UNIVERSITY OF CALIFORNIA UCRIVERSIDE | School of Business Administration
HOME OF THE A. GARY ANDERSON GRADUATE SCHOOL OF MANAGEMENT

PROPOSAL FOR A MASTER OF Supply Chain & Logistics Management

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GRADUATE DEGREE PROGRAM PROPOSAL

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PROPOSAL FOR A MASTER OF SUPPLY CHAIN & LOGISTICS MAMANGMENT

§ 1.0 INTRODUCTION

The UCR School of Business Administration (SoBA) proposes to offer a new Master of Supply Chain & Logistics Management (MSCLM) degree program to address the substantial unmet demand for trained Supply Chain Management (SCM) and logistics professionals. The new degree program will require sixteen months (four academic quarters plus a summer internship) of full-time study or its equivalent on a part-time basis. The program will be a self-supporting program. While the program is structured as self-supporting, it is designed to leverage the existing capacity of the School's current MBA and MS self-supporting programs and is expected to be cash-flow-positive from the first term it is offered.

SoBA offers a Bachelor of Science in Business Administration where an undergraduate student may choose to concentrate in a specialized area such as SCM. However, coursework culminating in a baccalaureate degree with a concentration in SCM is not usually sufficient for advanced SCM and logistics professionals. A student may also earn an MBA with a concentration in SCM; however, by design, an MBA is a generalist degree, and is perceived as such by employing firms.

The MSCLM program is designed to provide students with a rigorous understanding of and the ability to apply core principals within the field of Supply Chain Management and logistics using powerful quantitative and Business Analytics tools. Today's supply chains are truly global. Effective supply chain management is crucial and solves many of the problems encountered by businesses today. A thorough knowledge of this discipline and the execution of a sound supply chain strategy are necessary in today's global economy to be competitive, efficient and maximize a firm's profitability. Supply chain and logistics professionals are sought after in all industries today, with new and growing opportunities in biotech, cyber-security – even disaster and famine logistics.

The proposed MSCLM degree will bring greater visibility to UCR, the Graduate School, and SoBA; contribute positively to the reputation of the school nationally and internationally; and serve the growing needs of the region for well-educated SCM and logistics professionals. The program is consistent with the UCR and SoBA strategic plans; will give us an important edge over our competition as we move to take advantage of the fact that our geographical area is underserved in this sphere; and will elevate our national and international visibility as we do our part to meet the growing demand for SCM professionals. The program maybe a possible pathway into a PhD program in supply chain management. Several former students who graduated from our MBA program, who either have pursued a Ph.D. degree in SCM or expressed the desire to do so, encountered difficulties due to the lack of foundation in the SCM concentration. Having a program focusing on Supply Chain and Logistics Management will likely improve the marketability of our students seeking to pursue a PhD specializing in supply chain management or the like.

This proposal describes the rationale for the degree program, outlines how the program advances our strategic plan, and provides background on the market for the degree. The proposal includes information comparing the proposed program to those offered by other schools nationally and internationally, and includes details of the curriculum of the sixteen-month degree program. The program requires only a small frontend investment because most of the courses in the curriculum are already offered routinely by SoBA.

1.1 Aims and Objectives

Business schools are undergoing a significant shift in the applicant pool for Master's degree programs. Applications for traditional MBA programs that provide a general management focus have seen a sustained decline nationwide. Coincidentally, more students are seeking Master's degrees that specialize in various business fields, including supply chain management and logistics.

In recent years, demand for professionals with supply chain credentials has sky rocketed. According to Fortune Magazine, Logistics alone accounted for 8.5% of Gross Domestic Product in 2014 with over $1.3 trillion in spending on transportation, inventory, and related logistics activities. According to the same Magazine, there is a need for 1.4 million additional supply chain workers by 2018. The U.S. *Department of Labor Occupational Outlook Handbook (2014-2015),* for five typical occupations within supply chain management, the projected growth rate through 2024 ranged from 25% to 30% with salaries ranging from $74,260 to $108,120. The *average* annual income for supply chain professionals in 2013 was over $100,000 a year, according to the Institute for Supply Chain Management. The Bureau of Labor Statistics has predicted a 26 percent increase in logistics jobs by 2020 and a 29 percent rise in the need for freight agents by the end of the decade. The Graduate Management Admission Council (GMAC) 2016 Corporate Recruiters Survey Report indicates that, overall, about a quarter or more of corporate recruiters are actively seeking graduates of Master in Supply Chain Management programs (27% of respondents). The same survey indicates that Graduates of Master in Supply Chain Management programs are in greatest demand among companies in the manufacturing (42% of respondents), technology (39%), and products and services (37%) sectors.

The development of professionally oriented masters programs in SCM and Logistics is in direct response to the recognition that students who aspire to work in the field of SCM need more specialized education than is available through standard undergraduate or masters-level degree programs. Advanced SCM education has developed along a general structure. Students normally take more quantitative courses such as Management Science, Operations, Logistics, Procurement, and Inventory Management, focused on supply chain and logistics applications. These programs are normally called Master's in Supply Chain Management, Master's in Global Supply Chain Management, or Master of Arts or Master of Science in Global Logistics. This line is the focus of the proposed Master of Supply Chain & Logistics Management program of UCR. Institutions such as University of Southern California (very recently), Ohio State University, Arizona State University, Washington University, MIT, Penn State University and Michigan State University have similarly launched Master's degree programs in supply chain management within the last five years. The programs offered by Penn State and Arizona State are online

programs. Numerous institutions nationwide are planning to enter this market and launch their own Master of Science in Supply Chain Management programs.

The SoBA Master of SCLM program will meet the needs of two types of students: international students who are seeking a master's degree with an emphasis in SCLM and domestic students who generally have work experience and wish to strengthen their experience via attaining a master's degree in SCLM for future professional growth in the work environment. Work experience is not required, nor is it essential to succeed in the SoBA MSCLM program. However, inclusion of some students with work experience in the supply chain and logistics sector can contribute to the quality of the experience of others, help connect the school to the SCM community, and enrich classroom discussion. Students with experience tend to come from the U.S. and may choose to pursue the degree on a part-time basis.

Supply chain management offers a wide variety of job options for entry-level managers and beyond. We expect that students will find employment as "Supply Chain Analyst", "Purchasing Manager", "Warehouse Operations Manager", "Supply Chain Software Manager", "Transportation Manager", and "Vice President of SCM" among others.

Based on the experience of faculty involved with the proposed program, it is possible to develop a strong sense of esprit de corps among the students, even with substantial variations in prior experience, and to build lasting relationships with recent graduates that are useful to current students, other alums, and the School.

The following are among our main aims and objectives for the program:

- The program will enable supply chain management and logistics executives to gain the specialized expertise required for professional advancement.
- The regional market for supply chain and logistics professionals is underserved by institutions of higher education. The program will enable UCR to address the regional market need for professional education in supply chain & logistics management.
- The program will enable us to maintain and build critical mass of faculty in supply chain management and related fields.
- The program is expected, to advance the research mission of the School, and to fund well-qualified Ph.D. students with emphasis in supply chain management (to be launched in the future).
- The program is congruent with the UCR and SoBA strategic plans.
- Graduates of the program can be of immediate value in helping the School to place its graduates in attractive professional employment and supply chain and logistics alums can quickly become important prospects for campus development efforts.
- The particular strengths of UCR will enable the program to help bring greater socioeconomic diversity to the profession

1.2 Historical Development of the Field and Department Strengths

Before the 1950s, logistics was thought of in military terms. It had to do with procurement, maintenance, and transportation of military facilities, materiel, and personnel. The study and practice of physical distribution and logistics emerged in the 1960s and 1970s. Logistics costs were high. On a national level, it was estimated that logistics cost in the U.S. accounted for 15

percent of the gross national product (Heskett et al., 1973). On an individual firm level, they could be as high as 32 percent of sales (LaLonde and Zinszer, 1976). Physical distribution with its outbound orientation was first to emerge, since it represents about two thirds of logistics costs and it was considered a component of the marketing mix (product, place or physical distribution, promotion, and price) of essential elements. Business logistics, with its broader scope that includes inbound movement, was soon to follow.

The first college course (Michigan State University) and textbook (Smykay et al., 1961) appeared around 1960. Within the context of the total cost approach, activities such as transportation, inventory control, warehousing, and facility location were discussed. The emphasis was on a firm's outbound movement of goods and dealt little with inbound movements. In 1964, the scope of physical distribution was expanded to include physical supply and was called business logistics. Using the descriptive name of business logistics was not only an attempt to distinguish the name from military logistics but to focus on logistics activities that took place within the business firm.

Although physical distribution is usually associated with outbound product movements from a firm, this definition indicates a broader concept that includes both inbound and outbound movements. Heskett et al. (Heskett et al., 1964) described business logistics in terms of both physical supply and physical distribution, but they also recognized that logistics takes place throughout the supply channel, from producer to end consumer. They suggested that there needs to be coordination of the product flows throughout the entire channel. These concepts are similar to what is currently described as supply chain management and, at that time, physical distribution and logistics were somewhat synonymous terms.

In the 1990s, a new name emerges: *Supply Chain Management*. This name took the logistics area by storm since so many in various business fields seemed to embrace it and saw activities of their areas imbedded in it. The origin of the name seems a mystery and exactly what supply chain management is, compared with physical distribution and logistics, is being debated. Some are saying that it is a fulfillment of the activity integration promise implied in early definitions while others think it is a new and bold concept. Those believing that supply chain management is evolutionary claim that supply chain management is not new and they recognize that the logistics pioneers had many of the ideas promoted by current supply chain enthusiasts.

Recently, the Council of Supply Chain Management Professionals (CSCMP), which is the premier organization of supply chain practitioners, researchers, and academics, has defined supply chain management as: "Supply Chain Management encompasses the planning and management of all activities involved in sourcing and procurement, conversion, and all Logistics Management activities. Importantly, it also includes coordination and collaboration with channel partners, which can be suppliers, intermediaries, third-party service providers, and customers. In essence, Supply Chain Management integrates supply and demand management within and across companies." Whereas, CSCMP defines logistics to be: "Logistics Management is that part of SCM that plans, implements, and controls the efficient forward and reverse flow and storage of goods, services, and related information between the point of origin and point of consumption in order to meet customer requirements." Therefore, SCM is viewed as managing product flows *across* multiple enterprises whereas logistics is seen as managing the product flow activities just

within the firm. This is a deviation from the view that the early visionaries had for logistics. A contemporary view of SCM is to think of it as managing a set of *processes*, where a process is a group of activities relevant to achieving a defined objective, such as filling orders.

The trend toward increased globalization, free trade, and outsourcing all contribute to a continued and growing interest in logistics/SCM. According to a McKinsey & Company study, "by the year 2020, 80% of the goods in the world will be manufactured in a country different from where they are consumed compared with 20% now." There will be a tremendous shift in the movement and consumption of goods, all of which will require ever better management of the associated supply chain processes.

The contemporary view is that SCM is a new frontier for demand generation – a competitive weapon. Both views will be important, but the new emphasis will be on designing and operating the supply chain to enhance the revenues of the firm in such a way as to maximize contribution to profit. This view replaces the often-used strategic objective of minimizing supply chain costs, subject to meeting given customer service requirements, and it will elevate SCM in the eyes of top management. Collaboration and coordination will be the keys to achieving the benefits of SCM. When both parties in a supply chain relationship win equally due to their cooperative actions in the supply channel, the benefits are likely to be realized and the relationship remains intact.

In the last decade, business analytics has evolved significantly, and now offers decision support for critical tactical and strategic supply chain activities. The insights from these activities are helping companies optimize their supply chain functions and close the gaps to manage market pressures and contribute to financial performance. The increasing importance of analytics and planning to the success of a company's business strategy cannot be ignored. A Gartner study shows that several companies gave analytics and planning a high importance score (8.3 out of 10), however the need was not being achieved in performance [6.3 out of 10] as was evident in the ensuing gap. According to Wikibon, the Business Analytics market will top $84B in 2026, attaining a 17% Compound Annual Growth Rate (CAGR) for the forecast period 2011 to 2026. The Big Data market reached $27.36B in 2014, up from $19.6B in 2013. Much of this growth targets the supply chain function because it holds the greatest potential for innovation and competitive advantage.

The SoBA faculty is well-positioned to meet the needs of students in the proposed Master of Supply Chain & Logistics Management program. Our Operations and Supply Chain Management (OSCM) faculty, while currently small, is intended to grow over the next few years, partly in anticipation of the needs of the program. The current OSCM faculty members are all involved in research areas that are appropriate for students in the MSCLM program. In addition, some courses that are appropriate for students in the program are currently offered by the Finance faculty and the Accounting and Information Systems faculty of SoBA. Consistent with the orientation of this program, the School has identified Supply Chain Management as one of its five "spires of excellence," the area has restructured its curriculum at both the graduate and undergraduate levels to infuse supply chain analysis into the curriculum, and three new courses are being developed for the proposed MSCLM program. Faculty hiring has focused on supply chain management and is expected to continue to do so.

1.3 Timetable

The School seeks to launch the program in the fall of 2018 or sooner, if feasible. Most courses in the program are already offered either as MBA core or electives. Four new courses focused more specifically on the needs of the program are being developed (three have already been approved) and will be offered when the program is launched. We will initiate the program with a faculty director and existing SoBA administrative staff. We have conservatively projected enrollments at 5 students in the first year and gradually increasing to a projected maximum of 25 students by the fifth year. These enrollment projections are well below those achieved by other schools offering similar programs. The UCR campus strategic plan provides for growth of professional and self-supporting programs but does not define enrollment goals for self-supporting programs.

1.4 Relation to Existing Programs and Campus Academic Plan

The program fits the overall strategic plans of UCR and SoBA to increase its presence and reputation regionally, nationally, and internationally. The graduate degree in Supply Chain & Logistics Management is a part of the portfolio of offerings at many major business schools, and such graduate master's degree supply chain management programs are routinely ranked in such publications as *US News*, *Business Week*, and the *Financial Times.* The program will engage professional students in supply chain and logistics research, connect the campus more firmly with the professional supply chain management and logistics community, and strengthen our ability to place our students in significant professional positions.

The proposed Master of Supply Chain & Logistics Management degree program advances the objectives of UCR as reflected in its strategic plan, *UCR 2020: The Path to Preeminence*. This strategic plan places significant emphasis on increased focus on "professional and graduate education that will benefit a region that is in dire need of practitioners in a variety of professional fields." The plan notes that UCR's most successful graduate programs are those that integrate graduate education with academic research and creative activity, and that to achieve the profile of an AAU institution, UCR must increase its proportion of graduate and professional students. The plan points to the potential for professional programs to provide revenue enhancements to the campus.

The strategic plan calls for relative growth of graduate education, including professional education; serving the region by preparing students well for professional employment; reducing dependence on public funds through development of self-supporting graduate programs; connecting professional education to academic research; connecting more closely to the region; and developing the profile of an AAU university.

The proposed Master of Supply Chain & Logistics Management program is also consistent with the strategic goals of the School of Business Administration. The SoBA strategic plan identifies "supply chain management" as one of five spires of excellence. The term, supply chain management, implies that students will have hands on opportunities to learn advanced methods relevant to supply chain analysis and logistics using data analytics and quantitative tools, and that there will be significant complementarities between teaching and research in supply chain management.

We are in an environment where specialized post-graduate education is increasingly demanded. No longer is specialization just for academic Ph.D.s. Appropriate education for supply chain and logistics professionals is similar to that of supply chain management Ph.D.s. In fact, many of the technological advances in supply chain and logistics have come not from the universities, but from the private sector. Supply chain professionals working in the Riverside/San Bernardino area need to be dynamic and innovative because the economy of the region is destined to be the most rapidly growing portion of the California economy in the foreseeable future, and that growth is closely tied with the development and increasing professionalism of the logistics and warehousing sector in the region.

We expect that the Master of Supply Chain & Logistics Management program will positively impact the existing programs of SoBA:

- Because we plan to offer the degree initially using the capacity of existing courses, there will be no reduction in the capacity of the existing faculty to serve the teaching missions of the existing graduate and undergraduate degree programs.
- As the program grows, it will be necessary to add additional faculty in OSCM. The program will provide sufficient sustainable free cash flow to support the addition of lines.
- Faculty hired in response to growth of the program will help build critical mass in the school, help to advance the school's research mission, and help to support the eventual launch of the supply chain component of the Ph.D. in Management.
- While the program may be attractive to some students who otherwise would apply to the school's MBA program, it will also generate its own stream of applicants. Based on experience of other schools, the net effect is substantially positive for recruitment to the MBA program.
- Students admitted to the MSCLM program will be strong quantitatively and will contribute positively to the classroom experience and learning of MBA and other specialized Master students.
- Students of the MSCLM program are frequently interested in pursuit of the Ph.D. so that the program will provide a means of attracting and screening future Ph.D. candidates.
- The MSCLM program is not expected to impact the undergraduate program offered by the school. The balance of staffing undergraduate courses will be maintained or enhanced when new faculties are added as the program grows.

The experience of other universities that offer similar specialized degrees in supply chain and logistics shows that additional degree offerings in supply chain and logistics tend to complement and ultimately augment the MBA programs of the school, bringing dividends of additional prestige to the school, as well as benefits of networking with the firms in the industry. While the MSCLM degree program will share resources with the MBA program, it will attract its own pool of applicants. Because we can achieve sustainability at a very low level of students, and because MBA staff will also be involved in the MSCLM admissions, we can control the admission of students to the appropriate programs. Overall, the MSCLM program is expected to have a positive impact on the web traffic from students who are interested in the UCR MBA.

There is ample evidence in the experience of other schools that those who apply for Master's degrees in supply chain management tend to have stronger quantitative background than MBA applicants. Therefore, not just the market but the selection criteria for admission to the MBA and

MSCLM programs will differ. The marketing efforts for attracting students to the MSCLM program will result in a boost to the profile of the school as a whole. Students in the two programs will attend several courses together, and the presence of students with stronger quantitative background will tend to elevate the experience of both sets of students.

The effort to place graduates of the MSCLM program, coordinated with the placement effort for MBAs will help us to better place students into the cohorts that best suit them.

1.5 Interrelationships with the Programs of other Institutions, Market and Competition

Southern California is greatly underserved in graduate supply chain management education.

- The University of Southern California (USC) is the only other school in Southern California that currently offers advanced degree in supply chain management.
- Schools on the East Coast and east of the Mississippi are in the forefront of development and introduction of specialized graduate degrees in supply chain management and logistics.
- The USC program, Master's in Global Supply Chain Management, is a joint program between the Vitebri school of Engineering and the Marshal School of Business. It is fundamentally different from the proposed program and targets a different market.
- It is only a matter of time before our local competitors will introduce such programs, making UCR's introduction of the program at this time partly defensive.

The Master of Supply Chain & Logistics Management will provide a comprehensive overview of the entire field of supply chain management, with an emphasis on analytical methods and applications using business analytics tools.

1.6 Administration

The program will be administered by a faculty director within the OSCM area of the UCR School of Business. The School will establish a faculty admissions committee that will operate similarly to the current MBA program admissions committee. These admissions committees will collaborate and work with SoBA staff to establish clear distinctions in admissions criteria. Among other considerations, the MSCLM will place less emphasis on work experience and more on evidence of quantitative aptitude, ability and interest. Because of the importance of participative learning, the admissions committee will make selective use of interviews for foreign students, in addition to standardized tests of English proficiency.

Initially, the program will be marketed almost exclusively on the School's website, through local information sessions, and through promotion to faculty and administration of likely feeder schools. Information about the program will be distributed at MBA forums whenever the School decides to participate in such forums for the purpose of MBA recruiting.

Course staffing will be administered mainly by the OSCM area coordinator (faculty), in conjunction with their normal staffing responsibilities for MBA and other MS courses. Performance reviews of lecturers are the shared responsibility of faculty members in the discipline, and a formal annual review process for lecturers is already in place and is working well. Formal student advising will be administered through faculty-led advising/information sessions, with informal advising by faculty on an as-needed/as-requested basis.

Initial administrative support will be provided by existing SoBA staff in conjunction with their existing responsibilities for program administration.

As the program grows, it may become important to add dedicated staff and to formally allocate a portion of faculty time to program administration. Based on prior experience and conversations with directors of other programs, once the program reaches a scale sufficient to justify a full complement of course offerings, the program could need up to one faculty FTE fully committed to administration of this program and at least one dedicated administrative staff member who would be involved with recruiting, advising, and placement. The faculty FTE can be spread over several individuals and can include LSOE.

1.7 Plan for Evaluation

Within the School, the program will be continuously evaluated based on attainment of student FTE projections, the quality of applicants and matriculated students, curriculum effectiveness relative to learning objectives, placement success, and continuing involvement of program alums.

Campus policy is to evaluate new programs after three years and routinely thereafter, following established Graduate Program review procedures.

§ 2.0 PROGRAM

2.1 Undergraduate Preparation for Admission

Eligibility for admission depends on having completed a four-year undergraduate degree or equivalent. Based on experience of other schools, appropriate undergraduate majors include business, engineering, economics, mathematics, statistics, and physics, among others. Students with less quantitative backgrounds may also apply, but should expect to use electives to develop quantitative background or take additional courses if admitted to the program. Because classroom participation requirements in the program are high, international students will need to demonstrate competency in written and spoken English.

Students admitted to the program will have an academic profile somewhat different from those likely to be admitted to other master's level programs in SoBA. In particular, the MSCLM places substantially greater emphasis on quantitative background as reflected in undergraduate degree, courses taken, and scores on quantitative portions of admissions tests. In comparison to the MBA, the MSCLM places less emphasis on work experience. However, over time we expect that the cohort will include individuals with significant relevant work experience.

To be qualified for admission, an applicant to this program must have completed a Bachelor's degree or its approved equivalent from an accredited institution and attained an undergraduate record that satisfies the standards established by the Graduate Division and University Graduate Council. Applications are accepted for fall term. All applicants must submit scores from the Graduate Management Admissions Test (GMAT) or Graduate Record Exam, General Test (GRE). Applicants whose first language is not English are required to submit acceptable scores from the Test of English as a Foreign Language (TOEFL) or the International English Language Testing System (IELTS) unless they have a degree from an institution where English is the

exclusive language of instruction. In some cases, an interview may be required to assess English language ability. Additionally each applicant must submit at least two letters of recommendation, including at least two academic references. All other application requirements are specified in the graduate application or in the General UCR catalog.

The admissions criteria to the Supply Chain and Logistics Management program will be aligned with current admissions practices in all SoBA's graduate programs. These criteria use a holistic assessment of eligibility and potential for success. This holistic process includes both quantitative criteria (GPA, GMAT score), and qualitative criteria (including quantitative background, work experience, the quality of undergraduate institution attended, and the rigor of the undergraduate major) in the overall assessment of an applicant's eligibility for admission to the Supply Chain and Logistics Management Program.

The recommended Academic Index Score of (200 x GPA) + GMAT + Qualitative Index, is currently used by all SoBA's graduate programs to inform their admissions decisions, as well as for determination of eligibility for merit scholarships. The Qualitative Index will range from 0-100 and will be assigned by Graduate program staff and reviewed by the Graduate Advisor. An applicant with an Academic Index Score $\geq$ 1000 may be recommended to the Graduate Division for admission by the Graduate Advisor in consultation with the program director. Those applicants with lower scores will be placed on a waiting list, advised to retake the GMAT, or rejected, as appropriate. For those qualified students with lower scores, a request for an exception from the UCR's Graduate Division will be sought.

As presented in Exhibit III, in the first quarter of the Master of Supply Chain & Logistics Management degree program, students will be expected to take core courses in data models and decisions, quantitative methods, and operations management. This grounding is sufficient to expose students, in the second quarter, to the main field of Supply Chain Management. In the third quarter, the students are expected to build on what they learned in the second quarter by taking more advanced courses in the area, such as Logistics and Transportation and Procurement and strategic sourcing. In the summer quarter, students are expected to intern with local and global companies. The purpose of the summer internship is to expose students to real supply chain issues and apply the knowledge they acquired in the first three quarters of the curriculum. Ideally, we would like the students to do the internship in the summer after taking the foundation and necessary courses to take better advantage of the internship. However, although the program does not encourage it, students will be allowed to do the internship starting their second quarter provided the internship is at the quality level the program requires. In their final quarter, students take a capstone course. In the capstone course, students undertake a team-based project where they apply their acquired knowledge from prior courses as well as the experience gained in their summer internship.

Students should be able to complete the coursework for this program in 16 months. Admission is intended to be primarily in the fall quarter in order to match graduation timing with the normal recruiting cycle. However, the current offerings of SoBA do enable us to consider students for admission beginning in other terms or on a part time-basis. Required courses and sufficient elective courses will be offered every year.

2.2 Foreign Language

The program has no foreign language requirement.

2.3 Program of Study

2.3. A Field of emphasis

The specific field of emphasis is Supply Chain Management. Within this field, students can use elective offerings to tailor the curriculum to their own objectives.

2.3. B Plan(s)

Plan I (Thesis) will not be an option for the Master of Supply Chain & Logistics Management program. Given this would be typically a four-quarter program it is unlikely that a Plan I (Thesis) option will be feasible for students.

Plan II (Comprehensive Examination) requires that at least 18 units be in graduate level courses taken at a UC campus. None of these may be in courses numbered 297 or 299. Every candidate must take a comprehensive examination, the content of which is determined by the department or program. In most cases, units from courses numbered 291 cannot be used. Candidates for the degree are required to complete all of the general requirements specified by Graduate Studies. The program conforms to Plan II.

2.3. C Unit requirement

The Master of Supply Chain & Logistics Management will be offered as a four-quarter program (64 units) for graduates of a baccalaureate degree in a field that provides sufficient quantitative background to enable successful completion of the program.

2.3. D Required and recommended courses, including teaching requirement

Of the 64 units, 32 units (8 courses) are required courses; 4 units are a required summer internship course; 4 units are a required capstone course; and 24 units (6 courses) are elective courses must be selected from a list of elective courses designated by the Operations and Supply Chain Management area.

Required courses currently offered to MBA students

- MGT 201 Quantitative Analysis
- MGT 203 Economics for Management
- MGT 207 Operations Management for Competitive Advantage
- MGT 256 Applied Business Analytics
- MGT 258 Logistics and Supply Chain Management

Required courses not currently offered (new courses) to MBA students

- MGT 255 Procurement and Strategic Sourcing
- MGT 271 Quantitative Decision Making and Analysis
- MGT 275 Transportation and Logistics Management
- MGT ??? Supply Chain Integration (new course, capstone)

Elective courses currently offered to MBA students

- MGT 221 Decision Making Under Uncertainty
- MGT 224 Managing for Quality Improvement
- MGT 230 Databases for Management

- MGT 236 Decision Making under Certainty
- MGT 239 Simulation for Business
- MGT 259 Production Planning and Scheduling (to be reinstated)
- MGT 266 Project Management
- MGT 267 Applied Business Forecasting
- MGT 280 Business Issues in Electronic Commerce

Exhibit I contains current catalog copy for the required courses currently being offered to MBA students and for selected electives. All elective courses are currently regularly offered at least annually. During the first year or two of the program, with MBA enrollments at current levels, there is sufficient capacity in these classes to accommodate the needs of the Master of Supply Chain and Logistics students. Upon approval of the program, the new courses will be offered at least annually and will require staffing. Planned operations and supply chain management hiring is expected to meet the additional staffing needs.

2.4 Sample Program (full time)

Quarter 1

- MGT 201 Quantitative Analysis
- MGT 207 Operations Management for Competitive Advantage
- MGT 271 Quantitative Decision Making and Analysis
- Elective

Quarter 2

- MGT 203 Economics for Management
- MGT 258 Logistics and Supply Chain Management
- Elective
- Elective

Quarter 3

- MGT 256 Applied Business Analytics
- MGT 275 Transportation and Logistics Management
- Elective
- Elective

Summer Internship

Quarter 4

- MGT 255 Procurement and Strategic Sourcing
- MGT ??? Supply Chain Integration
- MGT 298I Internship (retroactive credit)
- Elective

2.4 Normative time from matriculation to degree (full-time)

Plan II students should be able to complete the coursework for this program in four academic quarters in addition to the summer quarter (16 months from beginning). Required courses and sufficient elective courses will be offered every year. The minimum academic residence in the UC is three quarters, two of which must be spent at the Riverside campus. Only courses in which grades of B- or above or "S" are received may be counted toward satisfying graduate degree requirements. To continue in good standing and obtain an advanced degree, students must maintain a minimum GPA of 3.00. In addition, students must demonstrate acceptable progress toward their degree objectives. This entails the acceptable completion of all course work and other degree requirements in a timely fashion. Students are considered to be making unacceptable progress and become subject to dismissal when

1. They have 12 or more units of "I" grades (incomplete course work) outstanding
2. The quarterly GPA falls below 3.00 for two consecutive quarters
4. They fail to fulfill program requirements in a timely and satisfactory manner, or
5. They have not completed their degree within 2 years for full-time students or within 5 years for part-time students.

§ 3.0 PROJECTED NEED

3.1 Student Demand for the Program

Business schools are undergoing a significant shift in the applicant pool for Master's degree programs. Applications for traditional MBA programs that provide a general management focus have seen a sustained decline nationwide. Coincidentally, more students are seeking Master's degrees that specialize in various business fields, including supply chain management and logistics. Institutions such as Ohio State University, Arizona State University, Washington University, MIT, Penn State University, Michigan State University, and University of Southern California have similarly launched Master's degree programs in supply chain management within the last five years. Numerous institutions nationwide are planning to enter this market and launch their own Master of Science in Supply Chain Management programs, in traditional classroom and/or online distance learning formats. Such degrees are becoming an increasingly common offering at peer and aspirational institutions. This enduring strength of nationwide demand for an advanced master's degree in supply chain management and logistics and an underserved market here in Southern California offer an opportunity to gain an advantage over other universities in the area. While we seek to serve the firms in our geographical area by making available to them a pool of trained supply chain and logistics professionals, we shall not restrict ourselves to admitting only those from Southern California. Expanding the potential market to the pool of students beyond California to the national arena, and beyond US borders to the international arena will ensure that we are able to recruit students who are well qualified to stand the rigors of the proposed program.

We anticipate that the tuition, fees, and other costs of the program will be comparable to other highly regarded supply chain management programs. The Table below shows the tuition of similar Master programs. In order to have a base for comparison, we calculated the tuition per course offered in the corresponding program. As the table shows, our tuition per course is relatively competitive. I addition, this is also what is being currently charged to students in the Master of Finance and Master of accounting programs.

University Or School	Program Length	Tuition	Number of Courses	Tuition per Course
Massachusetts Institute of Technology	10 Months	$67,938	10	$6,794
University of Michigan/Ross School of Business	10 Months	$50,000	10	$5,000
Portland State University	21 Months	$47,365	13	$3,643
University of Southern California	16 Months	$46,170	9	$5,574
UCR/SoBA	16 Months	$64,000	16	$4,800

Our intent is to develop the Master of Supply Chain & Logistics Management as a full-time program and we expect that initial enrollments will be of full-time students. As local demand from supply chain and logistics professionals increases, we anticipate an increasing but low percentage of part-time students.

Evidence from other programs indicates that students with supply chain management masters degrees are able to command materially higher compensation than undergraduates and often higher than MBA students. Generally, the cost of the degree to the student is normally justified based on anticipated impact on compensation. Given that there is a ready market for supply chain management masters students, scholarship aid in these programs is quite limited, normally around 10 to 15% of total tuition and fees. Scholarship aid is normally awarded competitively. Students who are not employer-sponsored or state-sponsored and who need funding can generally borrow much of the cost of the degree. In addition, because we do not currently have a supply chain management track in our Ph.D. program, we expect that a number of the students will be able to work on campus as teaching assistants, graders, and research assists. Students who take the program on a part-time basis normally do not receive scholarship aid, and usually are working full time and can cover the cost of the program from their compensation.

3.2 Opportunities for Placement of Graduates

Supply Chain executives require increasingly high levels of specialized expertise for professional advancement: A master's degree or a doctorate is a prerequisite in several specialized fields such as medicine and law for example. As a result of an exponential increase in the knowledge and skills needed for successful discharge of professional responsibilities in the field of supply chain management, industry has come to expect potential entrants to the supply chain management profession to have a command of supply chain management as a structured body of knowledge with its own paradigms that can only be acquired by pursuing an advanced degree in the field.

The regional market is underserved: The Master of Supply Chain & Logistics Management program will meet an untapped and growing demand for graduate supply chain management

education in the region served by UCR. Riverside and the Inland Empire sit at the hub of the western United States logistics and supply chain industry, connecting two of the world's largest ports, Los Angeles and Long Beach, to the rest of North America. Southern California, specifically the eight county region comprised of Los Angeles, San Diego, Riverside, Orange, San Bernardino, Kern, Imperial and Ventura counties is home to approximately eight hundred and fifty thousand businesses (ESRI, 2009). Several thousands of these businesses require, supply, and/or produce raw materials, semi-finished or finished products, assemblies and sub-assemblies, etc. in various shapes and form. The role of warehouses and storage facilities for storing the goods, merchandise, etc. worth millions of dollars and keeping them secure is extremely crucial. In order to facilitate the movement and distribution of goods and/or products along a supply chain, warehouses and storage facilities provide a range of logistics services, related to the distribution of goods. Logistics services can include "labeling, breaking bulk, inventory control and management, light assembly, order entry and fulfillment, packaging, pick and pack, price marking and ticketing, and transportation arrangement". Thus the region has a significant population of professionals who are involved in supply chain and logistics management, and other fields, who could benefit from a specialized Master of Supply Chain & Logistics Management degree. Moreover, it is expected to experience the most rapid population growth in the state. SoBA is the only graduate school of management affiliated with a major research university in Riverside and San Bernardino Counties.

Diversity in the Profession: The Program will meet an untapped demand for under-represented minority graduates. Many firms that recruit our graduates have inclusiveness initiatives with a goal of attracting individuals with diverse backgrounds and experiences. UCR has one of the most diverse campuses in the country and is in a unique position to meet the demands of these firms.

3.3 Importance of the Discipline

SCM is Globally Necessary: Basically, the world is one big supply chain. Supply chain management –the acquisition of parts and raw materials, from purchasing to delivery– touches major issues, including the rapid growth of multinational corporations and strategic partnerships; global expansion and sourcing; fluctuating gas prices and environmental concerns, each of these issues dramatically affects corporate strategy and bottom line. Because of these emerging trends, supply chain management is the most critical business discipline in the world today.

Until recently, supply chain management was not one of the classic B-school majors, for either undergraduates or MBAs. But job openings, comfortable salaries, and the prospect for advancement have caused the academic community to take notice, with more students majoring in the subject and more programs offering courses and concentrations in it. Today, business schools are undergoing a significant shift in the applicant pool for Master's degree programs. Applications for traditional MBA programs that provide a general management focus have seen a sustained decline nationwide. Coincidentally, more students are seeking Master's degrees that specialize in various business fields, including supply chain management and logistics. With such companies as H.J. Heinz and AnnTaylor Stores creating C-level supply chain positions in the past few years, more students are seeing career possibilities in the major. According to the Association to Advance Collegiate Schools of Business (AACSB), the number of undergraduate

SCM programs has increased 25 percent since 2006. Almost half that jump happened during the 2009-10 school year.

The development of professionally oriented masters programs in SCM and Logistics is in direct response to the recognition that students who aspire to work in the field of SCM need more specialized education than is available through standard undergraduate or broad masters-level degree programs.

The importance of logistics in the economy is attributed to the fact that logistics alone accounts for more than 8.3% of the U.S. Gross Domestic Product with over $1.3 trillion in spending on transportation, inventory, and related logistics activities. According to the U.S. *Department of Labor Occupational Outlook Handbook (2014-2015),* for five typical occupations within supply chain management, the projected growth rate through 2024 ranged from 2,5% to 30% with salaries ranging from $74,260 to $108,120. According to the Graduate Management Admission Council (GMAC) 2016 Corporate Recruiters Survey Report, Overall, about a quarter or more of corporate recruiters are actively seeking graduates of Master in Supply Chain Management programs (27% of respondents). The same survey indicates that Graduates of Master in Supply Chain Management programs are in greatest demand among companies in the manufacturing (42% of respondents), technology (39%), and products and services (37%) sectors. The report further indicates that recent graduates with a Master in Supply Chain Management degree can expect to see a median starting salary of $75,000, on par with Master of Finance graduates.

3.4 Ways in Which the Program Will Meet the Needs of Society

SCM is necessary to the foundation and infrastructure within societies: SCM within a well-functioning society creates jobs, decreases pollution, decreases energy use and increases the standard of living. Two examples of the effect of SCM within societies include:

> **Hurricane Katrina – 2005.** In 2005, Hurricane Katrina flooded New Orleans, LA, leaving residents without access to food or clean water. As a result, a massive rescue of the inhabitants had to be made. During the first weekend of the rescue effort, 1.9 million meals and 6.7 million liters of water were delivered.
>
> **Foundation for Economic Growth**. A society with a highly developed supply chain infrastructure that includes interstate highways, a large railroad network, ports and airports is able to trade many goods at low cost. Business and consumers are able to obtain these goods quickly, resulting in economic growth.

MBA students, while they have a more holistic education, often do not have enough training to understand the supply chain and logistics issues a business organization deals with. Students in the UCR Master of Supply Chain & Logistics program will acquire the knowledge and tools necessary to effectively manage their organization and will have the ability to understand the importance of a global view of the supply chain within which their organization operates. They will understand that effective supply chains give businesses a competitive advantage in the marketplace and help mitigate risks associated with acquiring raw materials and delivering products or services. They will learn that by implementing supply chain management systems, businesses are able to reduce waste, overhead costs and shipping delays in a scientific way and that the benefits of this systematic approach impacts areas ranging from product quality to order

turn-around times. Students will also learn that there are costs involved in every process of the product life cycle, and it is the responsibility of management to ensure that these costs are kept low, so the company can continue to pass along these savings to the consumer.

By moving rapidly we can help UCR graduates to reap the benefits of this expanding demand. The Master of Supply Chain & Logistics Management program will address an unmet need for graduate supply chain management education in Southern California in general and specifically Inland Southern California and is therefore consistent with the School of Business Administration's mission to service the educational needs of businesses in the region. The program will contribute to our developing a reputation for leadership in U.S. higher education, to recruiting outstanding faculty, and to the diversification of our sources of revenue, which will help the School of Business Administration maintain financial stability and independence and reduce dependence on state funding. The program also fits well with the School of Business Administration's strategies for building reputation by hiring high quality faculty who demonstrate excellence in both research and teaching.

It is remarkable that apart from the University of Southern California is the only other school in Southern California that currently offers an advanced degree in supply chain management. Southern California is greatly underserved. It is only a matter of time before our local competitors will introduce such programs.

3.5 Relationship of the Program to Research and/or Professional Interests of the Faculty

The emphasis, in the SoBA strategic plan was developed partly on the basis of the quantitative orientation of the Operations and Supply Chain Management faculty and partly on the value that the faculty recognizes in making sure that graduates of our programs are quantitatively well-trained in supply chain management and are capable of quantitative analysis at appropriate levels for their degrees. The Master of Supply Chain & Logistics program fits well with the strategic plan and with the quantitative orientation of our faculty.

Moreover, the quantitative nature of the supply chain management degree will provide competent research assistants, and will help to provide funding for the eventual launch of the supply chain management track of the management Ph.D. program.

§ 4.0 FACULTY

Quantitative supply chain and logistics management is one of the strengths of UCR Faculty, and we propose to position our degree offering accordingly. The Master of Supply Chain & Logistics Management that SoBA will offer is designed to provide overview of the entire field of supply chain and logistics management, with an emphasis on quantitative methods and applications, and with elective offerings that draw upon the strengths of our faculty.

BRIEF BIOGRAPHY OF THE FINANCE FACULTY[1]

1. Mohsen Elhafsi (Professor) received both Ph.D. and M.S. in Operations Research from the industrial and systems engineering department at the University of Florida and was ΦΚΦ Honor

[1] Exhibit VII contains full C.V's.

Graduate. He received the Diplôme d'Ingénieur Principal from the Ecole Nationale d'Ingénieurs de Tunis, Tunisia, in 1988. He joined SoBA as a tenure-track faculty member in 1997. He was promoted to associate professor in 2002 and to Full professor in 2009. He was awarded the prestigious Fulbright Fellowship for the 2006 to 2007 academic year to spend his sabbatical year in France at the Ecole Centrale de Lille, one of France's elite engineering schools. There he worked with host researchers at the Industrial and Logistics Laboratory on supply chain management issues ranging from coordination to performance measures and assessment. In 2007, he was awarded a $10,000 COR Research Fellowship (a fellowship program administered by the Academic Senate Committee on Research) for his proposal to work on supply chain issues related to contract manufacturing. His tenure at SoBA includes a number of administrative and faculty governance assignments, including: department chair (2004-2005), associate dean for graduate program (2007-2010), and area coordinator (2011-present). His areas of research include operations and supply chain management, manufacturing and service operations, and production and inventory systems. He is the author of numerous articles that have been published in peer-reviewed journals such as: *Management Science, IIE Transactions, European Journal of Operational Research, Production and Operations Management,* and *Global Optimization.*

2. Long Gao (Associate Professor) earned his Ph.D. in business administration and operations research from Penn State University, and his M.E. and B.E. in engineering physics from Tsinghua University in Beijing, China. His research interests include supply chain management, stochastic modeling of manufacturing and service systems, Markov decision processes, and simulation. He has published in journals such as *Management Science, Production and Operations Management, and European Journal of Operational Research*.

3. Elodie Goodman (Associate Professor) joined the School of Business Administration of the University of California at Riverside as an assistant professor of management science in 2012. Previously, she was assistant professor of industrial engineering at the University of Illinois at Chicago from 2006 to 2012. She holds a Diplôme d'Ingénieur from Ecole Centrale Paris, France (2002) and a Ph.D. in operations research from MIT (2006). Her research interests are on the modeling and solution of optimization problems in a variety of areas, in particular those involving game theory. Her recent work includes supply chain, influenza vaccine supply chain, pricing and inventory management and disaster planning.

4. Adem Orsdemir (Assistant Professor) is an assistant professor of operation and supply chain management. He received his BS degree from Bilkent University in electrical engineering and his MS from University of Rochester in electrical and computer engineering. He is also holding an MS degree from UNC in statistics and operations research. He received his PhD from UNC in operations management. He studies the profitability and environmental benefits of green operations driven by the environmental wave and market competition. His research also includes supply chain management in the context of corporate social responsibility.

5. Yunzeng Wang (Professor and Dean) joined the faculty of the UCR School of Business Administration (SoBA) in July 2008 as the Dean's Distinguished Scholar in Supply Chain Management and Professor of Finance and Management Science. He is currently the dean of the SoBA. Dean Wang obtained a Ph.D. degree in Operations Research from the Wharton School at the University of Pennsylvania in 1997. Prior to moving to the United States in 1993, he studied

at the University of Waterloo in Canada, and obtained a master's degree in management sciences. He also holds a bachelor's degree in electrical engineering from Shandong University in China, and a master's degree in engineering management from the Harbin Institute of Technology in China. Dean Wang's research interests include supply chain management, technology acquisition and adoption strategy, US-China economic development and trade, stochastic optimization, and game theory. He has published over 30 academic journal articles and invited book chapters.

§ 5.0 COURSES

As presented in Exhibit III, in the first quarter of the Master of Supply Chain & Logistics Management degree program, students will be expected to take core courses in data models and decisions, quantitative methods, and operations management. This grounding is sufficient to expose students, in the second quarter, to the main field of Supply Chain Management. In the third quarter, the students are expected to build on what they learned in the second quarter by taking more advanced courses in the area, such as Logistics and Transportation and Procurement and Strategic Sourcing. In the summer quarter, students are expected to intern with local and global companies. The purpose of the summer internship is to expose students to real supply chain issues and apply the knowledge they acquired in the first three quarters of the curriculum. In their final quarter, students take a capstone course. In the capstone course, students undertake a team-based project where they apply their acquired knowledge from prior courses as well as the experience gained in their summer internship.

The students are expected to choose 6 elective courses from an extensive range of relevant courses, such as Decision Making under Uncertainty, Databases for Management, Project Management, Business Issues in Electronic Commerce, Simulation for Business, Applied Business Forecasting, as well as other courses from other disciplines in Business.

Students should be able to complete the coursework for this program in 16 months. Admission is intended to be primarily in the fall quarter in order to match graduation timing with the normal recruiting cycle. However, the current offerings of SoBA do enable us to consider students for admission beginning in other terms or on a part-time basis. Required courses and sufficient elective courses will be offered every year.

§ 6.0 RESOURCE REQUIREMENTS

The School of Business Administration currently has a reserve that will allow it to launch and market this program without having to reduce funds allocated to existing programs, hiring initiatives or request start-up funds from the university. To launch the program, time will be required from current faculty for program development. The majority of the courses that will be offered are already developed and most are currently taught in SoBA's MBA program. There is sufficient excess capacity in the classes that are currently offered to absorb the start-up enrollment without adding sections.

The School of Business Administration has developed financial projections for the proposed Master of Supply Chain & Logistics Management program based on conservative assumptions. We plan to offer this program using the self-supporting model with a per credit fee. The Financial Projection shown in Exhibit II conservatively assumes an initial class size of 5 and a

steady growth at a rate of 5 students per year. We believe that we can deliver a high quality program to as many as 40 students per year utilizing current resources.

Assumptions regarding marketing costs and incremental costs of instruction are detailed in our Financial Projection shown in Exhibit II.

Based on the experience of other specialized masters programs in supply chain management, the Master of Supply Chain & Logistics Management program is expected to grow steadily. In the Financial Projection shown in Exhibit II, we have projected steady growth at a rate of about 5 students per year. While student FTE growth is always subject to uncertainty, the program is structured to be cash flow positive even if the growth targets are not achieved as quickly as projected. Moreover, there is significant potential that these projections will be exceeded due to the high demand for specialized master's degrees in supply chain management and the near absence of significant local competition.

As presented in detail in the Financial Projection, the Master of Supply Chain & Logistics degree program can be launched at minimal expense including direct costs of $20,000 stipend for the Academic Program Director and $25,000 for marketing. Existing staff at SoBA are expected to have the capacity to contribute to the administrative and recruitment effort for the new degree at the initial launching stage. However, to follow the UC Policy on *Self-Supporting Graduate Degree Programs* the financial projection has allocated indirect costs based on student credit hours of all programs offered at UCR in the School of Business.

The Operations and Supply Chain Management faculty already offers a comprehensive range of required and elective courses in operations, supply chain management, and statistics to MBA students. As discussed in Exhibit III (Courses), the curriculum of the new degree will be fashioned out of the existing menu of course offerings with the addition of three new courses. We plan to add special Master of Supply Chain & Logistics Management sections to these courses only as we are justified in doing so by demand and constraints on the capacity of the MBA and other Master programs.

Since we initially can leverage the staff support of the existing MBA and other Master programs, the Master of Supply Chain & Logistics Management program is expected to generate a positive cash flow from its inception. As the program grows and begins to generate its own revenue stream, it is envisaged that additional support staff will be hired to accommodate the growth, including student recruitment and application oversight. The Master of Supply Chain & Logistics Management program will incur direct expenses for marketing, stipend for the Academic Program Director, UCOP overhead assessment and UCR overhead assessment (after 3 years). In addition, a minimum of 15% of gross revenue will be allocated for financial aid to Master of Supply Chain & Logistics Management students. As the program grows we anticipate increasing the allocation to financial aid as shown in the Financial Projections. In addition, indirect costs will be allocated based on student credit hours of all programs offered at SoBA. This allocation of indirect costs is to comply with the UC Policy on Self-Supporting Graduate Degree Programs. As all SoBA graduate programs grow, additional faculty and staff will be hired to accommodate the growth and provide a quality education. These costs will be allocated to all UCR School of Business programs, as well as additional classroom support, instructional software, program operations and administrative costs (as displayed in the Financial Projections). The Supply Chain

& Logistics Management program will be subject to continuous review by the faculty of the School of Business Administration. Reasons for deviations between projected and actual enrollments will be examined and revisions to the program and to financial projections will be made as appropriate.

The Master of Supply Chain & Logistics Management program will enhance SoBA's net revenues, help build the resource base, diversify existing sources of revenue, and reduce dependence on state funding. In the long term, the program revenues will contribute to improvement of the educational experience of students in all of the degree offerings of the School.

Alumni and Development: Graduates of the Master of Supply Chain & Logistics Management program have the potential to become influential and supportive alumni soon after they complete their degree. Based on the experience of similar programs at other schools, including the experience of some of our own faculty, recent graduates tend to become important contributors and resources for the programs within months of completion of their graduate degrees. The Master of Supply Chain & Logistics Management program will facilitate development of stronger relationships with the corporate and professional communities. It is anticipated that most students in the program will be recruited for important positions after graduation.

§ 7.0 GRADUATE STUDENT SUPPORT

The Master of Supply Chain & Logistics Management program will offer graduate student support by reserving 15% of the gross fee revenue for student financial aid. As the program grows we anticipate increasing the allocation to financial aid as shown in the Financial Projection in Exhibit II. In addition, the SoBA Development officers will strive to attain donor commitments for scholarships for the Master of Supply Chain & Logistics Management graduate students.

§ 8.0 GOVERNANCE

The program will be directed by the Faculty of the School of Business Administration through its Executive Committee and a Graduate Programs Committee, which have oversight responsibility for all Graduate Programs offered by SoBA. Several firms in the sector in our geographical area have expressed keen interest in working together with the school. We can harness this interest by inviting senior executives of prominent firms in the area to serve on the advisory board for the program. The resulting coordination will lead to a closer relationship with future employers of graduates of the program. These senior executives serving on the advisory board will be available for events such as formal talks, and occasional classroom visit for a case discussion or select topic on real-world experience. These events will enrich the experience of students in all programs offered at the school.

§ 9.0 CHANGES IN SENATE REGULATIONS

The Master of Supply Chain & Logistics Management program will require adding the new degree objective to the Senate bylaws.

EXHIBIT I
COURSE DESCRIPTIONS OF REQUIRED AND SELECTED ELECTIVE COURSES

Required Courses available to Master of Supply Chain & Logistics and MBA students:

MGT 201. Quantitative Analysis (4) Lecture, 3 hours; discussion, 1 hour. Prerequisite(s): MGT 403 or equivalent; familiarity with Microsoft's Excel spreadsheet software. Addresses the process of generating decision- making information from data and solving management problems using common computer tools. Covers problem identification and formulation, model selection and use, and interpretation of the results of statistical analysis. Topics include estimation, hypothesis testing, analysis of variance, simple and multiple regression, time series, and forecasting. May not be taken for degree credit by students in statistics undergraduate or graduate programs.

MGT 203 Economics for Management (4) Lecture, 3 hours; individual study, 3 hours. Prerequisite(s): MGT 403 or equivalent. A study of the use of microeconomics and macroeconomics in managerial decision making. Topics include demand and supply, production and cost functions, competition, labor supply, national income accounting, aggregate output, interest rates, fiscal and monetary policy, inflation, economic growth, and business cycles.

MGT 207 Operations Management for Competitive Advantage (4) Lecture, 3 hours; outside projects and extra reading, 3 hours per week. Prerequisite(s): MGT 201, spreadsheet skills. Focuses on managing the activities involved directly in the creation of products and services, such as design, production, and distribution. Provides managers with the skills and tools to analyze, optimize, and improve production processes for competitive advantage. Explores issues through lectures, cases, and videos pertaining to various industries.

MGT 255 Procurement and Strategic Sourcing (4) Lecture, 3 hours; discussion, 1 hour. Basic concepts and processes in purchasing and sourcing management are introduced in this course. It teaches global sourcing techniques and the application of various management tools and quality tools in purchasing. Focus is on the proactive and planned analysis of supply markets and the selection of suppliers, with the objective of delivering solutions to meet pre-determined and agreed upon organizational needs.

MGT 256 Business Analytics for Management (4) Lecture, 3 hours; written work, 1 hour; extra reading, 1 hour; practicum, 1 hour. Prerequisite(s): MGT 201 or consent of instructor. Provides the fundamental concepts and tools needed to understand the emerging role of business analytics in organizations and apply basic business analytics tools in a spreadsheet environment. Makes extensive use of data, statistical and quantitative analysis, exploratory and predictive models, and fact-based management to drive decisions and actions.

MGT 258 Logistics and Supply Chain Management (4) Lecture, 3 hours; individual study, 3 hours. Prerequisite(s): MGT 207 or consent of instructor. Studies the integration of value-creating elements in supply, procurement, manufacturing, distribution, and logistics processes, using information technologies as a main enabler. Topics include distribution networks, demand

management, sourcing, transportation, pricing, supply chain coordination, information technology, and e-business.

MGT 271 Quantitative Decision Making and Analysis (4) Lecture, 3 hours; discussion, 1 hour. This course covers many approaches to solving business problems from managerial point of view. Various optimization techniques are surveyed with an emphasis on the why and how of these types of models. Spreadsheet Solvers are used to accomplish the mathematical manipulations. Emphasis is placed on input requirements and interpretation of results.

MGT 275 Transportation and Logistics Management (4) Lecture, 3 hours; discussion, 1 hour. The course provides deep insight into the key functional areas related to transportation and logistics management within supply chain operations. Focus will include the role of transportation systems; managerial and economic aspects of various transportation modes, transport, storage/handling, and facility location decisions with applications to both domestic and international operations.

Required Courses to be developed for the Master of Supply Chain & Logistics students:

MGT ??? Supply Chain Integration (4) Lecture, 3 hours; discussion, 1 hour. This course draws on the concepts, theories and techniques, specifically emphasizing the role of the supply chain manager in implementing and accomplishing project plans and objectives. Students may draw on topics from their workplace or may choose from projects provided by companies in our local area requesting consulting services in developing feasibility studies and project proposals. Note that the ability to assign such a "real world" project depends on the availability of companies interested in such analyses at the time.

Example Elective Courses

MGT 205 Information Systems (4) Lecture, 3 hours; laboratory, 1 hour; outside projects and extra reading, 2 hours. Prerequisite(s): graduate standing; familiarity with basic computer operations and software packages. Examines the operation and management of information systems as applied to the business environment. Topics include hardware, software, databases, decision support, and systems analysis. Software packages are used to integrate information systems concepts and business applications.

MGT 209 Marketing Management (4) Lecture, 3 hours; individual study, 3 hours. Prerequisite(s): MGT 403 or equivalent. Analyzes the marketing process, the environment within which it operates, institutions involved, and the functions performed. Examines the relationships and trends in a market-based economic system. Develops concepts and terms applied to marketing decisions from the perspective of a manager.

MGT 210 Human Resources Management (4) Lecture, 3 hours; outside projects and reading, 3 hours. Prerequisite(s): MGT 200. Introduces methods for managing the firm’s human resources within the context of regulatory and economic conditions and changing workforce demographics. Topics include recruitment and selection, compensation and reward systems, employee development and appraisal, and information systems for meeting HRM objectives.

MGT 215 International Comparative Management (4) Lecture, 3 hours; outside projects and readings, 3 hours. Prerequisite(s): graduate standing. Comparative analysis of significant management practices. The impacts of cultural, political, social, and economic factors on decision making within the international arena are examined.

MGT 221 Decision Making Under Uncertainty (4) Lecture, 3 hours; outside projects and extra reading, 3 hours. Prerequisite(s): MGT 207 or consent of instructor. Introduces basic tools for using data to make informed managerial decisions under uncertainty. Addresses modeling, performance evaluation, and optimization of systems with uncertain parameters. Topics include Markov chains, Markov decision processes, and probabilistic linear and dynamic programming. Applications are drawn from operations, finance, marketing, and other management fields.

MGT 224 Managing for Quality Improvement (4) Lecture, 3 hours; outside research, 3 hours. Prerequisite(s): MGT 201 or consent of instructor. Discusses the operational aspects of quality improvement in manufacturing and service organizations. Focuses on the broader issues of total quality management, statistical process control, and the difficulties in implementing quality efforts in organizations.

MGT 230 Databases for Management (4) Lecture, 3 hours; outside projects and readings, 3 hours. Prerequisite(s): MGT 205. Examines the features and capabilities of database management systems, including database classification, data structures, file organizations, evaluation, and management of database systems.

MGT 231 Corporate Finance (4) Lecture, 3 hours; extra reading, 1.5 hours; outside problem sets, 1.5 hours. Prerequisite(s): MGT 202. An intensive analysis of the effects of corporate financial policy decisions on firm value. Examines the interrelation of firm value, financing policy, investment decisions, and other considerations. Provides an understanding of the theoretical issues involved in the choice of these policies.

MGT 233 Marketing Research (4) Lecture, 3 hours; outside projects and extra reading, 3 hours. Prerequisite(s): MGT 201, MGT 209; or consent of instructor. Examines how marketing-related data is gathered from individuals and organizations. Explores the importance of integrating problem formulation, research design, questionnaire construction, and sampling so as to yield the most valuable information. Also studies the proper use of statistical methods and the use of computers for data analysis.

MGT 236 Decision Making Under Certainty (4) Lecture, 3 hours; outside projects and extra reading, 3 hours. Prerequisite(s): MGT 207 or consent of instructor. Introduces basic tools for using data to make informed managerial decisions under certainty. Covers modeling and solution methods in network optimization, integer and nonlinear programming, and multiple criteria decision analysis. Examines applications and case studies in operations, logistics, finance, and marketing.

MGT 239 Simulation for Business (4) Lecture, 3 hours; outside projects and extra reading, 3 hours. Prerequisite(s): MGT 201, MGT 205. Introduces computer simulation as a tool for

analyzing complex decision problems. Analyzes and discusses the theory and practice of modeling through simulation. Topics include modeling uncertainty and collecting input data, basic simulation principles, Monte Carlo simulation techniques, model verification and validation, and analysis of simulation output. Examines applications in manufacturing, finance, health services, and public policy.

MGT 250 Marketing Channels and Sales Force (4) Lecture, 3 hours; outside project, 3 hours. Prerequisite(s): MGT 209. Examines decisions related to distribution channels and sales force. Discusses how to select the most appropriate marketing channel. Channel management topics include distribution intensity, power, control, and channel conflict. Covers issues in sales-force management, compensation, structure, and size.

MGT 266 Project Management (4) Seminar, 3 hours; extra reading and project, 3 hours. Prerequisite(s): MGT 207 or equivalent. Addresses issues of project planning and control. Topics include differences between projects and production systems; project selection; project teams; breakdown structures of organization and work; scheduling and budgeting; resources management; project control and evaluation; and current project management software.

MGT 267 Applied Business Forecasting (4) Seminar, 3 hours; outside project, 3 hours. Prerequisite(s): MGT 201 or equivalent. Provides experience in developing forecasting models and applying them to problems in marketing, production, inventory management, business economics, and other fields. Discusses issues in data acquisition, data analysis, modeling of relations between variables, trend analysis, and seasonal forecasting. Uses case studies and applications from a variety of management areas.

MGT 280 Business Issues in Electronic Commerce (4) Seminar, 3 hours; outside project, 3 hours. Prerequisite(s): MGT 205 or consent of instructor. Provides an understanding of the various business strategies, management issues, and pertinent technologies related to electronic commerce. Explores several of the problems surrounding electronic commerce including security issues, privacy, encryption, safeguarding of intellectual property rights, acceptable use policies, and legal issues.

EXHIBIT II: FINANCIAL PLANNING

Master of Supply Chain & Logistics Management Budget Projection															
	Year 1 2017-2018			Year 2 2018-2019			Year 3 2019-2020			Year 4 2020-2021			Year 5 2021-2022		
	#	Revenue/Cost Per Unit	BUDGET	#	Revenue/Cost Per Unit	BUDGET	#	Revenue/Cost Per Unit	BUDGET	#	Revenue/Cost Per Unit	BUDGET	#	Revenue/Cost Per Unit	BUDGET
NUMBER OF COURSES	**16**			**16**			**16**			**16**			**16**		
NUMBER OF UNITS PER YEAR	**64**			**64**			**64**			**64**			**64**		
Year 1	**48**			**48**			**48**			**48**			**48**		
Year 2	**16**			**16**			**16**			**16**			**16**		
ENROLLMENT	**5**		**$288,000**	**10**		**$384,000**	**15**		**$672,000**	**20**		**$768,000**	**25**		**$1,056,000**
Year 1	**5**	$1,200.00	$288,000	5	$1,200	$288,000	10	$1,200	$576,000	10	$1,200	$576,000	15	$1,200	$864,000
Year 2				5	$1,200	$96,000	5	$1,200	$96,000	10	$1,200	$192,000	10	$1,200	$192,000
Total Revenue			**$288,000**			**$384,000**			**$672,000**			**$768,000**			**$1,056,000**
EXPENSES															
UCR IN-DIRECT OVERHEAD CHARGE [1]			**$0**		**6.80%**	**$20,700**		**6.80%**	**$41,400**		**6.80%**	**$62,100**		**6.80%**	**$82,800**
UCOP ASSESSMENT [2]			**$0**		**1.70%**	**$2,000**		**1.70%**	**$3,000**		**1.70%**	**$4,000**		**1.70%**	**$5,000**
UCR SCHOOL OF BUSINESS OVERHEAD [3]			**$57,400**			**$114,800**			**$172,200**			**$229,600**			**$287,000**
INSTRUCTIONAL SUPPORT			***$130,000***			***$136,500***			***$143,300***			***$150,400***			***$157,850***
Faculty w/benefits			$120,000			$126,000			$132,300			$138,900			$145,850
Classroom Support - Readers			$10,000			$10,500			$11,000			$11,500			$12,000
DIRECT PROGRAM INFRASTRUCTURE			***$40,000***			***$41,000***			***$42,050***			***$43,150***			***$44,300***
Academic Program Director w/benefits			$20,000			$21,000			$22,050			$23,150			$24,300
Program Operations			$20,000			$20,000			$20,000			$20,000			$20,000
PROGRAM-BASED STUDENT SUPPORT			***$43,200***			***$57,600***			***$100,800***			***$115,200***			***$158,400***
FINANCIAL AID		**15%**	**$43,200**		**15%**	**$57,600**		**15%**	**$100,800**		**15%**	**$115,200**		**15%**	**$158,400**
TOTAL EXPENSES:			**$270,600**			**$372,600**			**$502,750**			**$604,450**			**$735,350**
BALANCE			**$17,400**			**$11,400**			**$169,250**			**$163,550**			**$320,650**

Assumptions:

1. **Per proposal, the Master of Supply Chain and Logistics Management Program will be a 64-credit unit curriculum.**
2. **Normal student will complete in 16 months.**

Tuition @$1,208 per unit was based on the current Master of Finance program at UCR School of Business. The plan is to keep the cost level for the first five years to support growth in the program.

[1] **UCR In-Direct Overhead based on prior year expenditures for Infrastructure, UCR Administration, Student Support & Academic/Research allocated at 6.80% per new budget model.**

[2] **UCOP Assessment based on prior year as follows: 1/3 on current fund actual expenditures, 1/3 on total student FTE and 1/3 on total academic and staff FTE.**

[3] **UCR School of Business Overhead allocation is based on prior year expenditures and follows the UCR new budget model.**

EXHIBIT III
COURSE SCHEDULE AND COURSE STATUS

Sample Program (full-time)

Quarter 1	
MGT 201 Quantitative Analysis	MBA Core Course
MGT 207 Operations Management for Competitive Advantage	MBA Core Course
MGT 271 Quantitative Decision Making and Analysis	MSCLM Core Course
	Elective
Quarter 2	
MGT 203 Economics for Management	MBA Core Course
MGT 258 Logistics and Supply Chain Management	MBA Core Course
Elective	
Elective	
Quarter 3	
MGT 256 Applied Business Analytics	MBA Course
MGT 275 Transportation and Logistics Management	MSCLM Core Course
Elective	
Elective	
Summer Internship	
Quarter 4	
MGT 255 Procurement and Strategic Sourcing	MSCLM Core Course
MGT ??? Supply Chain Integration	MSCLM Core Course
MGT 298I Internship (retroactive credit)	MBA Core Course
Elective	

EXHIBIT IV
ACADEMIC DEGREE PROGRAM PROPOSALS: INFORMATION REQUIRED BY CPEC

1. **Name of Program:**
   Master of Supply Chain & Logistics Management
2. **Campus:**
   University of California Riverside
3. **Degree/Certificate:**
   Master's Degree
4. **CIP Classification: (to be completed by the Office of the President)**
5. **Date to be started:**
   September 1, 2018 or sooner, if feasible
6. **If modification of existing program, identify that program & explain changes.**
   Not Applicable.
7. **Purpose (academic or professional training) and distinctive features (how does this program differ from others, if any, in California?**

Program Differentiation

There is a large and increasing demand and professional need for specialized masters programs in Supply Chain & Logistics Management. Southern California is greatly underserved in graduate supply chain management education. Whereas Schools on the East Coast and east of the Mississippi are in the forefront of development and introduction of specialized graduate degrees in supply chain management & logistics, the University of Southern California (USC) is the only school in Southern California that currently offers an advanced degree in supply chain management. The USC program, Master's in Global Supply Chain Management, is a joint program between the Vitebri school of Engineering and the Marshal School of Business. It is fundamentally different from the proposed program and targets a different market. It is only a matter of time before our local competitors will introduce such programs, making UCR's introduction of the program at this time partly defensive. UCR will be unique in the UC system in offering a Master of Supply Chain & Logistics Management. The Master of Supply Chain & Logistics Management will provide a comprehensive overview of the entire field of supply chain management, with an emphasis on analytical methods and applications using business analytics tools. The specific positioning of this degree is for students who desire a more specialized graduate education than is provided by an MBA, with substantially more depth in supply chain and logistics management. The program is designed to develop sophisticated supply chain and logistics management expertise including modeling, analysis, decision making, and supply chain planning.

8. **Type(s) of students to be served:**

The Master of Supply Chain & Logistics Management will be offered as a 16-month program (64 units) for graduates of a baccalaureate degree in a field that provides sufficient quantitative background to enable successful completion of the program. Appropriate undergraduate majors include business, economics, engineering, mathematics, statistics, and physics, among others.

Students admitted to the program will have an academic profile somewhat different from those likely to be admitted to other master's level programs in the Anderson Graduate School of Management. In particular, the Master's in Supply Chain and Logistics Management places substantially greater emphasis on quantitative background as reflected in undergraduate degree, courses taken, and scores on quantitative portions of admissions tests. Compared to the MBA, the Master of Supply Chain & Logistics Management places less emphasis on work experience, though over time we expect that the cohort will include individuals with significant relevant work experience.

9. If program is not in current campus academic plan give reasons for proposing program now:

There are at least eight compelling reasons why the School of Business Administration and the Anderson School should launch this new degree program at this time:

- Supply Chain and Logistics executives require increasingly high levels of specialized expertise for professional advancement.
- The regional market is underserved.
- The Master of Supply Chain & Logistics Management will be an immediate source of net revenue.
- The program will enable us to build critical mass in the faculty.
- The program will increase the prospects for earning supply chain management accreditation from The Association to Advance Collegiate Schools of Business (AACSB International).
- The program is consistent with the UCR and SoBA strategic plans.
- Graduates of the Master of Supply Chain & Logistics Management program have the potential to become influential and supportive alumni soon after they complete their degree.
- The Program will meet an untapped demand for under-represented minority graduates.

10. If program requires approval of licensure board, what is the status of such approval?

Not Applicable

11. Please list special features of the program:

- Specialized graduate level supply Chain management and logistics education
- Significant complementarities with existing programs of SoBA

12. List all courses required:

The majority of the courses are currently offered by the SoBA

<u>Quarter 1</u>
MGT 201 Quantitative Analysis
MGT 207 Operations Management for Competitive Advantage
MGT 271 Quantitative Decision Making and Analysis
Elective

Quarter 2

MGT 203 Economics for Management
MGT 258 Logistics and Supply Chain Management
Elective
Elective

Quarter 3

MGT 256 Applied Business Analytics
MGT 275 Transportation and Logistics Management
Elective
Elective

Summer Internship

Quarter 4

MGT 255 Procurement and Strategic Sourcing
MGT ??? Supply Chain Integration (new course)
MGT 298I Internship
Elective

15. List any related program offered by the proposing institution and explain relationship.

We anticipate that the program will help us to attract good candidates to the School's Ph.D. program in management.

16. Summarize employment prospects for graduates of the proposed program.

The program will educate individuals for employment in all types of organizations in particular the logistics and supply chain sector. The experience of our faculty with other programs is that opportunities for professional employment are excellent and that it is possible to develop a virtuous cycle where recent graduates who are placed become ambassadors for the program, helping to place subsequent graduates.

17. Give estimated enrollment for the first 5 years and state basis for estimate.

We project 5 students in the first year, increasing by 5 per year to reach 25 in five years.

18. Give estimates of the additional cost of the program by year in each of the following categories: FTE Faculty, Library Acquisitions, Computing, Other Facilities, Equipment. Provide brief explanation of any of the costs where necessary.

Exhibit II of the full proposal (reproduced below) contains our financial projections. FTE Faculty, Library Acquisitions, Computing, Facilities and Equipment are considered by SoBA to be "in-direct costs" and are allocated across all graduate programs and the undergraduate program based on the projected student credit hours in each program. The projected budget uses the current 90% undergraduate student credit hours, with the remaining 10% graduate student credit hours allocated over the individual graduate program.

An increase in faculty FTE is shown by the increase in costs allocated to the Master of Supply Chain & Logistics Management, however, it is not possible to state an accurate FTE proration since the faculty teach in all area. Library acquisitions and computing are allocated in the line “Instructional Databases, IT & Course Materials. There will be no facilities cost as we will use available capacity in existing classrooms. Also we do not have specific equipment needs for the Master of Supply Chain & Logistics Management program.

Direct costs for the Master of Supply Chain & Logistics Management program include: UCOP Assessment at 1.7% of gross revenue, stipend for the Academic Program Director (faculty), marketing and financial aid at 15% of gross revenue.

19. How and by what agencies will the program be evaluated.

The program will be evaluated by the AACSB at UCR's next accreditation review. An initial campus level review will occur after 3 years and normal campus-level reviews will occur periodically thereafter.

EXHIBIT V

LETTER FROM SCHOOL OF BUSINESS ADMINISTRATION DEAN

UCR | School of Business Administration
HOME OF THE A. GARY ANDERSON GRADUATE SCHOOL OF MANAGEMENT

Office of the Dean

900 University Avenue, Anderson Hall, Riverside, CA, 92521
Tel: 951.827.4237 Fax: 951.827.3970 e-mail: yunzeng.wang@ucr.edu web-site: http://soba.ucr.edu

September 17, 2015

Courses and Programs Sub Committee of the Graduate Council
University of California, Riverside
Riverside, CA 92521

RE: Master in Supply Chain and Logistics Management

Dear Committee Members:

I am writing to endorse the proposed Master in Master in Supply Chain and Logistics Management. This is a well-designed program to expand SoBA's self-supporting program offerings. Over the last decade, the industry demand for business graduates has been shifting from the general Master for Business Administration (MBA) to specialized Masters. By offering the Master in Supply Chain and Logistics Management, SoBA will continue to build up capacity to meet the industry demand. The program will provide a stream of revenue to strengthen the School's financial stability.

Like our faculty, I enthusiastically support the program.

Sincerely

Yunzeng Wang
Dean

EXHIBIT VI

LETTERS FROM LOCAL LOGISTICS COMMUNITY REPRESENTATIVES

July 16, 2015

Yunzeng Wang, Ph.D.
Dean, University of California, Riverside School of Business Administration
Anderson Hall 0122
Riverside, CA 92521

Dear Dean Wang:

I am writing to offer my support for the proposed Master's Degree of Supply Chain and Logistics Management at the University of California, Riverside. Our industry is in need of qualified professionals who have demonstrated their skills and understanding by achieving a master's degree in this field.

Our organization would welcome the opportunity to hire a future graduate of this program. I anticipate the continued growth of the logistics industry in the Southern California region, and your program would be instrumental in supporting that growth through the education of highly trained logistics professionals.

Best Regards,

George Hynes
President
Logistic Edge, LLC

2091 Raymer Avenue Unit A-B
Fullerton, California 92833
(714) 997-0570 (888) 305-3343
(714) 908-2010 fax
www.logisticedge.com

LogisticsTeam
Fulfillment | Warehousing | Transportation | Reverse Logistics

July 6, 2015
Dean Yunzeng Wang
Dean UCR School of Business Administration (SoBA)
Anderson Hall 0122
Riverside, CA 92521

Dear Dean Wang:

This letter is sent in support of the proposed Master of Supply Chain and Logistics Management at the University of California, Riverside. The logistics industry needs programs like this to enable us to provide better services through better trained professionals. We endorse the program and would look forward to the potential long term benefit to our industry.

As a senior Logistics executive in the inland southern California region, I would be pleased to hire Supply Chain and Logistics professionals graduating from the Master degree program at the University of California, Riverside.

Sincerely,

James Lin
CEO
Logistics Team

3PD PARTY LOGISTICS
218 Machlin Court Walnut, CA 91789 • Tel. 909.839.2600 • Fax. 909.839.2602

YAMATO TRANSPORT U.S.A., INC.
80 SEAVIEW DRIVE, SECAUCUS, NJ 07094
PHONE: (201) 583-9706 FAX: (201) 583-9703

July 30, 2015

Yunzeng Wang, Ph.D.
Dean
School of Business Administration
University of California, Riverside
900 University Avenue
Riverside, California 92521

Dear Dean Wang,

On behalf of Yamato Transport U.S.A., Inc. (Secaucus, NJ)—a fully owned subsidiary of Yamato Holdings Co., Ltd., the number one company in the parcel express home delivery service in Japan—I support and endorse the proposed Master of Arts in Supply Chain and Logistics program in the School of Business Administration at the University of California, Riverside.

The Inland Southern California region's economy is driven to a significant degree by the supply chain and logistics industries. A large component of the area's working population are involved in the various sectors that make up supply chain and logistics, from transportation to commercial real estate to the Long Beach and L.A. ports, and would benefit from a specialized degree in supply chain and logistics.

Also, the Southern California region is underserved in graduate supply chain and logistics education and this new program will enable the University of California, Riverside to address a regional market need. In addition, the program will allow existing supply chain and logistics executives to gain the specialized training required for professional advancement.

As a senior supply chain and logistics executive located in the Southern California region, I would welcome high-quality professionals graduating from the Master of Arts degree program at UC Riverside.

Sincerely,

Koji Ogura
President and Chief Executive Officer,
Yamato Transport U.S.A., Inc.

IATA Number 01-1-9602/0011 FMC Ocean Transportation Intermediary License Number 2637 NF

Executive Offices: P.O. Box 150 • 301 S. Tippecanoe Ave., San Bernardino, California 92408 • (909) 733-5000

July 24, 2015

Yunzeng Wang, Ph.D.
University of California, Riverside
School of Business Administration
Anderson Hall 0122
Riverside, California 92521

Dear Dr. Wong,

Please accept this letter in support of a proposed Master's Degree Program in Supply Chain and Logistics Management at the University of California, Riverside.

I have been diligently working with individuals responsible for educational endeavors within the grocery industry for the past year in an attempt to get support for such a program as there is a real need in our area for it. There are numerous programs for individuals seeking to advance their education in Retail Management, but not such a program for individuals involved in Supply Chain and Logistics Management.

The Inland Empire is a hub of supply chain and logistics for the entire Southern California region. It makes a great deal of sense that the University of Riverside would lead the way in developing and offering a Master's Degree program in this area.

Our company would be supportive of this program and would have several individuals who we would encourage to attend in furtherance of their careers with Stater Bros. Markets.

Sincerely,

STATER BROS. MARKETS

George A. Frahm
Executive Vice President
Administration/Distribution

GAF/amz

EXHIBIT VII

LETTERS FROM UNIVERSITY OF CALIFORNIA SSCHOLARS

UCLAAnderson
School of Management

Charles J. Corbett
IBM Chair in Management
Professor Of Operations Management and Sustainability

Tel +1 (310) 825-1651 Fax +1 (310) 206-3337
charles.corbett@anderson.ucla.edu

Los Angeles, September 8, 2016

To whom it may concern,

This brief letter serves to express my support for the proposed Master of Supply Chain and Logistics Management, to be offered by the Anderson Graduate School of Management at UC Riverside. I have not seen the proposal and hence cannot comment on the merits of the proposal itself, but from my interactions with the Operations and Supply Chain Management faculty there, I am optimistic that they would be able to design and deliver a solid program.

Sincerely,

Charles

Gold Hall, Suite B-507, Box 951481
110 Westwood Plaza, Los Angeles, CA 90095-1481
http://personal.anderson.ucla.edu/charles.corbett/

UNIVERSITY OF CALIFORNIA - IRVINE

BERKELEY · DAVIS · IRVINE · LOS ANGELES · MERCED · RIVERSIDE · SAN DIEGO · SAN FRANCISCO · SANTA BARBARA · SANTA CRUZ

Professor Rick SO
THE PAUL MERAGE SCHOOL OF BUSINESS
IRVINE, CALIFORNIA 92697-3125
Phone: (949) 824-5054
Fax: (949) 824-8469
Email: rso@uci.edu

September 8, 2016

Professor Yunzeng Wang
Dean, School of Business Administration
University of California, Riverside
Riverside, CA 92521

Dear Yunzeng,

I am writing to offer my support of the proposed Master Program in Supply Chain and Logistics Management from your School of Business Administration at UCR.

With two of the largest container ports in Los Angeles and Long Beach, Southern California is a major international logistics hub for global trade, especially between the U.S. and Asia-Pacific region. In addition, the Inland Empire has a large number of warehouses and storage facilities for many logistics firms. As such, I believe there is a high demand for professionals with adequate supply chain and logistics management knowledge in the Southern California area.

I think the proposed program curriculum provides a good set of important knowledge and skills that can help to develop professionals for the supply chain and logistics industry. Also, your School has several faculty members who are active researchers in the operations/supply chain management area and are capable of delivering high-quality courses in the proposed program.

Therefore, I believe your School is well positioned to offer a good Master Program in Supply Chain and Logistics Management to meet the local demand in this functional area.

Regards,

Rick So
Professor and Area Coordinator
Operations and Decision Technologies Group

EXHIBIT VIII
CURRICULUM VITA OF SELECTED PARTICIPATING FACULTY

MOHSEN ELHAFSI

School of Business Administration
University of California, Riverside CA 92521
Phone: (951) 827-4557
Fax: (951) 827-3970
E-mail: mohsen.elhafsi@ucr.edu
Web site: http://agsm.ucr.edu/directory/faculty.html?netid=melhafsi

My research interest is in the general area of Operations and Supply Chain Management. It includes using optimization in the design, planning and control of large-scale industrial processes and service operations. My focus is on developing analytical models of complicated systems, developing solution procedures using quantitative techniques, and drawing managerial insights from the analysis of these models.

EDUCATION

Degree	Field	Institution	Date
Ph.D.	Industrial Engineering	University of Florida	1995
M.S.	Industrial Engineering	University of Florida	1995
M.E./B.Sc.	Industrial Engineering	Ecole National d'Ingénieurs de Tunis	1988

PROFESSIONAL EXPERIENCE

2009 – present	Full Professor	A. Gary Anderson Graduate School of Management, University of California, Riverside
2007 – 2010	Associate Dean of MBA Program & Graduate Advisor	A. Gary Anderson Graduate School of Management, University of California, Riverside
2002 – 2008	Associate Professor	A. Gary Anderson Graduate School of Management, University of California, Riverside
2006 – 2007	Visiting Professor	Ecole Centrale de Lille, France Fulbright Fellow
1997 – 2002	Assistant Professor	A. Gary Anderson Graduate School of Management, University of California, Riverside
1996 – 1997	Visiting Professor	A. Gary Anderson Graduate School of Management, University of California, Riverside
1995 – 1996	Post Doctoral fellow	Dept. of Industrial and Systems Engineering, University of Florida

1988 – 1990	Project Manager	Institut Regional des Science Informatiques et des Télécommunication, Tunisia

FIELDS OF INTEREST

Operations and Supply Chain Management

Design and Management of Manufacturing and Service Systems

Mathematical Modeling and Operations Research

COURSES TAUGHT

Undergraduate Level

Production and Operations Management

Decision Analysis & Management Science

Supply Chain Management

Practical Business Forecasting

Graduate Level

Operations Management for Competitive Advavntage

Logistics and Supply Chain Management

Introduction to Management Science

Statistics for Management

Applied Business Forecasting

Operations Planning and Control

Management Synthesis

AWARDS AND HONORS

First $10,000 Committee on Research (COR) Fellowship Award, University of California, Riverside, 2007-2008

Fulbright Fellowship Award (Ecole Centrale de Lille, France), 2006-07

Regents Faculty Fellowship Award: University of California, Riverside, 2000-01

ΦΚΦ Honor Graduate, 1995

Teaching Assistantship: ISE Department, the University of Florida, 1994 –95

Research Assistantship: ISE Department, the University of Florida, 1991 – 94

Graduate Study fellowship: United States Agency for International Development, 1990 – 94

High Honors Qualified Engineer Diploma: IE Department, Ecole Nationale d'Ingénieurs de Tunis, 1988

High honors Baccalaureate Diploma, 1982

LANGUAGES

English (Fluent)
French (Fluent, education language)
Russian (Two-year Certificate)

SERVICES AND PROFESSIONAL ACTIVITIES

School and Campus Wide Services

Elected Member: Senate Committee on Committees, 2014-2017

Elected Member: SoBA Executive Committee, 2014-2016

Member: Finance Recruiting Committee, 2014-2015

Member: Steffy Chair Marketing Recruiting Committee, 2013-2014, 2014-2015

Member: SoBA Undergraduate Committee, 2014-2016

Chair: OSCM Recruiting Committee, 2013-2014

Member: Academic Senate Research Committee (09/2013-09/2014)

Member: SoBA Committee on Research (01/2012-01/2014)

Member: Special Committee on International Activities (03/2009-09/2010)

Member: SoBA Executive Committee (09/2010-09-2012)

Member: Academic Senate Graduate Council (2010-2013)

Member: Courses and Programs Subcommittee (2010-2013)

Chair: MS/OM Recruiting Committee, 2010-2011

Member: Academic Senate Courses Committee (2009-2010)

Chair: Research Committee (2010)

Graduate Advisor: 2007-2010

Chair: Graduate Program Committee, 9/2007-9/2010

Chair: Admission Committee, 2007-2008, 2008-2009

Chair: Recruiting Committee (two senior positions in Supply Chain Management), 2007-2008

Member: Internal Strategic Planning Steering Committee, 2007-2008

Member: Academic Senate Research Committee, 2007-2008

Member: Interdisciplinary Teams and Networks Grants Program Committee 09/2007-09/2010

Chair: Recruiting Committee for Dean's Academic Appointment, 2004-2005

Chair: "Management Department: The Economic Approach", 2003-04

Member: Strategic Planning Committee, 2003-04

Chair: MS/OM Recruiting Committee, 2002-03

Member: Steffy Chair Recruiting Committee, 2002-03

Member: Graduate Program Committee, 1997-2000, 2002-03

Member: Research Committee, 2000-2001

Member: MIS Recruiting Committee, 1997-1998

Member: Center for Research in Intelligent Systems (CRIS), 1996-present

Member: Ad hoc committee for 5th year appraisal evaluation 2002-2003

Member: Several Ph.D. Oral Examination, Statistics Department, 1999-2006

Editorial Board Membership

Member of the IFAC (International Federation of Automatic Control) Technical Committee on Manufacturing Modeling for Management and Control (since 2015)

Asia Pacific Journal of Mathematics (since 2014)

Statistics, Optimization & Information Computing (since 2013)

Open Journal of Optimization (since 2012)

The International Journal of Mathematics in Operational Research (since 2008)

International Journal of Commerce and Management (since 2009)

Session Chair

2014 Production and Operations Management Society, Annual Conference, Atlanta Georgia, May 9- 12, 2014.

2013 INFORMS Annual Conference, Minneapolis, October 6-9, 2013.

2013 Production and Operations Management Society, Annual Conference, Denver Colorado, May 3- 6, 2013.

2011 Production and Operations Management Society, Annual Conference, Reno Nevada, April 29-May 2, 2011.

2005 Operations Research 2005, International Scientific Annual Conference, Bremen, September 7-9, 2005.

2002 33rd Annual DSI Meeting, San Diego, California, Nov. 23-26, 2002

2001 National INFORMS Meeting, Miami, FL, November 4-7, 2001

2001 International Conference, Academy of Business and Administrative Sciences, Brussels, Belgium

2000 International Conference, Academy of Business and Administrative Sciences, Prague, Czech Republic

1998 National INFORMS Meeting, Seattle, WA, October 25-28, 1998

5th Industrial Engineering Research Conference, Minneapolis, MN, May 18-21, 1996

Proposal Assessor

"Information and Decision Dynamics in Manufacturing", Executive Board of the Austrian Science Fund, 2014

Hong Kong Research Grants Council (RGC), 2000

Grants to Enhance and Advance Research (GEAR) Program, University of Houston, 2006.

Journals Refereed

Operations Research, Management Science, Manufacturing & Service Operations Management, Naval research Logistics, IIE Transactions, European Journal of Operational Research, International Journal of Mathematics of Operational Research, IEEE Transactions On Automatic Control, IEEE Transactions on Automation Science and Engineering, Journal of Scheduling, International Journal of Production and Operations Management, International Journal of Flexible Manufacturing, Computers and Industrial Engineering, Mathematical and Computer Modelling, Omega Journal, International Journal of Production Research, International Journal of Production Economics, Engineering Optimization, International Journal of Commerce, Computers and Operations Research, Computers and Industrial Engineering

PROFESSIONAL AFFILIATIONS

The Institute for Operations Research and Management Science, since 1991

The Manufacturing and Service Operations Society, since 1997

The Production and Operations Management Society, since 1993

The Institute of Industrial Engineering, since 1992

The Honor Society of Phi Kappa Phi, since 1995

The Fulbright Association, since 2007

PUBLICATIONS

ARTICLES IN JOURNALS (TECHNICAL, REFEREED)

1. A. El Amraoui and M. Elhafsi, "An Efficient New Heuristic for the Hoist Scheduling Problem," Computers & Operations Research, 67, 184–192, 2016.
2. M. Elhafsi and E. Hamouda, "Managing an assemble-to-order system with after sales market for components," European Journal of Operational Research, 242(3), 828-841, 2015.
3. M. Elhafsi, L. Zhi, H. Camus, and E. Craye, "An Assemble-to-Order System with Product and Components Demand with Lost Sales," International Journal of Production Research, 53(3), 718-735, 2015.
4. S. Benjaafar, M. Elhafsi, W. Zhou, and C. Y. Lee "Optimal Production and Inventory Control of Multi-Stage Assembly Systems with Multiple Demand Classes," Operations Research, 59(2), 522-529 (2011).
5. S. Benjaafar, M. Elhafsi "A Production-Inventory System with both Patient and Impatient Demand Classes", IEEE Transactions on Automation Science and Engineering, **9**(1), 148-159, 2012.
6. M. Elhafsi, H. Camus and E. Craye, "Managing an Integrated Production Inventory System with Information on the Production and Demand Status and Multiple Non-Unitary Demand Classes," European Journal of Operational Research, 207(2), 986-1001, (2010).
7. S. Benjaafar, M. Elhafsi, and W. Tinglian "Optimal Control of a Production-Inventory System with both Backorders and Lost Sales," Naval Research Logistics, 57, 252-265, (2010).
8. M. Elhafsi, "Optimal Integrated Production and Inventory Control of an Assemble-to-Order System with Multiple Non-Unitary Demand Classes," European Journal of Operational Research, 194, 127–142, (2009).
9. M. Elhafsi, H. Camus and E. Craye, "Optimal Control of a Nested-Multiple-Product Assemble-To-Order System" International Journal of Production research, 46(19) 5367-5392, 2008.

10. S. Benjaafar and M. Elhafsi, "Production and Inventory Control of a Single Product Assemble-to-Order Systems with Multiple Customer Classes," Management Science, 52(12) 1896-1912, 2006

11. S. Benjaafar, M. Elhafsi and F. De Véricourt, "Demand Allocation in Multiple-Product, Multiple-Facility Make-To-Stock Production Systems," Management Science, 50(10) 1431-1448, 2004.

12. B. Dodin and M. ElHafsi, "Scheduling of a Multi-Item-Single-Facility System with Time Varying Demands and Inventory and Backorder Costs," International Journal of Operations and Quantitative Management, 10(1) 1-22, 2004.

13. M. ElHafsi, "Optimal Lead-Time Planning in Serial Production Systems with Earliness and Tardiness Costs," IIE Transactions, 34(3) 233-243, 2002

14. M. ElHafsi, "A Production Planning Model for an Unreliable Production Facility: Case of Finite Horizon and Single Demand," European Journal of Operational Research, 143, 94-114, 2002.

15. B. Dodin, M. Elhafsi, J. Varzandeh, and K. Farahbod, "Decision Support Systems and Design for Reverse Logistics," Journal of International Information Management, 69-73, Fall 2001.

16. M. ElHafsi, "An Operational Decision Model for Lead-Time and Price Quotation in Congested Manufacturing Systems," European Journal of Operational Research, **126**(2): 355-370, 2000.

17. M. ElHafsi, and E. Rolland, "Negotiating Price/Delivery Dates in a Stochastic Manufacturing Environment," IIE Transactions, **31**(3): 255-270, 1999.

18. M. ElHafsi and S. X. Bai "Multi-Period Production Planning and Control with Demand and Cost Fluctuations," Journal Of Mathematical and Computer Modelling. **28**(3): 103-119, 1998.

19. M. ElHafsi and S. X. Bai, "Optimal and Near Optimal Control of a Two-Part-Type Stochastic Manufacturing System with Dynamic Setups," Production and Operations Management, **6**(4): 419-438, 1997.

20. M. ElHafsi and S. X. Bai, "The Common Cycle Economic Lot Scheduling Problem with Backorders: Benefits of a Controllable Production Rate," Journal Of Global Optimization, **10**: 283-303, 1997.

21. G. Vairaktarakis and M. ElHafsi, "The Use of Flowlines to Simplify Routing Complexity in Two-Stage Flowshops," IIE Transactions, **32**(8): 687-699, 2000.

22. F. J. Krämer, M. ElHafsi and S. X. Bai, "Production Flow Control for a Manufacturing System with Flexible Routing," Production and Operations Management, **6**(1): 37-56, 1997.

23. S. X. Bai, Y. K. Tsai, M. ElHafsi, and K. Deng, "Production Scheduling in a Price Competition," Computers and Mathematics with Applications, **33**(5): 5-19, 1997.

24. S. X. Bai and M. ElHafsi, "Scheduling of an Unreliable Manufacturing System with Nonresumable Setup Changes," Computers and Industrial Engineering, **32**(4): 909-925, 1997.

25. M. ElHafsi and S. X. Bai, "Optimal Production Control of a Dynamic Two-Product Manufacturing System with Setup Costs and Setup Times," Journal Of Global Optimization, **9**:183-216, 1996.

26. M. ElHafsi and S. X. Bai, "Optimal Production and Setup Control of a Dynamic Two-Product Manufacturing System: Analytical Solution," Journal Of Mathematical and Computer Modelling, **24**(3): 57-78, 1996.

27. S. X. Bai and M. ElHafsi, "Transient and Steady State Analyses of a Manufacturing System with Setup Changes," Journal Of Global Optimization, **8**:349-378, 1996.

28. S. X. Bai, H. Burhanpurwala, M. ElHafsi and Y. K. Tsai, " Hierarchical Production Control for a Flow Shop with Dynamic Setup Changes and Random Machine Breakdowns," Operations Research Spektrum, **18**: 81-96, 1996.

29. M. ElHafsi and S. Yeralan, "Computer Control System for a Cutting Machine," Computers and Industrial Engineering, **23**(1-4), 345-348, 1992.

30. L. Ammar, M. Achour and M. ElHafsi, "Etude Et Conception De Systèmes d'Appoint Pour Chauffe-Eau Solaire", Les Annales de l'ENIT, **2**, July 1988.

ARTICLES IN PROCEEDINGS (TECHNICAL, REFEREED)

31. Li, Z., M. Elhafsi, H. Camus, E. Craye, "Optimal control of both lost sales and backorders ATO system with component demand", 1st International conference on Reasoning and Optimization in Information Systems –ROIS'2013– September 7-8, 2013, Sousse–Tunisia.

32. Li, Z., M. Elhafsi, H. Camus, E. Craye, "Optimal Control of a lost sales ATO system with component demand," 5th International Conference "Management of Technology –Step to Sustainable Production" –MOTSP 2103– May, 29-31 2013, Novi Vinodolski, Croatia.

33. Elhafsi, M., H. Camus, E. Craye, "Optimal Control of a Production System with Information on the Production and Demand Status: Application to Vendor Managed Inventory" Proceedings of the 8th ENIM IFAC International Conference of Modeling and Simulation – MOSIM'10, pp. 668-675, May 10-12, 2010, Hammamet–Tunisia.

34. ElHafsi, M., H. Camus, E. Craye, "Optimal Control of a Nested-Multiple-Product Assemble-To-Order System", Workshop International, Logistique & Transport 2007, novembre 2007, Sousse, Tunisie, pp. 369–373.

35. M. ElHafsi, S. Benjaafar, and Y. Yu, "Production and Inventory Control of a System with Multiple Sources of Supply" 15th *International Annual EUROMA Conference* June 15-18, 2008, University of Groningen, The Netherlands.

36. M. Elhafsi, H. Camus, E. Craye, "Optimal Control of a Nested-Multiple-Product Assemble-To-Order System" International Workshop: Logistics and Transportation, *IEEE/SMC co-sponsored workshop*, Nov. 18-20, 2007, Tunisia

37. S. Yeralan and M. ElHafsi, "Recent Advances In Intelligent Machine Tools," *Proceedings of the 5th Annual Conference On Recent Advances In Robotics*, Florida Atlantic University, June 11-12, 1992.

38. S. X. Bai and M. ElHafsi, "Optimal Feedback Control of a Manufacturing System with Setup Changes," *Proceedings of the Fourth International Conference on Computer Integrated Manufacturing and Automation Technology*, October 10-12, 1994, in Troy, New York.

39. M. ElHafsi and S. X. Bai, "Production and Setup Control in a Stochastic Manufacturing System," *Proceedings of the 5th Industrial Engineering Research Conference*, May 18-20, 1996, Minneapolis, Minnesota.

Submitted ARTICLES (TECHNICAL, REFEREED)

40. Benjaafar, S., R. Chen, M. Elhafsi, "Optimal Control of an Inventory System with Stochastic and Independent Leadtimes," Operations Research.

Working Papers

41. M. Elhafsi, W. Zhou, and S. Benjaafar, "Optimal Production and Inventory Control of a Multi-Class Demand, Assemble-to-Order System with Backorders" To be submitted to Productions and Operations Management.

42. M. Elhafsi "Optimal Dynamic Pricing for a Multi-Product Nested ATO system with Heterogeneous Demand" To be submitted to Manufacturing & Service Operations Management.

43. M. Elhafsi, "Efficient Heuristics for Managing Multi-Product ATO Systems" To be submitted to Computers and OR.

INVITED TALKS AT UNIVERSITIES

ESSEC Business School, Operations Management Area, Paris, France, 2014

University of Waterloo, Management Science Department, Canada, 2009

University of Geneva, College of Business (HEC), Switzerland, 2006

Ecole Centrale de Lille, France, 2006 (1)

Ecole Centrale de Lille, France, 2006 (2)

University of Neuchâtel, College of Business (HEC), Switzerland, 2006

University of Montreal, Business School (HEC), Canada, 2005

CONFERENCE PARTICIPATION-PAPER PRESENTATIONS

OR 2015, International Conference on Operations Research, Optimal Decisions and Big Data (Managing an Assemble-to-Order System with After Sales Market for Components), Vienna Austria, Sep 1-4, 2015

20th Conference of the International Federation of Operational Research Societies – IFORS (Managing an Assemble-to-Order System with After Sales Market for Components), Barcelona, Spain, July 13-18, 2014

POMS Annual Meeting (An Assemble to Order System with Product and Components Demand with Lost Sales), Atlanta Georgia, May 9-12, 2014

INFORMS Annual Meeting (Optimal Control of an Inventory System with Stochastic Leadtimes), Minneapolis Minnesota, October 6-9, 2013

POMS Annual Meeting (Managing an Integrated Production-Inventory System with Multiple Production Facilities), Denver Colorado, May 3-6, 2013

INFORMS Annual Meeting (Optimal Control of Production-Inventory Systems with Multiple Facilities), Phoenix Arizona, October 14-17, 2012

International Annual Conference of the German OR Society (A Production-Inventory System with both Patient and Impatient Demand Classes), Hanover Germany, September 4-7, 2012

23rd Production and Operations Management Society Annual Conference (Managing an Integrated Production Inventory System with Information on the Production and Demand Status), Chicago Illinois, April 20 – 23, 2012

22nd Production and Operations Management Society Annual Conference (A Production-Inventory System with both Patient and Impatient Demand Classes), Reno Nevada, April 29 – May 02, 2011

International Annual Conference of the German OR Society, (Managing a Production System with Information on the Production and Demand Status and Multiple Non-Unitary Demand Classes), Munich, Germany, September 1-3, 2010

2010, 11th Workshop on Optimal Control, Dynamic Games and Nonlinear Dynamics (Optimal Control of a Production-Inventory System with both Backorders and Lost Sales), University of Amsterdam, May 31 – June 2, 2010

2008, 15th International Annual EUROMA Conference, (Production and Inventory Control of a System with Multiple Sources of Supply), University of Groningen, the Netherlands, June 15 – 18, 2008

2008, Production and Operations Management Society (POMS) Conference (Optimal Control of a Production-Inventory System with both Backorders and Lost Sales), San Diego, CA, May 9 – 12, 2008

2007 National INFORMS Conference (Optimal Control of a Production-Inventory System with both Backorders and Lost Sales), Seattle, WA, Nov. 3 – 7, 2007

2007, Production and Operations Management Society (POMS) Conference (Optimal Control of an Assembly Systems with Multiple Stages and Multiple Demand Classes), Dallas, TX, May 4 – 7, 2007

International Conference on Service Systems and Service Management (ICSSSM'06), (Optimal Control of Inventory Systems with Multiple Supply Sources", University of Technology of Troys-France. October 25 – 27, 2006

2005 National INFORMS Conference (Optimal Control of Inventory Systems with Multiple Supply Sources), San Francisco, CA, Nov. 13-16, 2005

Operations Research 2005, International Scientific Annual Conference (Optimal Production and Inventory Control of Assemble-to-Order Systems with Multiple Customer Classes), Bremen, Germany, September 7-9, 2005

2005, Production and Operations Management Society (POMS) Conference (Optimal Control of an Assemble-to-order Systems), Chicago, IL, April 29-May 3, 2005

2004, Multi-Echelon and Manufacturing and Service Operations Management (MSOM) Conference (Optimal Control of an Assemble-to-order System), Eindhoven, Netherlands, June 30 – July 2nd, 2004

2004, 2nd World Conference and 15th Annual POMS Conference (Demand Allocation in Multiple-Product, Multiple-Facility Make-To-Stock Production Systems), Cancun, Mexico, April 30- May3, 2004

OR2003 - SYMPOSIUM ON OPERATIONS RESEARCH (Assignment and Loading of Liquid Chemicals to Ship Compartments), University of Heidelberg, Germany, September 3 - 5, 2003

Eighth Viennese Workshop on Optimal Control, Dynamic Games and Nonlinear Dynamics: Theory and Applications in Economics and OR/MS Vienna (Dynamic Loading of Liquid Chemicals to Ship Compartments), Austria, May 14-16, 2003

OR2002 - International Conference on Operations Research (Demand Allocation in Multiple-Product, Multiple-Facility Make-To-Stock Production Systems), University of Klagenfurt, Austria, September 2 - 5, 2002

2001 National INFORMS meeting (Transporting and Managing Inventories of Liquid Chemical products Using Oceangoing Vessels" and Demand Allocation in Multiple-Product, Multiple-Facility Make-To-Stock Production Systems), Miami Beach, Florida, Nov. 4-7, 2001

2001 International Conference, Academy of Business and Administrative Sciences, Brussels (Demand Allocation in Multiple-Product, Multiple-Facility Make-To-Stock Production Systems), Belgium, July 23-25, 2001

2000 National INFORMS Meeting ("Optimal Lead-Time Planning in Serial Production Systems with Earliness and Tardiness Costs", and "Assignment and Loading of Liquid Chemicals to Ship Compartments"), San Antonio, TX, November 5-8, 2000

17th European Conference on Operational Research (Assignment and Loading of Liquid Chemicals to Oceangoing Vessels), Budapest, Hungary, July 16-19, 2000

2000 International Conference, Academy of Business and Administrative Sciences (Optimal Lead-Time Planning in Serial Production Systems with Earliness and Tardiness Costs), Prague, Czech Republic, July 10-12, 2000

National INFORMS Meeting ("Assignment and Loading of Liquid Chemicals to Oceangoing Vessels" and "The Use of Flowlines to Simplify Routing Complexity in Two-Stage Flowshops"), Salt Lake City, UT, May 7-10, 2000

11th Annual Meeting of the Production Operations Management Society (Scheduling of a Multi-Item-Single-Facility System with Time Varying Demands and Inventory and Backorder Costs), San Antonio, TX, April 1-4, 2000

National INFORMS Meeting (Scheduling of a Multi-Item-Single-Facility System with Time Varying Demands and Inventory and Backorder Costs), Philadelphia, PA, November 7-10, 1999

9th International Conference on Flexible Automation and Intelligent Manufacturing, Tilburg University, The Netherlands, (A Production Planning Model for an Unreliable Production Facility: Case of Finite Horizon and Single Demand) June 23-25, 1999

National INFORMS Meeting, (A Production Planning Model for an Unreliable Production Facility: Case of Finite Horizon and Single Demand), Cincinnati, OH, May 2-5, 1999

National INFORMS Meeting, (An Operational Decision Model for Lead-Time and Price Quotation in Congested Manufacturing Systems), Seattle, WA, October 25-28, 1998

16th European Conference on Operations Research (Negotiating Price/Delivery Dates in a Stochastic Manufacturing Environment), Brussels, Belgium, July 12-15, 1998

National INFORMS Meeting (Optimal and Near Optimal Control of a Two-Part-Type Stochastic Manufacturing System with Dynamic Setups), Dallas, TX, October 26-29, 1997

National INFORMS Meeting (Multi-Period Production Planning and Control with Demand and Cost Fluctuations), San Diego, CA, May 4-7, 1997

Production and Operations Management Society, Eighth Annual Meeting (Scheduling of an Unreliable Manufacturing System with Nonresumable Setup Changes), Miami, FL, April 12-15, 1997

National INFORMS Meeting (The Common Cycle Economic Lot Scheduling Problem with Backorders: Benefits of a Controllable Production Rate), Atlanta, GA, November 3-6, 1996

5th Industrial Engineering Research Conference (Production and Setup Control in a Stochastic Manufacturing System), Minneapolis, MN, May 18-21, 1996

National INFORMS Meeting (Production Scheduling in a Price Competition) New Orleans, LO, October 29 – November 1, 1995

National INFORMS Meeting (Optimal Production and Setup Control of a Dynamic Two-Product Manufacturing System: Analytical Solution), Los Angeles, CA, April 23-26, 1995

National ORSA/TIMS Meeting (Optimal Production Control of a Dynamic Two-Product Manufacturing System with Setup Costs and Setup Times), Boston, MA, April 24-27, 1994

Long Gao

January 8, 2015

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University of California
Riverside, CA 92521

Tel: 951-827-5284
Email: long.gao@ucr.edu
URL: longgao.wordpress.com

Research Interests

Revenue Management, Inventory Control, Supply Risk, Contracting, Transportation Mechanism Design, Dynamic Programming

Education

- Ph.D. in Operations Management, THE PENNSYLVANIA STATE UNIVERSITY 2002-2007
- M.S. in Engineering Physics, TSINGHUA UNIVERSITY, CHINA 2000-2002
- B.S. in Engineering Physics, TSINGHUA UNIVERSITY, CHINA 1996-2000

Academic Appointments

- Assistant Professor, AGSM, UC, Riverside July '08-Present
- Assistant Professor, University of Dayton August '07- May '08
- Visiting Scholar, The University of Sydney June '11
- Visiting Scholar, Tsinghua University June '08
- Research Assistant, Penn State University Spring '05- Summer '07

Journal Publications

1. Gao, L. Long-term Contracting: The Role of Private Information in Dynamic Supply Risk Management. *Production & Operations Management*, forthcoming, 2015.
2. Gao, L., D. Thomas, M. Freimer. 2014. Optimal Inventory Control with Retail Pre-packs. *Production & Operations Management*, 23(10), 1761–1778.
3. Gao, L., Z. Li, B. Shou. 2014. Information Acquisition and Voluntary Disclosure in an Export-Processing System. *Production & Operations Management*, 23(5), 802–816.
4. Gao, L., S.H. Xu, M. Ball. 2012. Managing an Available-to-Promise Assembly System with Dynamic Short-Term Pseudo Order Forecast. *Management Science*, 58(4), 770–790.
5. Hwang, J., L. Gao, W. Jang. 2010. Joint Demand and Capacity Management in a Restaurant System. *European Journal of Operations Research*, 207(1), 465–472.
6. Li, Z., L. Gao. 2008. The Effects of Sharing Upstream Information on Product Rollover. *Production & Operations Management*, 17(5), 522–531.
7. Xu, S. H., L. Gao, J. Ou. 2007. Service Performance Analysis and Improvement for a Ticket Queue With Balking Customers. *Management Science*, 53(6), 971–990.

Other Publications

1. Gao, L., Z. Li. 2003. An Architecture Design and Realization of the Industrial CT Visualization System. *Nuclear Electronics & Detection Technology*, 23(2), 124-128.
2. Gao, L., Z. Li. 2002. Radiation Physics and Integrity Design of Large Missile CT Inspection System. *Nuclear Electronics & Detection Technology*, 22, 68-71.

Invited Seminars

1. "Dynamic Supply Risk Management with Procurement Diversification, Discretionary Selling and Signal-Based Forecast", UBC, Vancouver, Nov. 4, 2013.
2. "Dynamic Supply Risk Management," Tsinghua University, July 9, 2012.
3. "Managing an Available-to-Promise Assembly System with Dynamic Short-Term Pseudo Order Forecast," The University of Sydney, June 10, 2011.
4. "Why Does Venture Capital Performance Persist Over Time? Evidence From A Dynamic Simulation," with David Porter, Richard Smith, Economics Department, UC Riverside, March 28, 2011.

5. "Order Processing in an Available-to-Promise System with Pseudo Orders," Statistics Department, UC Riverside, March 10, 2010.
6. "Yield Management in Freight Transportation," Tsinghua University, May 29, 2008.
7. "An Available-to-Promise Production-Inventory System with Pseudo Orders," The University of Arizona, Mar. 7, 2008
8. "An Available-to-Promise Production-Inventory System with Pseudo Orders," UC Riverside, Feb. 11, 2008
9. "Optimal Inventory Control with Retail Pre-packs," University of Dayton, Mar. 10, 2007.
10. "Optimal Inventory Control with Retail Pre-packs," Purdue University, Feb. 15, 2007.
11. "Optimal Inventory Control with Retail Pre-packs," Wilfrid Laurier University, Feb. 8, 2007.
12. "Optimal Inventory Control with Retail Pre-packs," Binghamton University, Jan. 30, 2007.

Conference Presentations

1. "How to Use Dynamic Local Knowledge: the Case for Intermodal Revenue Management," with Ting Luo, Yalcin Akcay, *MSOM*, Seattle, Jun. 21, 2014
2. "Strategic Outsourcing under Dynamic Information Asymmetry," *POMS*, Atlanta, May 10, 2014.
3. "Quality Control in an Export Processing System," with Paolo Letizia, *POMS*, Atlanta, May 9, 2014.
4. "Dynamic Capacity Leasing and Order Processing in Intermodal Freight Transportation," *INFORMS*, Minneapolis, Oct. 9, 2013
5. "Managing Long-Term Supplier Relationship under Changing Productivity", *INFORMS*, Minneapolis, Oct. 7, 2013
6. "Dynamic Supply Risk Management under Information Asymmetry", *INFORMS*, Minneapolis, Oct. 7, 2013
7. "Supply risk management in an export-processing system," *POMS*, Denver, May 4, 2013.
8. "Dynamic Risk Management in Intermodal Freight Transportation," *POMS*, Denver, May 3, 2013.
9. "Supply Risk Management in an Export-Processing System," *INFORMS*, Phoenix, October 17, 2012.
10. "Managing Supply Disruptions: Procurement Diversification, Demand Rationing and Dynamic Forecast," *INFORMS*, Charlotte, November 15, 2011.
11. "Managing Supply Disruptions: Procurement Diversification, Demand Rationing and Dynamic Forecast," *M&SOM*, Ann Arbor, June 27, 2011.
12. "Managing Supply Disruptions: Procurement Diversification, Demand Rationing and Dynamic Forecast," *POMS*, Reno, April 29, 2011.
13. "Matching Supply and Demand in the Presence of Multiclass Suppliers and Customers" *INFORMS*, San Diego, October 14, 2009.
14. "Optimal Load Tendering and Acceptance Policies for Intermodal Freight Transportation," *M&SOM*, Boston, June 30, 2009.
15. "Optimal Load Tendering and Acceptance Policies for Intermodal Freight Transportation," *POMS*, Orlando, May 3, 2009.
16. "An Available-to-Promise Production-Inventory System with Pseudo Orders," *M&SOM*, University of Maryland, June 5-6, 2008.
17. "Yield Management in Freight Transportation," *INFORMS*, Washington DC, October, 2008.

18. "An Available-to-Promise Production-Inventory System with Pseudo Orders," *INFORMS*, Seattle, November 6, 2007.
19. "The Effects of Sharing Upstream Information on Product Rollover," *INFORMS*, Seattle, November 6, 2007.
20. "Service Performance Analysis and Improvement for a Ticket Queue with Balking Customers," *M&SOM*, Atlanta, June 19, 2006.
21. "Service Performance Analysis and Improvement for a Ticket Queue with Balking Customers," *INFORMS Applied Probability Conference*, Ottawa, Canada, July 6, 2005.

Teaching Experience

- MGT 201: Quantitative Analysis (MBA core), UCR — Winter '09, '10, '11, '12, '14
  MGT 207: Operations Management (MBA core), UCR, — Spring '12, '14
  MGT 239: Simulation for Business (MBA elective), UCR — Spring, Fall '09, Fall '10, '11, '12, '13, Spring '14
  MGT 291: Directed Studies (MBA elective), UCR — Winter, Spring '10, Spring '11
  BUS 125: Simulation for Business, UCR — Spring Fall '10
- DSC 210: Statistics for Business I, University of Dayton — Fall '07, Spring '08
- Introduction to Statistics for Business — Summer '05
  Demand Fulfillment (MBA), TA — Spring '06
  Introduction to Statistics for Business, TA — Fall '04, Spring '05, Fall '05, Fall '06

Honors & Grants

- SoBA's favorite Professor list, Highlander Guide, UCR, 2014
- Omnibus Research Award, UCR, 2010, 2011, 2013, 2014
- Academic Senate Regents Award, UCR, 2012
- Finalist, Dilwyn Paiste, III Teaching Award, 2005
- Smeal Dissertation Research Award, 2005
- Smeal Graduate Fellowship, Pennsylvania State University, 2002
- Guanghua Scholarship, Tsinghua University, 2001
- Academic Excellence Scholarship, Tsinghua University, 1998, 1999

Professional Activities

- Senior Editor, *Surveys in Operations Research and Management Science*, 2013–Now
- Reviewer for *Management Science*, *Operations Research*, *Manufacturing & Service Operations Management*, *Productions & Operations Management*, *European Journal of Operations Research*, *Naval Research Logistics*, *IIE Transactions*, *Decision Sciences*, *Annals of Operations Research*
- Member, Graduate Program Committee, AGSM, UCR, 2013-Present
- Member, Recruiting Committee, AGSM, UCR, 2012, 2014
- Member, Seminar Committee, AGSM, UCR, 2009-Present
- Chair, Scholarship Committee, AGSM, UCR, 2009, 2011
- Member, Doctoral Committee, Statistics, UCR, 2010
- Vice president, Penn State University INFORMS student chapter, 2005-2007
- Member, The Institute of Operations Research and Management Sciences (INFORMS)
- Member, Manufacturing and Service Operations Management Society (M&SOM)
- Member, Production and Operations Management Society (POMS)
- Member, Applied Probability Society (APS)

Adem Orsdemir

University of California Riverside
School of Business Administration
Anderson Hall
Riverside, CA 92521

Curriculum Vitae, January, 2015
919.928.3353
E-mail: orsdemiradem@gmail.com

Research Interests

- Sustainable Operations Management
- Operations/Marketing Interface

Education

- **PhD Business Administration**, 2014
  Kenan-Flagler Business School: Operations Area
  University of North Carolina at Chapel Hill
- **MS in Statistics and Operations Research**, 2014
  University of Rochester
- **MS in Electrical and Computer Engineering**, 2009
  University of Rochester
- **BS in Electrical and Electronics Engineering**, 2006
  Bilkent University, Turkey

Professional Experience

- **Asistant Professor**, 2014-Present
  University of California Riverside
- **Research Assistant**, 2009-2014
  University of North Carolina at Chapel Hill
- **Research Assistant**, 2006-2009
  University of Rochester
- **Summer Intern**, 2005
  Ohio State University

Research

Orsdemir,A., E. Kemahlioglu-Ziya, A. Parlakturk. Competitive Quality Choice and Remanufacturing. **Production and Operations Management** 23(1) 48-64, 2014
*Presented at MSOM Sustainable Operations Special Interest Group 2012

Orsdemir, A., V. Deshpande, A. Parlakturk. Is servicization a win-win strategy? Profitability and Environmental Implications of Servicization. (*Working Paper*)

Orsdemir, A., B. Hu, V. Deshpande. Responsible Sourcing via Vertical Integration. (*Working Paper*)

Orsdemir, A., L. Gao. Bargaining and Corporate Social Responsibility. (*Work in Progress*)

Other Research (Engineering)

"Malignant Lesion Segmentation Using 4D Co-occurrence Texture Analysis Applied to Dynamic Contrast Enhanced Magnetic Resonance Breast Image Data,", B. J. Woods,B. D. Clymer, T. Kurc, J. Heverhagen, R Stevens, **A. Orsdemir**, O. Bulan, M. Knopp,*J. Magnetic Resonance Imaging*, Volume 25, pp 495-501 (2007)

"Optimal Spread Spectrum Watermark Embedding via a Multistep Feasibility Formulation,", H. O. Altun, **A. Orsdemir**, G. Sharma, M. F. Bocko, IEEE Trans. on Image Processing, 2009

"Steganalysis Aware Steganography: Statistical Indistinguishability Despite High Distortion", **A. Orsdemir**, O.Altun, G. Sharma and Mark Bocko, In Delp et al. *in Proc. SPIE: Security Forensics, Steganography, and Watermarking of Multimedia Contents X Electronic Imaging Symp. 27-31 Jan.2008, San Jose,CA*

"On the Security and Robustness of Encryption via Compressed Sensing", **A. Orsdemir**, O. Altun, G. Sharma, and M. Bocko, it in Military Communications Conference (MILCOM), Nov. 17-19, 2008, San Diego, CA

"Collusion resilient fingerprint design by alternating projections", O. Altun, G. Sharma, **A. Orsdemir**, and M. Bocko, *in Proc. IEEE Intl. Conf. Image Proc., 16-19 Sept. 2007, San Antonio, TX, vol. IV, pp. 437–440*

SEMINARS & TALKS

Orsdemir, A., V. Deshpande, A. Parlakturk. Is servicization a win-win strategy? Profitability and Environmental Implications of Servicization. University of California Riverside. January 8, 2014. Salt Lake City, Utah.

Orsdemir, A., V. Deshpande, A. Parlakturk. Is servicization a win-win strategy? Profitability and Environmental Implications of Servicization. University of Utah. October 14, 2013. Salt Lake City, Utah.

Orsdemir, A., V. Deshpande, A. Parlakturk. Is servicization a win-win strategy? Profitability and Environmental Implications of Servicization. INFORMS Annual Meeting. October 9, 2013. Minneapolis, MN.

Orsdemir, A., E. Kemahlioglu-Ziya, A. Parlakturk. "Competitive Quality and Remanufacturing". Production & Operations Management Society Annual Conference. April 22, 2012. Chicago, IL.

Orsdemir, A., E. Kemahlioglu-Ziya, A. Parlakturk. "The Impact of Quality Choice on Remanufacturing". Production & Operations Management Society Conference. April 29, 2011. Reno, NV.

Orsdemir, A., E. Kemahlioglu-Ziya, A. Parlakturk. "The Effect of Quality Choice on Remanufacturing", Workshop on New Product Development, Innovation, and Sustainability, October 14, 2010, Kelley School of Business, Indiana University.

TEACHING EXPERIENCE

- **Instructor**, University of North Carolina (Fall 2013)
  Busi 403 Operations Management
  Class Enrollment: 39
  Overall Rating: 4.2/5
- **Teaching Assistant**, University of North Carolina (Fall 2011, Fall 2012)
  For Courses: Busi 403, Busi 410. Conducted recitations, held office hours, designed and graded problem sets.
- **Teaching Assistant**, University of Rochester (Fall 2006, Spring 2007)
  For Courses: Signals and Systems, Circuits and Signals. Conducted recitations, held office hours, designed and graded problem sets and laboratory projects

SERVICE

- **Reviewer:** Decision Sciences, Naval Research Logistics

HONORS & AWARDS

- INFORMS 2013 Future Academician Colloquium Participant
- Awarded full-tuitionship for graduate studies by University of Rochester
- Listed as high honor student at Bilkent University
- Ranked 309^{th} at University Entrance Examinations in Turkey

PERSONAL INFO

- **Languages:** Turkish (native), English (fluent), German (beginner)

ACTIVITIES

- **Student Reviewer:** IEEE ICIP, IEEE ICASSP, EUSIPCO
- **Clubs:** President of Turkish Students Association in University of Rochester

Elodie Adida (Goodman)

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University of California at Riverside
Anderson Hall Room 225
900 University Ave., Riverside, CA 92521

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Professional Appointments

2012 – present **University of California at Riverside**, School of Business Administration, Riverside CA
Assistant Professor of Operations and Supply Chain Management

2006 – 2012 **University of Illinois at Chicago**, Mechanical and Industrial Engineering, Chicago IL
Assistant Professor of Industrial Engineering

Education

2001 – 2006 **Massachusetts Institute of Technology**, Operations Research Center, Cambridge MA
Ph.D. in Operations Research.
Dissertation: *Dynamic Pricing and Inventory Control: Uncertainty and Competition*
Advisor: Dr. Georgia Perakis

1999 – 2001 **Ecole Centrale Paris**, France
MS in Engineering (Diplôme d'ingénieur)

Publications

Published Peer-Reviewed Journal Articles

David, A., E. Adida. 2014. Competition and Coordination in a Two-Channel Supply Chain. To appear in *Production and Operations Management*.

Adida, E., G. Perakis. 2014. The Effect of Supplier Capacity on the Supply Chain Profit. *Annals of Operations Research*. **223**(1): 1-52.

Adida, E., D. Dey, H. Manani. 2013. Operational Issues and Network Effects in Vaccine Markets. *European Journal of Operational Research*. **231**(2): 414-427.

Jones, R, E. Adida. 2013. Selecting Nonpharmaceutical Interventions for Influenza. *Risk Analysis*. **33**(8): 1473-1488.

Chen, Q., E. Adida, J. Lin. 2013. Implementation of an Iterative Headway-Based Bus Holding Strategy with Real-Time Information. *Public Transport*. **4**(3): 165-186.

Mamani, H., E. Adida, D. Dey. 2012. Vaccine Market Coordination Using Subsidy. *IIE Transactions on Healthcare Systems Engineering*. **2**(1): 1-19.

Adida, E., V. DeMiguel. 2011. Supply Chain Competition with Multiple Manufacturers and Retailers. *Operations Research*. **59**(1): 156-172.

Adida, E., N. Ratisoontorn. 2011. Consignment Contracts with Retail Competition. *European Journal of Operational Research*. **215**(1): 136-148.

Adida, E., P.C. DeLaurentis, M. Lawley. 2011. Hospital Stockpiling for Disaster Planning. *IIE Transactions*. **43**(5): 348-362.

Jones, R, E. Adida. 2011. Influenza Infection Risk and Predominate Exposure Route: Uncertainty Analysis. *Risk Analysis*. **31**(10): 1622-1631.

Adida, E., G. Perakis. 2010. Dynamic Pricing and Inventory Control: Robust vs. Stochastic Uncertainty Models - A Computational Study. *Annals of Operations Research*. **181**(1): 125-157.

Adida, E., G. Perakis. 2010. Dynamic Pricing and Inventory Control: Uncertainty and Competition. *Operations Research*. **58**(2): 289-302.

Adida, E., P. Joshi. 2009. A Robust Optimization Approach to Project Scheduling and Resource Allocation. *International Journal of Services Operations and Informatics*. **4**(2): 169-193.

Adida, E., G. Perakis. 2007. A Nonlinear Continuous Time Optimal Control Model of Dynamic Pricing and Inventory Control with no Backorders. *Naval Research Logistics*. **54**(7): 767-795.

Adida, E., G. Perakis. 2006. A Robust Optimization Approach to Dynamic Pricing and Inventory Control with no Backorders. *Mathematical Programming*. **107**(1-2): 97-129.

Submitted Peer-Reviewed Journal Articles

Adida, E., V. DeMiguel, N. Bakshi. 2014. Sourcing Through Intermediaries: The Role of Competition.

Adida, E., H. Mamani, S. Nassiri. 2014. Bundled payments vs. Fee-for-service: Impact of Payment Scheme on Performance.

Working Papers

Gao, L., E. Adida. 2014. How to Use Dynamic Private Information: Outsourcing under Changing Supplier Capability.

Other – Refereed Conference Proceedings

Adida, E., H. Mamani, S. Nassiri. 2014. Bundled Payments vs. Fee-for-Service: Impact of Medicare's Payment Scheme on Treatment Level, Participation and Social Welfare. Proceedings of MSOM, University of Washington, Seattle.

Adida, E., N. Bakshi, V. DeMiguel. 2013. Supply Chain Intermediation when Retailers Lead. Proceedings of MSOM Supply Chain Special Interest Group (SIG), INSEAD.

Adida, E., H. Mamani, D. Dey. 2012. Operational Issues and Network Effects in Vaccine Markets. Proceedings of MSOM, Columbia University.

Adida, E., N. Bakshi, V. DeMiguel. 2012. Supply Chain Intermediation when Retailers Lead. Proceedings of MSOM, Columbia University.

Jones, R, E. Adida. 2011. Integrating Exposure and Epidemiological Models to Select Non-Pharmaceutical Interventions for Influenza. *Epidemiology: Abstracts of 2010 Joint Conference of International Society of Exposure Science & International Society for Environmental Epidemiology on Emerging Infectious Disease and Environmental Factors.* **22**(1): S145.

DeLaurentis, P.C., E. Adida, M. Lawley. 2010. Hospital Stockpiling for Disaster Planning. Proceedings of Industrial Engineering Research Conference, Cancún, Mexico.

Chen, Q., E. Adida, J. Lin. 2010. An Investigation in Real-Time Bus Holding Policy. Proceedings of Hong Kong Society for Transportation Studies International Conference, Hong-Kong.

Adida, E., V. DeMiguel. 2009. Efficiency and Coordination in a Supply Chain with Competing Manufacturers and Retailers. Proceedings of MSOM, MIT.

DeLaurentis, P.C., E. Adida, M. Lawley. 2009. Hospital Stockpiling for In Pandemics with Pre-Determined Response Levels. Proceedings of IEEE International Conference on Service Operations, Logistics and Informatics, Chicago IL.

DeLaurentis, P.C., E. Adida, M. Lawley. 2008. A Game Theoretical Approach for Hospital Stockpile in Preparation for Pandemics. Proceedings of Industrial Engineering Research Conference, Vancouver, Canada.

Other – Book Publication
Adida, E. 2007. *Dynamic Pricing and Inventory Control - No Backorders under Uncertainty and Competition*. VDM Verlag Dr. Muller. Berlin, Germany. ISBN: 978-3836421430.

Invited Talks

ESSEC Business School, 2012, Paris, France.
University College London, Management Science and Innovation, 2012, London UK.
University of California - Riverside, Anderson Graduate School of Management, 2012, Riverside CA.
San José State University, College of Business, 2012, San José CA.
Illinois Institute of Technology, Stuart School of Business, 2012, Chicago IL.
Illinois Institute of Technology, Stuart School of Business, 2011, Chicago IL.
Massachusetts Institute of Technology, Sloan School of Management, 2011, Cambridge MA.
Northwestern University, Industrial Engineering and Management Sciences, 2010, Evanston IL.
University of California at Irvine, The Paul Merage School of Business, 2009, Irvine CA.
University of Chicago, Graduate School of Business, 2007, Chicago IL.
Purdue University, Biomedical Engineering, 2007, West Lafayette IN.
Northwestern University, Kellogg School of Management and Industrial Engineering and Management Sciences, 2007, Evanston IL.
University of Illinois at Chicago, Mechanical and Industrial Engineering, 2006, Chicago IL.
University of Washington in St. Louis, Olin School of Business, 2006, St. Louis MO.
University of Texas at Dallas, School of Management, 2006, Dallas TX.
IBM Research T.J. Watson Labs, 2004, Hawthorne NY.

Conference Presentations

"Bundled Payments vs. Fee-for-Service: Impact of Medicare's Payment Scheme on Treatment Level, Participation and Social Welfare"
INFORMS Healthcare Conference, Nashville TN, July 2015
INFORMS Annual Meeting, San Francisco CA, November 2014.
MSOM Annual Conference, University of Washington Seattle, June 2014.

"Competition and Coordination in a Two-Channel Supply Chain."
INFORMS Annual Meeting, San Francisco CA, November 2014.
IFORS Conference, Barcelona, Spain, July 2014.
POMS Annual Conference, Atlanta GA, May 2014.
INFORMS Annual Meeting, Minneapolis MN, October 2013.
Annual Southern California OR/OM Day, University of California, Irvine, May 2013.
INFORMS Annual Meeting, Phoenix AZ, October 2012.

"Managing Long-Term Supplier Relationship under Changing Productivity."
INFORMS Annual Meeting, San Francisco CA, November 2014.
POMS Annual Conference, Atlanta GA, May 2014.
INFORMS Annual Meeting, Minneapolis MN, October 2013.

"Supply Chain Intermediation When Retailers Lead."
MSOM Annual Conference, Supply Chain Management SIG, INSEAD, France, July 2013.
INFORMS Annual Meeting, Phoenix AZ, October 2012.
MSOM Annual Conference, Columbia University, June 2012.
POMS Annual Conference, Chicago IL, April 2012.

"Operational Issues and Network Effects in Vaccine Markets."
INFORMS Annual Meeting, Phoenix AZ, October 2012.
MSOM Annual Conference, Columbia University, June 2012.
POMS Annual Conference, Chicago IL, April 2012.

"Consignment Contracts with Retail Competition."
POMS Annual Conference, Chicago IL, April 2012.
INFORMS Annual Meeting, Charlotte NC, November 2011.

"Public Policy Implications for a Vaccine Supply Chain: Operational Issues and Negative Network Effects."
INFORMS Annual Meeting, Charlotte NC, November 2011.

"Supply Chain Intermediation: A Three-Tier Competition Model."
INFORMS Annual Meeting, Charlotte NC, November 2011.

"Vaccine Market: Operational Issues and Externality Effect."
INFORMS Annual Meeting, Charlotte NC, November 2011.
INFORMS Healthcare Conference, Montreal, Canada, June 2011.

"An Investigation in Real-Time Bus Holding Policy."
Hong Kong Society for Transportation Studies Conference, Hong-Kong, December 2010.

"Economics of Vaccine Coverage and Public Policy Implications."
INFORMS Annual Meeting, Austin TX, November 2010.

"Integrating Exposure and Epidemiological Models to Select Non-Pharmaceutical Interventions for Influenza"
Joint Conference of International Society of Exposure Science & International Society for Environmental Epidemiology (poster), Seoul, Korea, August 2010.

"Hospital stockpiling for disaster preparedness."
IIE Annual Conference, Cancún, Mexico, June 2010.

"Efficiency and Coordination in a Supply Chain with Competing Manufacturers and Retailers."
Behavioral and Quantitative Game Theory Conference, Newport Beach CA, May 2010.
INFORMS Annual Meeting, San Diego CA, October 2009.
International Symposium on Mathematical Programming, Chicago IL, August 2009.
MSOM Annual Conference, MIT, June 2009.
INFORMS Revenue Management and Pricing Conference, Northwestern University, June 2009.
Optimization Applications in Engineering and Applied Sciences Conference, UIUC, March 2009.

"Hospital Stockpiling for Influenza Pandemics with Pre-set Response Levels."
INFORMS Annual Meeting, San Diego CA, October 2009.
IEEE Conference on Service Operations, Logistics and Informatics (SOLI), Chicago IL, July 2009.

"Inventory Stockpiling and Sharing for Disaster Preparedness."
INFORMS Annual Meeting, San Diego CA, October 2009.

"A Game Theoretical Approach for Hospital Stockpile in Preparation for Pandemics."
INFORMS Annual Meeting, Washington DC, October 2008.
IIE Annual Conference, Vancouver, Canada, May 2008.
Healthcare Engineering Symposium on the Interface of Health Services Research and Healthcare Engineering (poster), Research Triangle Park NC, April 2008.
INFORMS Annual Meeting, Seattle WA, November 2007.

"The Strategic Role of Capacity in a Joint Inventory Management and Pricing Game."
INFORMS Annual Meeting, Washington DC, October 2008.
INFORMS Annual Meeting, Seattle WA, November 2007.
INFORMS Midwest Regional Conference, Northwestern University, August 2007.
INFORMS Revenue Management and Pricing Conference, Universitat Pompeu Fabra, June 2007.

"Dynamic Pricing and Inventory Control under Uncertainty."
International Conference on Continuous Optimization/ Modeling and Optimization: Theory and Applications, Hamilton, Canada, August 2007.
EURO XXI, Prague, Czech Republic, July 2007.
INFORMS Annual Meeting, Pittsburgh PA, November 2006.
INFORMS Revenue Management and Pricing Conference, Columbia University, June 2006.

"Dynamic Pricing and Inventory Control: Uncertainty and Competition through Robust Optimization and Quasi-Variational Inequalities."
International Symposium on Mathematical Programming, Rio de Janeiro, Brazil, August 2006.

"Dynamic Pricing and Inventory Control with no Backorders; Uncertainty and Competition."
INFORMS Annual Meeting, San Francisco CA, November 2005.
IFORS Triennial, Honolulu HI, July 2005.
INFORMS Revenue Management and Pricing Conference, MIT, June 2005.

"A Robust Nonlinear Fluid Model of Dynamic Pricing and Inventory Control with no Backorder."
INFORMS Annual Meeting, Denver CO, October 2004.
INFORMS Revenue Management and Pricing Conference, MIT, June 2004.
INFORMS Annual Meeting, Atlanta GA, October 2003.

Awards and Distinctions

Research awards
UCR Research and Travel Award: $1700, 2014–15
UCR Academic Senate Regents Fellowship: $4400, 2013–14
UCR Research and Travel Award: $1650, 2013–14
First author of the *IIE Transactions* article *Hospital Stockpiling for Disaster Planning* selected to be highlighted in the *IE Magazine* of May 2011.
UIC STEM Education Research Grant: $5,000, 2010–11
UIC Faculty Scholarship Support award: $1,000, 2012
UIC Faculty Scholarship Support award: $1,000, 2011
UIC Faculty Scholarship Support award: $1,000, 2010
UIC Faculty Scholarship Support award: $1,000, 2009
UIC Women in Science and Engineering Research award: $6,000, 2010
UIC Women in Science and Engineering Research award: $1,000, 2009
UIC Women in Science and Engineering Research award: $5,000, 2008

Service awards
IIE Regional Outstanding Faculty Advisor Award, 2012
Outstanding reviewer for the journal *IEEE Transactions on Automatic Control*, 2007

Other
Participant, INFORMS Doctoral Colloquium, Pittsburgh PA, 2006
Georges Besse Foundation Fellowship, 2001
Jean Gaillard Memorial Fellowship, 2001
Hoschet Prize, 2000–01

Teaching

Decision-Making Under Uncertainty MGT 221, UCR, Spring 2013, Spring 2014, Fall 2014
Elective MBA course. Introduces computer-based models for business decision-making under

uncertainty. Basics of decision analysis, spreadsheet-based data analysis, modeling and optimization. Taught in computer lab. Enrollment: 24-32.

Quantitative Analysis MGT 201, UCR, Winter 2013, Fall 2014, Winter 2015
Core MBA / Master of Finance course. Introduces statistics for management. Introduces fundamental statistical tools for managerial decision-making. Basics of data analysis, probability, sampling theory, estimation, hypothesis testing, regression analysis. Enrollment: 1 or 2 sections of 50-60.

Operations Research I IE 471, UIC, Fall 2008, Fall 2009, Fall 2010, Fall 2011
Undergraduate and Masters course. Introduction to operations research, formulation of linear programming problems, simplex methods, duality theory, sensitivity analysis, network models, and integer linear programming formulations. Enrollment: 15-30.

Probability and Statistics for Engineers IE 342, UIC, Fall 2006, Spring 2007, Summer 2010, Fall 2010, Spring 2012
Undergraduate course. Probability, random variables, mathematical expectation, discrete and continuous distributions, estimation theory, and test of hypotheses. Enrollment: 40-65.

Financial Engineering IE 201, UIC, Fall 2007, Spring 2008, Fall 2008, Spring 2009
Undergraduate course. Principles and techniques of economic analysis in engineering and management science. Time value of money, interest rates, present worth analysis, rate of return analysis. Enrollment: 100.

Nonlinear Optimization IE 576, UIC, Fall 2009, Fall 2011
Masters and PhD course. Convex analysis, line search techniques, unconstrained and constrained optimization, optimality conditions, duality, convex and non-convex optimization, interior point methods, and real-world applications. Enrollment: 14-17.

Professional Service

Panel participation
Invited panelist at INFORMS 2014 Doctoral Student Colloquium, 2014

Organization of Sponsored/Invited Sessions in International Conferences
Session Chair, INFORMS, 2014
Session Chair, IFORS, 2014
Session Chair, INFORMS, 2013
Session Chair, INFORMS, 2009
Session Chair, OptimA, 2009
Session Chair, INFORMS, 2008
Session Chair, EURO XXII, 2007
Session Chair, ICCOPT/MOPTA, 2007
Session Chair, INFORMS, 2007

Judging service for paper competitions
Judge of POMS College of Healthcare Operations Management Best Paper Competition, 2012
Judge of MSOM Student Paper Competition, 2009

Refereeing service for conferences
Reviewer for ISB-POM Workshop paper submissions, 2014
Reviewer for MSOM Conference paper submissions, 2014
Reviewer for MSOM Conference paper submissions, 2012
Reviewer for MSOM Conference paper submissions, 2011

Refereeing service for grant proposals
Panel Reviewer for National Science Foundation, Service Enterprise Systems program, 2011
Panel Reviewer for National Science Foundation, Service Enterprise Systems program, 2010

Panel Reviewer for National Science Foundation, Computational Mathematics program, 2010

Refereeing service for journals
Ad hoc referee for: *Management Science, Operations Research, Manufacturing and Service Operations Management, Production and Operations Management, Mathematics of Operations Research, The European Journal of Operational Research, Transportation Science, Naval Research Logistics, IEEE Transactions on Automatic Control, IEEE Transactions on Automation Science and Engineering, IIE Transactions, INFORMS Journal on Computing, Networks and Spatial Economics, Operations Research Letters, Annals of Operations Research, International Journal of Production Economics, OR Spectrum, Applied Mathematics and Computation, Journal of Revenue Management and Pricing, The Asia-Pacific Journal of Operational Research, Optimization Letters, Journal of Intelligent Manufacturing, International Journal of Systems Science, Wiley Encyclopedia of Operations Research and Management Science, Engineering Optimization.*

Other
Affiliated Faculty Member of the Transportation Center at Northwestern University, 2010 – present.
Faculty Advisor, UIC Student Chapter of the Institute of Industrial Engineers, 2009–12.

Academic Service
UCR SoBA School Research Committee member, 2014-present
UCR SoBA Graduate Academic Committee member, 2014-present
UCR SoBA Management Faculty Search Committee member, 2014–present
UCR SoBA Interdepartmental Graduate Program in Management Faculty member, 2012 – present
UCR SoBA School Research Committee **Chair**, 2014
UCR SoBA Undergraduate Academic Committee member, 2012–14
UCR SoBA Operations and Supply Chain Management Faculty Search Committee member, 2013–14
UCR SoBA Finance and Marketing Endowed Chairs Search Committee member, 2013–14
UIC Honors College Fellow, 2010–12
UIC Honors students Faculty Advisor, 2010–12
UIC MIE Department Advisory Committee member 2010–11
UIC MIE Department IE Recruiting Committee member, 2009–10, 2011–12
UIC MIE Department Outreach and Publicity Committee member, 2009–11
UIC MIE Department Faculty Secretary, 2006–08
UIC IE Seminar coordinator, 2008–09
UIC IE thesis committee member of 8 Masters/PhD students, 2006–12
UIC IE undergraduate recruiting committee, 2007–12

Graduate student advising
PhD Thesis committee member for Arisha Ashraf, UCR Environmental Economics and Policy, 2014-present.
MBA Thesis Committee member for Kevin Straight, UCR, 2013-14
PhD Thesis committee Chair for Amy David, UIC, 2010–12 (2014 placement: Purdue University, Krannert School of Management)
PhD Thesis committee Chair for Nantaporn Ratisoontorn, UIC, 2009–12 (placement: UIC, MIE)
PhD co-advisor, Qin Chen, UIC, 2009–12
Undergraduate advisor for 4 undergraduate students, UIC, 2007–09
Masters advisor, Pradnya Joshi, UIC, 2007–08

Memberships
Institute for Operations Research and the Management Sciences (INFORMS)
Health Applications Society
MSOM Society
Women In ORMS Forum

January 2015

Response to Committee on Planning and Budget
Proposal for a new self-supporting Master of Supply Chain & Logistics Management

We thank the members of the committee on Planning and Budget (CPB) for their effort and thorough review of the proposal for a new Master of Supply Chain & Logistics Management. The proposal greatly benefitted from your feedback and suggestions. In the following we respond to the concerns expressed by the members of the CPB item by item.

Business Plan

According to section VI.H of the UC Policy on Self-Supporting Graduate Degree Programs (dated 9/11/2011)1, *"State-supported and self-supporting programs must separately account for their use of resources."* The budget in the proposed proposal, in contrast, presents only marginal costs. CPB would like to review an estimated budget for this program that includes all associated costs, including the faculty salaries, staff support, and facilities. This could be estimated and included as an overhead, but then an explanation of how that overhead was determined should be included. Given the true costs, CPB would then like know how many students the program would need to enroll to pay for all direct and indirect costs.

Response: We have revised the projected budget section and in particular the Excel sheet showing the school expenditures according to the new proposed business model. The majority of the School of Business expenditures are allocated in this projected budget based on number of students in each program, including Undergraduate and Graduate Programs. The proposed fee structure is based on the 2016-17 UCR Master of Finance per unit rate. The new projected budget shows the projected number of students and the generated revenue for the first five years of the program. Note that we used a very conservative figure of the projected number of students with only five students to start the program.

Market Analysis

CPB would like to see a more thorough market analysis that demonstrates competiveness as well as higher education and workforce needs. Areas that need to be addressed include:
(i) Tuition. The proposal should include a section discussing fees that includes a comparison with similar programs and a justification of the proposed fees.

Response: We have included a table showing tuition for similar programs. Market comparison took into consideration Masters of Supply Chain programs that offer 16 courses as the proposed UCR program versus 9 courses offered in other Master of Supply Chain programs such as USC.

1 CPB is aware that the policy is undergoing revision. We have reviewed a draft of the revised policy, and our concerns remain.

(ii) Workforce needs. The proposal should include data pertaining to the job prospects for the region, California, and elsewhere. What types of jobs will require this Master's degree, how many of these jobs are available regionally, nationally, and internationally? Is California a hub for such positions?

Response: We have already included a section showing the potential market for graduates of such a program. Supply Chain Management is a broad discipline and is not limited to a particular

area. Graduates of such a program are solicited throughout the whole United States and abroad such as Europe, China, South East China, India, and other areas of the world.

(iii)Target audience. Expected demographic information (e.g. foreign vs. domestic, resident vs non-resident) should be included. The career objectives from these different audiences may vary and should be discussed.

Response: The MSCLM will target qualified student both domestic and international. However, similar to the Master of Finance and Master of Accounting self-supporting programs, we expect the majority of the students of this program to be Asians and more precisely Chinese. We will work very hard to attract qualified domestic students through scholarships, fellowships and other financial means. As indicated above in our response, a MSCLM degree allows similar career objectives with the exception of those graduates who desire to continue in a related Ph.D. program.

Faculty Effort
The development of 4 classes, evaluation of capstone projects, and program service (e.g. admissions committee) will take significant faculty effort. Is this budgeted? Will any of this effort be compensated with a summer stipend or off-load teaching? What is the percent of classes taught by ladder rank faculty and will it change as a result of the program?

Response: The majority of the School of Business expenditures are allocated in the new projected budget based on number of students in each program, including Undergraduate and Graduate Programs. In particular, instructional Support – costs to teach 4 new courses developed specifically for the Master of Supply Chain & Logistics Management Program. Ladder rank faculty teaching in self-supporting programs are compensated on an over-load fashion.

Academic Quality
Self-Supporting Graduate Degree Programs are held to the same academic standards as state-supported programs. Given this, the proposal would benefit from letters of support from faculty at peer institutions. The letters could also serve to support the demand of a program in this field.

Response: We have included two additional letters from two highly reputed scholars in the Supply Chain Management area. Prof. Charles Corbett, from the Anderson School of Management at UCLA, served as the Associate Dean of the MBA program and is currently the IBM Chair in Management and Professor of Operations Management and Sustainability. Professor Rick so, from the Paul Merage School of Business at UCI, serves as Professor and Area Coordinator of the Operations and Decision Technologies Group. Dr. So had previously served as Director of Ph.D. Programs and Associate Dean of Undergraduate Programs.

Plan for Evaluation
CPB suggests for the evaluation to be expanded, including an ongoing evaluation from the start of the program. We also suggest the creation of surveys for various times in the student's careers, such as entry, midpoint, graduation, and post-graduation. The program would also benefit from the creation of various assessment metrics from the start.
In addition to the items listed above, we have a few additional comments and questions:

• Have the faculty voted on this proposal? If so, what is the vote?

Response: Both the executive committee (on 10/12/2015) and the entire faculty (on 10/23//2015) approved the proposal.

• The proposal is also absent discussion of placement of students after graduation, which may be especially important since this is a professional degree requiring professional fees.

Response: Similar to all the professional degrees offered by the school, the school career center will help students with placement.

• [p1] "*The program is an ideal path for some of our students to pursue PhD programs in supply chain management and Logistics"*. This should be clarified or removed. While the program may be a possible pathway into a PhD program, with the program's high costs and professional orientation it may not be an ideal path.

Response: we have changed the statement as suggested by the CPB. It now reads "The program maybe a possible pathway into a PhD program in supply chain management." Furthermore, we are not advocating for students to use this program as a pathway into a Ph.D. program. We are just saying some graduates may decide to get into a Ph.D. program after graduation and the knowledge and foundation they obtain through this program will be very beneficial.

• [p2] The quoted reports appear to be somewhat dated. We wonder if there are more up-to-date reports. Similar comments on p5 and elsewhere through text.

Response: We have updated the information with more recent reports.

• [p6] "… recently developed strategic plan, UCR 2020" phrase seems dated.

Response: we have rewritten the entire paragraph.

• [p7] "as the program grows, it may be necessary" => will be necessary?

Response: We have changed it according to the suggestion.

• [p7] "the MSCLM degree program will share resources with the MBA program".
What assurances are in place that this new self-supporting program will not drain resources from state-supported MBA program?

Response: As indicated in the new projected budget the program will be responsible for its expenses and will not drain resources from state-supported MBA program. Furthermore, the two self-supporting programs have been generating a surplus for the school since their launch. We believe this program will have similar revenue streams.

• [p8] "Initial administrative support will be provided by existing SoBA staff in conjunction…." Given the shortage of SoBA staff, this should be discussed. Also, it does not appear to be budgeted.

Response: This is now reflected in the new projected budget. The graduate programs staff size has grown substantially in the last two years.

• [p10] "… students are expected to intern with local and global companies". What support is in place to help assure placement and what are the placement expectations (e.g. 100%)? What if they can't find an internship?

Response: Our full time MBA program has the same requirement. Students get help with their internships from the graduate programs career center. All our MBA students end up finding an internship and we expect it to be the case for the MSCLM program.

• [p13] "USC's tuition for 2015-16 is $46,160". This would appear to be significantly less than the $1330/unit used in the budget (exhibit II) for this program. What is the justification for charging more than USC? Has market research been done to substantiate?

Response: As indicated above, we have updated this information and we have included a table comparing the cost of our proposed program to similar programs. The tuition/unit is the same as in the two current self-supporting programs.

• [p19] "a minimum of 15% of gross revenue will be allocated for financial aid …"
Given the expected domestic to international ratio, what are the financial aid expectations for domestic students?

Response: Similar to our current MBA program and self-supporting programs, the majority of the financial aid goes to domestic students. The history of the current self-supporting programs shows that 15% of the student enrollment are domestic. The average award to the domestic students is 20-25% the cost of the program. The average award to the international students is 10-15%.

• [p19] "We believe that we can deliver a high quality program to as many as 40 students per year utilizing current resources". Given that this is a proposal for a self-supporting program, all costs should be budgeted and mechanisms need to be in place to insure that state-supported programs are not being adversely affected.

Response: Please see the new projected budget which shows that all costs are budgeted for.

• [p18] "The School of Business Administration currently has a reserve that will allow it to launch …" How much of the reserve is expected to be used and how long is expected to take to recover these costs?

Response: As the new projected budget shows the program will result in a surplus beginning year 1 with a conservative number of 5 students.

• [p26] This spreadsheet should be fully explained in the text.

Response: The new spreadsheet includes more information that makes it self-explanatory.

• There are several formatting errors (Professor Y. Peter Cheung's CV includes formatting comments from Track Changes), courses should be listed in numerical order, etc.

Response: We took care of all editing concerns.

Response to Graduate Council
Proposal for a new self-supporting Master of Supply Chain & Logistics Management

We thank the members of the Graduate Council for their effort and thorough review of the proposal for a new Master of Supply Chain & Logistics Management. The proposal greatly benefitted from your feedback and suggestions. In the following we respond to the concerns expressed by the members of the Graduate Council, item by item.

1. The admissions criteria for the program are not defined. For a graduate program in a specialized technical area, some admissions criteria would be helpful to describe, such as undergraduate course work in some relevant areas or quantitative methods, etc. Other holistic criteria can also be described that will be used by the admissions committee.

Response: The admissions criteria to the Supply Chain and Logistics Management program will be aligned with current admissions practices in all SoBA's graduate programs. These criteria use a holistic assessment of eligibility and potential for success. This holistic process includes both quantitative criteria (GPA, GMAT score), and qualitative criteria (including quantitative background, work experience, the quality of undergraduate institution attended, and the rigor of the undergraduate major) in the overall assessment of an applicant's eligibility for admission to the Supply Chain and Logistics Management Program.
The recommended Academic Index Score of (200 x GPA) + GMAT + Qualitative Index, is currently used by all SoBA's graduate programs to inform their admissions decisions, as well as for determination of eligibility for merit scholarships. The Qualitative Index will range from 0-100 and will be assigned by Graduate program staff and reviewed by the Graduate Advisor. An applicant with an Academic Index Score $\geq$ 1000 may be recommended to the Graduate Division for admission by the Graduate Advisor in consultation with the program director. Those applicants with lower scores will be placed on a waiting list, advised to retake the GMAT, or rejected, as appropriate. For those qualified students with lower scores, a request for an exception from the UCR's Graduate Division will be sought.

Typical students who would be admitted to the program exhibit strong quantitative background. For example students with a bachelor degree in Engineering, Economics, Math, physics or a quantitative Business degree would constitute a very good fit.

2. Graduate advising is not well described. Who will be responsible for graduate advising? In addition, since the argument has been made for the demand for graduates with degrees in this topic, who will provide career guidance for the students.

Response: As is the case with the current MFin and MPAc master programs, the program director is responsible for graduate advising while the career center in collaboration with the program director provide career guidance for the students.

3. The financial plan lacks any details. Of particular concern is the statement that there is sufficient existing capacity in the school to teach the classes. For a self-supporting program, all costs, including faculty teaching, advising, materials, and so on, should be accounted for in the financial plan, since the resources for the program cannot be drawn from state-supported educational programs and resources. Compensation for faculty, and any potential needs to hire staff and faculty for this program should be clear.

Response: We have revised the financial plan to address the council's concerns as follows.

Business Plan – The majority of the School of Business expenditures are allocated in this projected budget based on # students in each program, including Undergraduate and Graduate Programs.

Market Analysis – the proposed fee structure is based on the 2016-17 UCR Master of Finance per unit rate. Internal market comparison across the UCR School of Business self-supporting Graduate Program rates is important.
Market comparison took into consideration Masters of Supply Chain programs that offer 16 courses as the proposed UCR program versus 9 courses offered in other Master of Supply Chain programs such as USC.

Instructional Support – costs to teach 4 new courses developed specifically for the Master of Supply Chain & Logistics Management Program.

Financial Aid – The history of the current MPAc and MFin programs shows that 15% of the student enrollment are domestic. The average award to the domestic students is 20-25% the cost of the program. The average award to the international students is 10-15%

In addition, the School of Business Administration has been authorized to hire up to four faculty members through the Supply Chain Management Cluster hire.