



ARIZONA STATE UNIVERSITY
PROPOSAL TO ESTABLISH A NEW GRADUATE DEGREE

DEGREE PROGRAM

College/School(s) offering this degree: W. P. Carey School of Business

Unit(s) within college/school responsible for program: W.P. Carey School of Business Dean's Office

If this is for an official joint degree program, list all units and colleges/schools that will be involved in offering the degree program and providing the necessary resources: NA

Proposed Degree Name: Master of Science in Supply Chain Management and Engineering

Master's Degree Type: MS-Master of Science

Doctoral Degree Type: NA

If Degree Type is Other, provide proposed degree type: NA

and proposed abbreviation: NA

Proposed title of major: Supply Chain Management and Engineering

Is a program fee required? Yes No

Requested effective term: Fall and year: 2013

(The first semester and year for which students may begin applying to the program.)

PROPOSAL CONTACT INFORMATION

(Person to contact regarding this proposal)

Name: Dr. John Fowler

Title: Professor

Phone: 965-4330

email: john.fowler@asu.edu

DEAN APPROVAL

This proposal has been approved by all necessary unit and College/School levels of review, and the College/School(s) has the resources to offer this degree program. I recommend implementation of the proposed degree program. (Note: An electronic signature, an email from the dean or dean's designee, or a PDF of the signed signature page is acceptable.)

College Dean Name: Amy Hillman, Executive Dean

College Dean Signature  **Date:** 9/20/12

College Dean name: Paul Johnson
(If more than one college involved)

College Dean Signature  **Date:** 10/4/12

**ARIZONA STATE UNIVERSITY
PROPOSAL TO ESTABLISH A NEW GRADUATE DEGREE**

DEGREE PROGRAM INFORMATION

Master's: MS-Master of Science

Proposed title of major: Supply Chain Management and Engineering

1. PURPOSE AND NATURE OF PROGRAM

A. Brief program description

The Master of Science in Supply Chain Management and Engineering (MS-SCME) will be a two year, 30 credit hour program for working professionals in supply chain management, industrial engineering or a related field that consists of 15 credit hours of courses from the Department of Supply Chain Management in the W. P. Carey School of Business and 15 credit hours from the Industrial Engineering program in the School of Computing, Informatics, and Decision Systems Engineering in the Ira A. Fulton Schools of Engineering. Most students will have an undergraduate degree in a technical field, such as business, engineering, or science. The objective is twofold: (1) to provide students with knowledge of the fundamental foundations across the full spectrum of supply chain management functions, and (2) the ability to use state-of-the-art engineering tools to analyze, control, and optimize modern supply chains. The initial offering of the degree will be online.

Key Program Elements

- A rigorous cohort-based program allows students to develop a network of future business colleagues, learn from one another, and creates a supportive environment for learning.
- A set of four courses from the Department of Supply Chain Management courses that focus on a business approach to fundamental supply management, logistics management, and operations management issues faced by supply chain professionals in manufacturing and service industries, as well as those in government.
- A set of three courses from the Industrial Engineering Program that focus on mathematical tools and techniques that can be used to analyze, control, and optimize modern supply chains.
- A set of two courses from the Industrial Engineering Program that focus on an engineering approach to fundamental supply management, logistics management, and operations management issues faced by supply chain professionals in manufacturing and service industries, as well as those in government.
- A capstone applied project course that covers project management and where students generate and evaluate alternative solutions to a real supply chain situation and provide a project report deliverable to the client business.

B. Total credit hours required for the program: 30

C. Are any concentrations to be established under this degree program? Yes No

2. PROGRAM NEED

Supply chain operations are a major sector of Arizona’s economy and this sector is growing rapidly, especially in the service area. Companies such as American Express, Honeywell, Intel, and Raytheon have a major presence in Arizona and each relies heavily on continuously improving their supply chain strategy and operations for their global success. Arizona is also a major center for regional, national, and international distribution that requires increasing supply chain expertise to remain competitive.

There are a number of MS degrees in supply chain management available throughout the country, as well as a number of MS degrees in industrial engineering available, there is only one other program that combines these two distinct supply perspectives in a single degree.

The new Master of Science in Supply Chain Management and Engineering supports the university mission of excellence and impact. The trans-disciplinary nature of this degree will provide an opportunity to well educated students who can move directly into supply chain leadership roles.

3. IMPACT ON OTHER PROGRAMS

Minimal. The closest programs to this are the MBA with a specialization in Supply Chain Management and the MS in Industrial Engineering, but the unique trans-disciplinary nature of the degree will likely mean that it will have minimal impact on these degrees.

4. PROJECTED ENROLLMENT

We anticipate enrolling 30 students into the program the first year, 40 the second year, and reaching a full cohort of 50 by Year 3. We hope to reach two modest sized cohorts (40 each) by Year 5.

5-YEAR PROJECTED ANNUAL ENROLLMENT					
	1st Year	2nd Year (Yr 1 continuing + new entering)	3rd Year (Yr 1 & 2 continuing + new entering)	4th Year (Yrs 1, 2, 3 continuing + new entering)	5th Year (Yrs 1, 2, 3, 4 continuing + new entering)
Number of Students Majoring (Headcount)	30	30+40	40+50	50+50	50+40+40 (Two cohorts)

5. STUDENT LEARNING OUTCOMES AND ASSESSMENT

A. List the knowledge, competencies, and skills students should have when they graduate from the proposed degree program.

The Master of Science in Supply Chain Management and Engineering is intended to educate working supply chain professionals in current and future supply chain trends and the latest supply chain management tools and techniques. The program will produce graduates with the capability and motivation for continued learning throughout their careers.

The curriculum is designed to provide: (i) General critical thinking skills required to address supply chain issues; (ii) A mastery of fundamental management and engineering tools and technologies with a clear understanding of supply chain procedures and processes; (iii) Technical leadership skills essential for career advancement; and (iv) A capstone experience bridging the gap between academic preparation and real-world supply chain applications. Students will participate in an onsite orientation at the beginning of the program. During this orientation they will engage in team building exercises that will result in complementary group assignments which they will work in throughout the program. This onsite orientation will form the nucleus experience for networking within the class and ongoing coursework and interactions facilitate leadership skills, learning from one another and deepen network relationships. The Faculty Co-Directors of the program will rotate the assignment of group leaders in each course, so that all students will have opportunities to lead their group through a series of technical assignments.

B. Describe the plan and methods to assess whether students have achieved the knowledge, competencies and skills identified in the Learning Outcomes.

As shown in the table below, evaluation of the Master of Science in Supply Chain Management and Engineering learning goals and objectives is a process that is ongoing throughout the curriculum. The process provides useful feedback to the business faculty and the MS-SCMEC Program Co-Directors.

Educational Goals/Objectives	Outcome measure(s)	Assessment process	Frequency of assessment
Critical Thinking Skills	Student performance on exams, course projects, and presentations.	Grade review	Every course offering
Supply Chain Tools and Technologies	Student performance on exams, course projects, and presentations.	Grade review	Every course offering
Real-World Applications of Business Solutions	Student performance in the capstone course.	Grade review and instructor assessment	End of program

In addition, we feel it is equally important to assess/evaluate the program itself. As shown in the table below, evaluation of the Master of Science in Supply Chain Management and Engineering program is a process that begins at the end of the first course and continues after graduation. Overall, the process will function effectively and provides useful feedback to the business faculty, MS-SCME Program

Co-Directors, W.P. Carey Associate Dean for MBA Programs, and W.P. Carey Student Services Coordinator. A major strength of the process is that we will continue to obtain feedback from our alumni, via regular alumni surveys, long after graduation.

Educational Goals/Objectives	Outcome measure(s)	Assessment process	Frequency of assessment
Quality Curriculum	1. Student satisfaction with instruction 2. Student satisfaction with job placement 3. Consistency/uniformity across courses with respect to rigor and quality of course content	1. End of semester evaluations 2. Alumni survey 3. Curriculum review	1. Every course offering 2. Periodic 3. Periodic
Advising and Career Management	1. Student satisfaction with advising 2. Student satisfaction with job/graduate school placement 3. Customer satisfaction with graduates	1. Exit interview 2. Alumni survey 3. Recruiter survey	1. At graduation 2. Periodic 3. Periodic

6. ACCREDITATION OR LICENSING REQUIREMENTS

The W. P. Carey School programs are accredited by AACSB International - The Association to Advance Collegiate Schools of Business. As stated in the Accreditation Standards, “Any new business programs begun at the institution will have sufficient resources to satisfy accreditation standards and will result from strategic planning processes of the school and institution. AACSB should be informed whenever new business degree programs are begun. New business programs in the institution will be placed on the list of accredited programs of the institution until they have been reviewed.” Our next accreditation visit will occur in AY 2013-14 at which time the new MS program will be established. At that time, the review team will evaluate the program to determine how the degree enhances our vision and mission of the W. P. Carey School of Business and Arizona State University. We believe that the program is consistent with the mission and vision of the school, and foresee no negative outcomes to accreditation of such a program.

7. FACULTY, STAFF AND RESOURCE REQUIREMENTS

A. Faculty

i. Current Faculty.

The MS-SCME program will use existing courses offered in the W.P. Carey School of Business and the Ira A. Fulton Schools of Engineering. According to US News and World Reports, the partners in this program are the 5th ranked graduate program in Supply Chain Management and the 21st ranked graduate program in Industrial Engineering. Faculty members from these programs will naturally and seamlessly be involved in the MS-SCME program. See the Table of Likely MS-SCME Faculty below for the names, rank, and highest degree earned for faculty likely to teach in the MS-SCME program.

ii. New Faculty.

Current W.P. Carey School of Business and Ira A. Fulton Schools of Engineering faculty should be adequate for this new degree.

TABLE OF LIKELY MS-SCME FACULTY			
Department	First Name	Last Name	Highest Degree
SCM	Reynold	Byers	PhD
	Joseph	Carter	PhD
	John	Fowler	PhD
	Mohan	Gopalakrishnan	PhD
	Arnold	Maltz	PhD
	Michele	Pfund	PhD
IE	Ronald	Askin	PhD
	Linda	Chattin	PhD
	Esma	Gel	PhD
	Pitu	Mirchandani	PhD
	Muhong	Zhang	PhD

iii. Administration of the program.

The Faculty Co-Directors of the M.S. in Supply Chain Management and Engineering program will oversee its operation. Admissions will be handled by a committee of business and engineering faculty appointed by the Co-Directors. Course offerings and curriculum development and review will be handled by the Co-Directors and the Associate Dean for the W. P. Carey MBA Program. Career advising will be managed by the W.P. Carey School of Business, Graduate Career Management Center (CMC) in collaboration with the Business Career Center. Student services (i.e., matriculation, course registration, graduation coordination, approval of plans of study) will be managed by the W. P. Carey MBA program student services team.

B. Resource requirements to launch and sustain the program.

Current W.P. Carey School of Business and Ira A. Fulton Schools of Business staff and ASU facilities and resources should be adequate for this new degree. However, we will not be able to offer the degree without the program fee.

8. COURSES:

A. Course Prefix(es): Provide the following information for the proposed graduate program.

- i. Will a new course prefix(es) be required for this degree program?

Yes No

- ii. If yes, complete the [Course Prefixes / Subjects Form](#) for each new prefix and submit it as part of this proposal submission.

B. New Courses Required for Proposed Degree Program: No new courses are required for this degree.

**APPENDIX
OPERATIONAL INFORMATION FOR GRADUATE PROGRAMS**

(This information is used to populate the [Graduate Programs Search](#)/catalog website.)

1. Program description

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2. Campus where program will be offered:

(Please note that Office of the Provost approval is needed for ASU Online campus options.)

ASU Online only (all courses online)

3. Admission Requirements:

i. Degree

The W. P. Carey School of Business and the Ira A. Schools of Engineering seek exceptional individuals who are working supply chain professionals (or in closely related fields). Applicants must be highly motivated and have strong intellectual capabilities. The admissions committee looks for outstanding academic credentials, character qualities such as maturity, integrity, and leadership, and diversity in perspectives and experiences.

Students must complete the online application form to apply to the Graduate College for admission to the program. They must also submit the following to the W.P. Carey School:

- Resume.
- Official transcripts of all coursework completed at institutions other than ASU.
- GMAT and/or GRE test scores.
- Personal statement.
- One letter of recommendation.

ii. GPA

Minimum Qualifications

An undergraduate cumulative GPA of 3.20 OR a Graduate Management Test (GMAT) test score of 650 OR a Graduate Record Examination score of 1250. (All applicants must submit either a GMAT or GRE test score. The GMAT is recommended.)

iii. English Proficiency Requirement for International Applicants

The English proficiency requirements are the same as the Graduate College requirement. (see Graduate College requirement

http://graduate.asu.edu/admissions/international/english_proficiency): **Yes** **No**

iv. Foreign Language Exam:

Foreign Language Examination(s) required? Yes No

v. Required Admission Examinations

GRE OR GMAT Millers Analogies None Required

vi. **Letters of Recommendation:** Yes No

4. **Application Review Terms (if applicable Session):** Indicate all terms for which applications for Admissions are accepted and the corresponding application deadline dates, if any:

Fall (regular) Deadline (month/year): 3/15

5. **Curricular Requirements:**

5A. **Will concentrations be established under this degree program?** Yes No

5B. Curricular Structure:

The program will initially be a lockstep cohort program. Later, if the program grows, we may be able to add electives.

Required Core Courses for the Degree			Credit Hours
(Prefix & Number)	(Course Title)	(New Course?) Yes or No?	(Insert Section Sub-total) 27
SCM 502	Operations and Supply Management	N	3
IEE 598	Math Tools	N	3
SCM 520	Strategic Procurement	N	3
IEE 574	Applied Deterministic Operations Research Models	N	3
IEE 575	Applied Stochastic Operations Research Models	N	3
SCM 541	Logistics in the Supply Chain	N	3
IEE 535	International Logistics	N	3
SCM 532	Supply Chain Cost and Design Issues	N	3
IEE 534	Supply Chain Modeling/Analysis	N	3
Culminating Experience <i>E.g. - Capstone course, applied project, thesis (masters only) – 6 credit hours) or dissertation (doctoral only) – 12 credit hours) as applicable</i>			Credit Hours (Insert Section Sub-total)
SCM 593 Applied Project - Project where students generate and evaluate alternative solutions to a real supply chain situation and provide a project report deliverable to the client business.			3
Total required credit hours			30

6. **Comprehensive Exams:**

Master's Comprehensive Exam (when applicable), please select the appropriate box.

No comprehensive exam required – applied project instead

7. **For Doctoral Degrees that require a dissertation, submission of a written dissertation prospectus and its oral defense are required.** N.A.
8. **Allow 400-level courses:** Yes No
9. **Committee:** Required Number of Thesis or Dissertation Committee Members (must be at least 3 including chair or co-chairs): N.A.