ESTABLISHING GRADUATE CERTIFICATES
ARIZONA STATE UNIVERSITY
GRADUATE COLLEGE

This form should be used by programs seeking to establish a new graduate certificate. All sections should be completed. Current graduate certificate guidelines may be found at graduate.asu.edu/academic_policies/opportunities.html#GradCertificates.

The graduate certificate is a programmatic or linked series of courses in a single field or one that crosses disciplinary boundaries. The graduate certificate facilitates professional growth for people who already hold the baccalaureate degree and may be freestanding or linked to a degree program. The virtue of the graduate certificate is that it enables the university to respond to societal needs and promotes university interaction with corporate, industrial, and professional communities.

Submit the completed and signed (chairs, unit deans) proposal to the **Office of Graduate Academic Programs** in the Graduate College. Mail code: 1003 and electronic copies to ozel@asu.edu or Denise.Campbell@asu.edu

Please type.

Contact Name(s): Andrew Atzert	**Contact Phone(s): 480-965-8617**
College: W. P. Carey School of Business	
Department/School: W. P. Carey School of Business—Dean's Office	
Name of proposed Certificate: Graduate Certificate in Supply Chain Management (SCM)	
Requested Effective Term and Year: (*e.g. Spring 2010*) Spring 2010	
Do Not Fill in this information: Office Use Only **CIP Code:**	

1. OVERVIEW. Below, please provide a brief overview of the certificate, including the rationale and need for the program, potential size and nature of the target audience, information on comparable programs (at ASU and/or peer institutions), how this program would relate to existing programs at ASU, and any additional appropriate information.

A. Description

The certificate is composed of five (3 credit) online courses in SCM, each six weeks in length (five content weeks and one reading/final assignment completion week), each of which will be offered twice in a calendar year. The content of the courses is tightly integrated and as a whole to offer a comprehensive coverage of core topics in SCM.

B. Audience and Enrollment Projections

The intended audiences for the certificate include working professionals who are:

- Graduates of general management undergraduate or graduate business programs who wish to supplement their degrees with focused, graduate-level courses in SCM, and are either:
- Relatively new to SCM and desire a foundational knowledge of SCM complexities as well as a strong understanding of how companies leverage their supply chains to achieve competitive advantage, or
- Experienced SCM professionals who wish to update their knowledge of current thinking and best practices through interaction with faculty engaged in broad-based research and consulting

Based on a trial run of the certificate program on a non-credit basis since January, 2009, as well on information obtained from companies who would potentially provide financial support to their employees in the program, we anticipate enrollments of 25-30 students in each class in calendar year 2010, increasing to 40-50 students in 2011 and up to 60 in 2012 (maximum class size is 60).

C. Competing Programs

There are no graduate certificates at ASU that serve this intended audience in this discipline. Only one peer institution – Penn State – shares with W. P. Carey a highly-ranked supply chain management program *and* also offers an online graduate certificate in supply chain management. They would be our only direct competitor in a global market that is more than large enough to support two providers.

D. Relation to other ASU programs

The class sections offered in the graduate certificate program will also be offered to second year MBA evening and online students as optional elective courses, thus enabling the school to meet the demand from students in these programs for electives and an area of emphasis SCM.

The Certificate will not allow prior credits earned in other degree programs or at ASU or elsewhere. Exceptions will be made for alumni of the W. P. Carey MBA program or alumni of another W. P. Carey graduate certificate program. Those alumni who have graduated within five years of admission to the SCM Certificate program may, upon admission to the program, petition for up to six prior hours to count towards the Graduate Certificate in SCM, provided those hours were earned through the completion of courses in the W. P. Carey MBA or certificate program that are identical to (i.e., the same course number and learning objectives) as courses offered in the Graduate Certificate in SCM.

Students will not be considered for admission to the Graduate Certificate in SCM while enrolled in the W. P. Carey MBA. Students enrolled in the Certificate program *can* apply for admission to the W. P. Carey MBA; however, they may not be simultaneously matriculated into both programs.

Students who have completed courses in the Certificate program may, if later accepted to the MBA program, petition the acceptance of these credits towards the MBA, up to the maximum nine credits permitted by the Graduate College. Acceptance these credits are at the discretion of the W. P. Carey MBA program. Credits earned in courses considered "core" MBA courses are generally not considered for transfer.

2. ADMINISTRATION AND RESOURCES

A. How will the proposed certificate be administered (including recommendations for admissions, student advisement, retention etc.)? Describe the administering body in detail, especially if the proposed certificate is part of a larger interdisciplinary agenda. How will the graduate support staff for this proposed certificate program be met?

Application review and admissions standards will be consistent with MBA Admissions standards (see 3.A.) Admissions committee will ensure applicants meet competitive academic standards to succeed in graduate business education.

Program administration and student services will be provided primarily by existing staff of Center for Executive and Professional Development (CEPD) on behalf of the W.P. Carey School of Business dean's office. Student service coordinators will assist students in registering for courses, ordering books, and accessing course websites, as well as assist faculty in setting up course materials in Blackboard. An enrollment manager will track students' progress in the program, remind them of re-enrollment deadlines, and also assist in recruiting new students. Student services coordinators and the enrollment manager provide general advising, while course-specific advising will be available to students through the assigned faculty director and individual course faculty.

B. What are the resource implications for the proposed certificate, including any projected budget needs? Will new books, library holdings, equipment, laboratory space and/or personnel be required now or in the future? If multiple units/programs will collaborate in offering this certificate, please discuss the resource contribution of each participating program. Letters of support must be included from all academic units that will commit resources to this certificate program.

Resource implications are minimal. Online courses are already developed, and faculty have been teaching the courses on a non-credit basis since January, so no additional instructional resources are required above current staffing levels. The program, including the cost of instruction and any staff needed to accommodate future growth, will be entirely self-funded through previously-approved program fees for graduate courses offered by W.P. Carey School of Business and administered through CEPD. Faculty will be paid on an off-load basis consistent with current practice for courses offered by W. P. Carey's Center for Executive and Professional Development.

3. ADMISSIONS PROCEDURES AND CRITERIA

A. Admission criteria – Applicants must meet the admissions criteria for the Graduate College. Please also include any other additional admission requirements, e.g. type of undergraduate degree, minimum GPA, tests and/or entry-level skills that are required for this certificate program. (http://graduate.asu.edu/academic_policies/admissions.html)

- Minimum GPA of 3.0 verified on official transcripts
- Two years full-time work experience
- (See section 1.D. for students who can apply to this program)

B. Application Review Terms

Indicate all terms for which applications for admissions are accepted and the corresponding application deadline dates, if any:

To select desired box, place cursor on the left side of the box, right click mouse, select ***Properties***, under ***Default Value*** select ***Checked***, press ***OK*** and the desired box will be checked

☒ Fall Deadline (month/year): August 15th (first course in fall sequence is scheduled in mid-September

☒ Spring Deadline (month/year): Feb 1st (first course in spring sequence is scheduled in early March)

☐ Summer Deadline (month/year):

C. Projected annual admission/enrollment

How many students will be admitted immediately following final approval of the certificate? What are enrollment projections for the next three years?

25-30 enrollments are anticipated for the first course starting in March, 2010. See 1.B. for enrollment projections.

4. ACADEMIC REQUIREMENTS

A. Minimum credit hours required for certificate (15 credit hour minimum)

Fifteen

B. Please describe the primary course delivery mode, (e.g., online, face-to-face, off-site etc.). Please note: If this proposed initiative will be offered completely online, clearly state that in this section.

All courses are offered online only.

C. As applicable, please describe culminating experience required (e.g., internship, project, research paper, capstone course, etc.)

The final course in the sequence (SCM 532) is a capstone course for which the other four courses are prerequisites and which requires students to synthesize what they have learned in prior courses.

D. What knowledge, competencies, and skills (learning outcomes) should students have when they graduate from this proposed certificate program? Examples of program learning outcomes can be found at (http://www.asu.edu/oue/assessment.html).

By the completion of all five courses in the program, students will be able to.

- Evaluate the four most common methods of forecasting and choose which strategy is best given market conditions.
- Define and analyze transformation processes available for producing and delivering products and services.
- Calculate the capacity / resource requirements and the resulting time to deliver a product / service for given demand levels and uncertainties.
- Explain why inventory exists and determine appropriate inventory management policies.
- Demonstrate the ability to apply the principles, philosophies and processes of supply management to the purchasing management process on a global basis
- Use Excel and Excel Solver to apply principles and best practices in logistics, including demand forecasting, cost analysis, selection of service providers, and methods to shorten lead times
- Demonstrate an understanding of the relative importance of, and relationships between, costs associated with warehousing, transportation, distribution centers, and order processing systems.
- Use fact-based negotiations planning and execution process to achieve optimal supplier relationships.
- Incorporate into a negotiation strategy the key factors of cost structures, supply chain goals, organizational and cultural differences as well as the basic economics that affect supplier pricing approaches.
- Identify the implications of any supply management activity on the cost and the value that the organization provides to the customer.
- Analyze the supply chain of an organization or an industry and assess its strengths and weaknesses. This includes evaluating outsourcing decisions within the supply chain.
- Apply the appropriate tools of price analysis, cost analysis, total cost of ownership analysis and target costing appropriately to a given situation.
- Demonstrate a holistic understanding of supply chain management that balances analytical and soft skills.

E. How will students be assessed and evaluated in achieving the knowledge, competencies, and skills outlined in 4.D. above? Examples of assessment methods can be found at (http://www.asu.edu/oue/assessment.html).

Faculty in each of the courses will use a variety of assessment methods. While relative amounts of these methods will vary depending on the class, in general each class will include:

- Weekly, multiple choice quizzes that assess students' understanding of fact-based information presented in online course materials (students will also have access to practice quizzes so that they can self-assess).
- Discussion board questions that require students to analyze and synthesize course concepts and principles and apply them appropriately to their own and/or their classmates' workplace situations.
- Case analyses/article critiques.
- Simulations that require the students to synthesize and apply concepts and principles presented in the courses.
- Presentations of data analysis completed in tools such as Excel
- Final examinations and/or final projects and assignments that assess students' overall mastery of principles, concepts and practices presented in the courses.

These courses have been delivered at the graduate level since 2001 as part of the W. P. Carey School of Business MBA programs, and thus assessment methods have already been developed and refined for each of them.

F. Satisfactory student academic progress standards and guidelines (including any time limits for completion).

In order to earn the certificate, a student must achieve a 3.0 GPA in the Certificate courses. A student receiving a course grade below a "B-" (2.7) will be placed on academic probation but may continue taking courses while on academic probation. To get out of probation, any course in which a student earns below a "B-" (2.7) but above a "D" must be retaken the next time the course is offered within the next twelve months, except if the student is already on academic probation for a prior course grade below "B-" (2.7). A student who repeats a course and receives a grade of "B-" (2.7) or above will be removed from academic probation. Only one retake of a course is allowed. For any courses repeated, the first and second grades received will both be used in computing the final GPA. While on academic probation, if the student receives any grade below a "B-" (2.7) the student will be found to be making unsatisfactory progress in completing the Certificate requirements and will be recommended for dismissal from the Certificate program to the Graduate College. A student who receives a grade of "D" or "E" in any certificate course will NOT be permitted to continue coursework and will be recommended for dismissal from the Certificate program to the Graduate College. Students will have six years from the time of admission to complete the requirements for the Certificate.

G. Will this proposed certificate program allow sharing of credit hours from another ASU degree program to be used as part of this certificate program? (Please note that a maximum of 9 hours taken as a non-degree student at ASU, including as a part of a certificate program, may be used towards a future graduate degree at ASU).

See 1.D.

H. Below, please list all required and elective courses in the appropriate boxes (you may attach additional pages if necessary).

Please ensure that all *new core* course proposals have been submitted to the Provost's office through ACRES online course proposal submission system. Please note: a minimum of 2/3 of the courses required for a graduate certificate must be at the 500-level or above.

Required Courses			**Credit Hours**
(Prefix & Number)	*(Course Title)*	*(New Course?) Yes or No?*	**(Insert Section Sub-total)**
SCM 502	Operations and Supply Management	No	**3**
SCM 520 (New course in ACRES)	Strategic Procurement Prerequisite: SCM 502	Yes (Has been taught numerous times since 2000 as SCM 594)	**3**
SCM 541	Logistics in Supply Chain Prerequisite: SCM 502	No	**3**
SCM 521	Supplier Management & Negotiations Prerequisite: SCM 502	No	**3**
SCM 532	Supply Chain Cost and Design Issues Prerequisites: SCM 502, SCM 594, SCM 541, SCM 521	No	**3**
Electives			**Credit Hours**
(Prefix & Number)	*(Course Title)*	*(New Course?) Yes or No?*	**(Insert Section Sub-total)**
Culminating Experience (if applicable)			**Credit Hours (Insert Section Sub-total)**
SCM 532 as listed above			
Total required credit hours			**15**

5. PRIMARY FACULTY PARTICIPANTS - Please list all primary faculty participants for the proposed certificate, including home unit and title. You may attach additional pages if necessary.		
Name	**Home Unit**	**Title**
Joseph Carter	Department of Supply Chain Management	Professor

Reynold Byers	Department of Supply Chain Management	Clinical Associate Professor
Arnold Maltz	Department of Supply Chain Management	Associate Professor
Phillip Carter	Department of Supply Chain Management	Professor
Steven Brown	Department of Supply Chain Management	Research Professor
Michele Pfund	Department of Supply Chain Management	Clinical Associate Professor
John Fowler	School of Computing, Informatics, and Decision Systems Engineering	Professor
Kevin Dooley	Department of Supply Chain Management	Professor

6. REQUIRED SUPPORTING DOCUMENTS
(Please label accordingly, i.e., Appendix or Attachment A, B, etc.)

Please include the following with your proposal:

- **A.** Sample plans of study for students in the proposed program
- **B.** Statements of support from all deans and heads of impacted academic units
- **C.** Course descriptions for all new courses. Please enclose course syllabi for new courses if not submitted to ACRES already.

7. APPROVALS - If the proposal submission involves multiple units, please include letters of support from those units.

DEPARTMENT CHAIR (PRINT/TYPE)	
Prof. William Verdini (*See attached sheet*)	
SIGNATURE	**DATE**

DEAN (PRINT/TYPE)	
Prof. Amy Hillman, Executive Dean (*See attached sheet*)	
SIGNATURE	**DATE**

The following section will be completed by GC following the recommendations of faculty governance bodies.

UNIVERSITY VICE PROVOST AND DEAN OF THE GRADUATE COLLEGE	
SIGNATURE	**DATE**

Please note: Proposals for new certificates also require the review and recommendation of approval from the University Graduate Council, Curriculum and Academic Programs Committee (CAPC), the Academic Senate, and the Office of the Provost before they can be put into operation.

The final approval notification will come from the Office of the Provost.

Academic Unit Approvals – Supply Chain Management Certificate

7. APPROVALS - If the proposal submission involves multiple units, please include letters of support from those units.

DEPARTMENT CHAIR (PRINT/TYPE)	
Prof. William Verdini	
SIGNATURE W Verdini	**DATE** 12/08/09

DEAN (PRINT/TYPE)	
AMY HILLMAN	
SIGNATURE Amy Hillman	**DATE** 12·4·09

The following section will be completed by GC following the recommendations of faculty governance bodies.

UNIVERSITY VICE PROVOST AND DEAN OF THE GRADUATE COLLEGE	
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