**PROGRAM APPROVAL PROCESS**

**(Revised June 2022)**

**Highlights of the Program Approval Process:**

* The Regent universities shall submit the name and educational level of proposed programs that have already undergone an initial institutional review, are currently undergoing an in-depth institutional review, and are likely to be submitted for program approval by the Board of Regents. The proposed program must reside on the program planning list maintained in the Board office for at least three months prior to submitting a program proposal to allow sufficient time for discussion within the three Regent universities.
* The Board Office and the Council of Provosts shall review the annual program planning list at each Council of Provosts meeting.
* The universities shall complete their in-depth review of the proposed programs and submit their proposals to the Board Office using a program approval format developed by the Board Office (Form A).
* Letters of support from the other universities must be included with the program proposal.
* A review by the Iowa Coordinating Council for Post-High School Education (ICCPHSE) shall also occur prior to being submitted for Board approval. A program with unresolved concerns by the ICCPHSE should be so noted.
* The program proposals shall be reviewed in-depth by the Council of Provosts and the Board Office.
* With the recommendation for approval by the Board Office and the Council of Provosts, the program proposal shall be submitted to the Board of Regents Academic Affairs Committee and Board of Regents for discussion and action.
* Substantial expenditures for the proposed program or advertising/marketing of the proposed program shall not occur until after the program is approved by the Board of Regents. This means that the institutions shall not hire any new faculty, secure facilities, develop curriculum, or advertise the program until it has been approved by the Board of Regents.

**FORM A**

**Board of Regents, State of Iowa**

**REQUEST TO IMPLEMENT A NEW BACCALAUREATE, MASTERS,**

**DOCTORAL, OR PROFESSIONAL DEGREE PROGRAM**

THE PURPOSE OF ACADEMIC PROGRAM PLANNING: Planning a new academic degree program provides an opportunity for a Regent university to demonstrate need and demand as well as the university’s ability to offer a quality program that is not unnecessarily duplicative of other similar programs offered by colleges and universities in Iowa.

Institution: \_\_\_\_\_Iowa State University\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

CIP Discipline Specialty Title: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

CIP Discipline Specialty Number (six digits): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Level: B \_\_\_\_\_\_\_\_\_\_\_\_ M \_\_\_X\_\_\_\_\_\_ D \_\_\_\_\_\_\_\_\_\_\_ P \_\_\_\_\_\_\_\_\_\_\_

Title of Proposed Program: \_\_Master of Science in Supply Chain Management\_\_\_\_\_\_\_\_\_\_\_\_

Degree Abbreviation (e.g., B.S., B.A., M.A., Ph.D.): \_\_\_MSSCM\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Mode(s) of Delivery (check all that apply): On-campus (face-to-face) \_\_ Off-campus (face-to-face) \_\_\_ Online \_\_X\_\_\_ Hybrid \_\_\_\_ Other \_\_\_\_

Approximate date to establish degree: Month \_\_\_August\_\_\_\_\_\_\_ Year \_\_2025\_\_\_\_\_

Contact person: (name, telephone, and e-mail) Haozhe Chen, (515) 294-7216, hzchen@iastate.edu\_\_

College that will administer new program: \_\_Ivy College of Business\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Please provide the following information (use additional pages as needed). Do not use acronyms without defining them.

1. Describe the proposed new degree program, including the following:
   1. A brief description of the program. If this is currently being offered as a track, provide justification for a standalone program.

*We propose a 30-credit Master of Science in Supply Chain Management program to address the imperative and lasting supply chain talent need. This will be an online graduate program to provide students flexibility in their schedule and location. Students can decide their pace but can complete the entire program as fast as within 12 months – 4 courses in Fall, 4 courses in Spring, and 2 courses in Summer. To equip the students with the skill sets that can meet industry needs, the proposed program will have a strong analytical emphasis and try to be STEM designated.*

* 1. A statement of academic objectives;

*The proposed Master of Science in Supply Chain Management program is designed to provide high-quality professional training to students. Students graduating from this program are expected to be highly qualified supply chain professionals who possess advanced managerial and analytical skills to make sound supply chain decisions and lead supply chain improvement initiatives. They should be able to take appropriate supply chain positions in private or public organizations domestically or internationally.*

*Specific learning outcomes include:*

1. *Students will be able to develop a comprehensive understanding of the important role of supply chain management in today’s business environment and how supply chain management impacts other business functions.*
2. *Students will be able to identify and apply the current supply chain theories, practices, and concepts to identify, analyze, and address real-world supply chain issues.*
3. *Students will be able to use and apply critical quantitative tools/skills to conduct sound supply chain analysis for data-driven decision making.*
4. *Students will be able to provide supply chain optimization solutions related to operations management and logistics management by balancing data analytics, strategy evaluation, and business environment monitoring.*
5. *Students will be able to develop a strong international perspective and lead supply chain improvement initiatives in a global context.* 
   1. What the need for the program is and how the need for the program was determined;

*The Master of Science in Supply Chain Management program is designed to help address the talent shortage in the field of supply chain management. As today’s supply chains are becoming more complex and vulnerable, companies and organizations in all sectors are paying increasing attention to the effective and efficient management of supply chains. Well-trained and skilled supply chain professionals are highly sought after. However, higher education has not been able to meet the supply chain talent demand growth. At Iowa State, while our undergraduate supply chain management program produces high-quality entry-level professionals and our doctoral program trains future supply chain management academics, we don’t have a masters program that can provide practical training to develop supply chain professionals with advanced managerial and analytical tools and skills.*

*From a macro perspective, the supply chain field is facing a significant shortage of talent. Such a shortage exists not only within the state of Iowa but also nationally and internationally. Companies and organizations in all sectors are especially in need of supply chain management professionals who have gone through rigorous training to help them develop and implement effective supply chain strategies and cope with various supply chain challenges.*

*In addition, a global perspective is crucial to today’s supply chain management no matter if the company or organization is local, national, or international. Being able to effectively and efficiently manage a supply chain in a complex global environment is a necessity for sustained success.*

*The proposed Master of Science in Supply Chain Management program will be able to (1) fill the gap in our degree offerings and (2) help industries in Iowa and beyond address supply chain challenges through a high-quality graduate program.*

* 1. The relationship of the proposed new program to the institutional mission and how the program fits into the institution’s and college’s strategic plan;

*ISU as a land-grant institution has the mission to “Create, share, and apply knowledge to make Iowa and the world a better place”, and ISU has the vision to “lead the urgent, global quest for solutions”. The Ivy College of Business is committed to offering a high-quality education in a way that prepares students for their real-world experiences. To prepare students who can make a difference, one of the items under Goal 1 of the Ivy College of Business’ 2015-2020 strategic plan calls for “the establishment of new graduate degrees and certificate programs based on industry needs.”*

*The proposed Master of Science in Supply Chain Management program aligns with the university’s mission and college’s strategic plan perfectly. The aim of this new program is to train highly knowledgeable and skilled professionals who can help companies and organizations in Iowa and beyond to effectively and efficiently manage supply chains in the ever-changing global environment.*

* 1. The relationship of the proposed new program to other existing programs at the institution; describe how the proposed program will enhance other programs at the university. Will the proposed program duplicate existing programs at the university?

*There are no other programs similar to this one at ISU. In fact, the proposed new program will fill the gap in our supply chain management degree offerings.*

* 1. Special features or conditions that make the institution a desirable, unique, or appropriate place to initiate such a degree program.

*Ivy College of Business’s Department of Supply Chain Management has 12 tenured and tenure-track faculty members and 3 full-time term faculty members. Our faculty’s research constantly ranks among the best in the world. In the latest SCMList ranking in 2023, ISU ranks No. 8 in the world for empirical supply chain research. According to Transportation Journal, ISU ranked No. 6 in the world for supply chain management research productivity. Our undergraduate supply chain management program was ranked No. 20 in the nation by U.S. News & World Report in 2022. In addition, the Ivy College of Business enjoys a strong reputation in different aspects.*

*Our survey of other supply chain management master’s programs around the country found that (1) there are significantly fewer masters programs in supply chain management than in other business fields, particularly in the Midwest, and (2) very few programs have a focus on analytical skills in supply chain management. In contrast, our proposed program can help address these issues by offering a new, flexible online program with an emphasis on highly applicable and demanded supply chain management skill sets, which makes this a unique master’s program.*

*The combination of our world-class faculty, the college’s reputation, and unique positioning makes ISU an ideal institution for students to obtain such high-quality training.*

* 1. Describe the personnel, facilities, and equipment necessary to establish and maintain a high-quality program. Include any reallocations from other programs or areas of the university.

*The Department of Supply Chain Management has very experienced faculty members, and they have been delivering undergraduate and doctoral supply chain management courses for decades. The majority of the courses in this newly proposed master’s program are already being offered online by our faculty members. These faculty members will continue to teach, improve, and develop courses in the proposed program.*

*In addition, the excellent existing online course delivering platform/infrastructure and technological support in the college are more than adequate for offering this new online program.*

* 1. How does student demand for the proposed program justify its development? What are the anticipated sources of students to enroll in this new program?

*As stated earlier, there is a significant talent shortage in the supply chain management field. The number of potential student and company inquiries, the input from our department’s Executive Advising Council members, the feedback from our own supply chain management major graduates, and our interactions with industry professionals all indicated that there will be a stable demand for the proposed Master of Science in Supply Chain Management program.*

*We anticipate a wide range of student sources for the proposed program: in-state and out-of-state students with different undergraduate degree backgrounds who are interested in pursuing a supply chain management career, as well as working professionals in Iowa and beyond who intend to further their supply chain management career through a rigorous online master program.*

1. Estimate the number of majors and non-majors students that are projected to be enrolled in the program during the first seven years of the program.
   1. Undergraduate

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Yr 1 | Yr 2 | Yr 3 | Yr 4 | Yr 5 |
| Majors |  |  |  |  |  |
| Non-Majors |  |  |  |  |  |

* 1. Graduate/Professional

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Yr 1 | Yr 2 | Yr 3 | Yr 4 | Yr 5 |
| Majors | *10* | *15* | *20* | *25* | *30* |
| Non-Majors |  |  |  |  |  |

1. Describe the state and/or national workforce need and/or demand for graduates of the proposed program currently and in the foreseeable future (provide the sources of data used to estimate workforce need and demand).

*Because of the broad nature of supply chain management, graduates from the proposed Master of Science in Supply Chain Management program could go into a wide range of industries and take on many different roles. Therefore, it is difficult to find accurate estimates about the workforce size. However, from* [*Iowa Workforce Development*](https://www.iowaworkforcedevelopment.gov/occupational-projections) *website, we were able to identify the occupational projections (2020-2030) for the following closely related fields. The total state-wide employment number for these occupations was 41,370 in 2020 and will increase to 47,585 in 2030, which is a 15% increase.*



*Some industry reports have warned that the supply chain talent shortage is quickly escalating from a gap to a potential crisis. According to an industry estimate, for every graduate with supply chain skills, there are six holes to be filled, and it could be as high as 9 to 1 in the future.*

*According to the* [*US Bureau of Labor Statistics*](https://www.bls.gov/ooh/business-and-financial/logisticians.htm#tab-6)*, employment of supply chain management professionals is expected to grow by 18% from 2022 to 2032, much faster than the average for all occupations. About 21,800 openings for logisticians are projected each year, on average, over the decade.*

*The supply chain talent shortage is not limited to the U.S., and it is, in fact, a widespread global issue, according to* [*a recent DHL report*](https://www.dhl.com/global-en/home/our-divisions/supply-chain/thought-leadership/articles/the-deepening-talent-shortage.html)*. This global shortage of supply chain professionals is also reflected in many other* [*industry reports*](https://www.riverlogic.com/blog/keeping-strong-supply-chain-talent-five-things-you-shouldnt-ignore)*.*

1. The dean’s office in the academic college proposing the new program is required to contact the corresponding dean’s offices at the other two Regents universities (if there is no corresponding college, consider related programs in other colleges or contact the Provost’s office for guidance). In some cases, such as for an interdisciplinary program, more than one college at the other universities may need to be contacted. Please summarize how this cross-institutional outreach was completed:

a. Date that Form A was sent to dean’s offices at the other two Regents universities.

b. Date and format (email, telephone, video, in-person) of discussions between the dean’s offices, and names/titles of those who participated.

c. Summary of feedback received from the other two Regents universities, including any concerns raised. Where relevant, describe current or planned collaborations related to the program.

d. Was the proposal modified to reflect these discussions? If so, describe.

1. List other public and private institutions of higher education in Iowa currently operating programs similar to the proposed new degree program. (For comparison purposes, use a broad definitional framework, e.g., such identification should not be limited to programs with the same title, the same degree designation, having the same curriculum emphasis, or purporting to meet exactly the same needs as the proposed program.)

*There are no other public or private institutions in the state of Iowa that offer supply chain management master’s programs. This also supports the need of such a program at ISU.*

If the same or similar program exists at another institution of higher education in Iowa (other than those Regent universities noted above), respond to the following questions:

* 1. Describe collaboration efforts with other institutions.
  2. With what representatives of these programs has there been consultation in developing the program proposal? Provide a summary of the response of each institution consulted.
  3. Has the possibility of an inter-institutional program or other cooperative effort been explored?
  4. Are the other programs similar to the proposed program at comparable quality and cost?

1. If there are plans to offer the program off campus, online, or a blended modality, briefly describe these plans, including potential sites and possible methods of delivery instruction. Will off-campus delivery require additional **HLC or other accreditor approval**?

*There are no plans to offer this program off campus. All courses in this proposed program will be offered online. As mentioned earlier, most of the courses in the new program are currently offered online by our SCM faculty members.*

1. Will the proposed program apply for programmatic accreditation? When?

*The proposed program will be covered by the existing AACSB accreditation of the Ivy College of Business. The proposed program will be evaluated every five years along with all other degree programs offered by the Ivy College of Business as part of its Continuous Improvement Review.*

1. For undergraduate programs: Will articulation agreements be developed for the proposed program? With whom?
2. Describe any opportunities for experiential learning (e.g. internships, clinicals, research, community engagement/service learning).

*No plans for formal experiential learning.*

1. From where will the financial resources to cover the costs for the proposed program come (list all that apply, e.g., department reallocation, college reallocation, grants, new to the university)?

*Iowa State University utilizes a decentralized financial management model for the development of its annual operating budgets. The Resource Management Model (RMM), is a responsibility-centered and incentive-driven approach to financial planning and management. The model supports departments and colleges in making budgetary decisions that enhance student success (e.g., retention), innovate by meeting market demands from students and employers for degree programs of the future, and discontinue legacy curricula that are either not aligned with industry/employer needs or for which student demand is low. Through the RMM, for graduate and professional students, net tuition revenue is allocated to academic colleges based on a student’s enrollment. Tuition revenue will include both base tuition and applicable differential rates. The proposed degree program will be funded through this existing, proven financial model, and is expected to be fully self-sustaining over time. In addition to the budget model as described, financial resources may also come from internal reallocations made within the college during the program’s startup phase. The level of reallocation will depend, in part, on the numbers of new students attracted to the proposed program, and the number of existing students who choose the proposed program over another program, based on standard and differential tuition rates. The proposed program will not be dependent on grants, contracts, gifts, central university resources, or reallocations between academic colleges.*

1. Include any additional information that justifies the development of this program.

**Appendix A**

**Master of Science in Supply Chain Management Curriculum**

The proposed Master of Science in Supply Chain Management program would require 30 credits.

**Required courses (27 credits)**

***SCM Core (27 credits)***

SCM 501: Supply Chain ManagementSTEM (Sternberg)

SCM 520: Decision Models for Supply Chain ManagementSTEM (Suzuki)

SCM 524: Strategic Process Analysis & ImprovementSTEM (Denizel)

SCM 530: Supply Chain AnalyticsSTEM\*

SCM 540: Enterprise Supply Chain Information SystemsSTEM (Sternberg)

SCM 560: Strategic Logistics Management (Chen)

SCM 563: Purchasing and Supply ManagementSTEM (Cantor)

SCM 598: Supply Chain Global Leader Seminar Series

SCM 599: Supply Chain Case (or Creative Component)STEM\*

**SCM Electives (3 credits)**

SCM 503: Healthcare Supply Chain Management (Phares)

SCM 513: Biorenewables Supply Chain Management (Bottenfield)

SCM 526: Lean Operations in HealthcareSTEM (Pal)

SCM 571: Sustainable Supply Chain Management (Cantor)

Or one 500-level course from other areas in the Ivy College of Business with approval

STEM STEM focused courses

\* New courses

**Sample Program Plan:**

**1-year sample program plan:**

|  |  |  |
| --- | --- | --- |
| **Semester 1: Fall** | **Semester 2: Spring** | **Summer Term** |
| Core: | | |
| SCM 501 (new time - Fall)  SCM 524  SCM 560  SCM 563 | SCM 520  SCM 530\*  SCM 540  SCM 598\* | SCM 599\* |
| Elective - choose a total of 1 course (3 credit hours) from available electives | | |
| SCM 571 | SCM 513  SCM 503 | SCM 526 |

**2-year sample program plan:**

|  |  |  |
| --- | --- | --- |
| **Year 1** | | |
| **Semester 1: Fall** | **Semester 2: Spring** | **Summer Term** |
| Core: | | |
| SCM 501 (new time - Fall)  SCM 524 | SCM 520  SCM 530\* |  |
| Elective - choose a total of 1 course (3 credit hours) from available electives | | |
| SCM 571 | SCM 513  SCM 503 | SCM 526 |
| **Year 2** | | |
| **Semester 1: Fall** | **Semester 2: Spring** | **Summer Term** |
| Core: | | |
| SCM 560  SCM 563 | SCM 540  SCM 598\* | SCM 599\* |
| Elective - choose a total of 1 course (3 credit hours) from available electives | | |
| SCM 571 | SCM 513  SCM 503 | SCM 526 |

\* New courses

**Appendix B**

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