APPROVAL FORM FOR

DEGREE PROGRAMS

MISSISSIPPI STATE UNIVERSITY

NOTE: This form is a cover sheet that must accompany the degree program change proposal. The actual proposal should be prepared in accordance with format requirements provided in the *Guide and Format for Curriculum Proposals* published by the UCCC. Both cover sheet and proposal should be submitted to UCCC Mail Stop 9702 (281 Garner Hall), Phone: 325-9410.

College Architecture, Art, and Design **Department:** Building Construction Science

Contact Person: Saeed Rokooei **Mail Stop:** 9635 **E-mail:** srokooei@caad.msstate.edu

Nature of Change: New Program **Date Initiated:** 9/26/24

Current Degree (BS, MS, etc.): _____

Current Major: _____

Current Concentration(s): _____

Current Campus(es): ☑ Starkville ☐ Meridian ☐ Distance ☐ Gulf Coast*

*Gulf Coast campus for Bagley College of Engineering only

New Degree (BS, MS, etc.): MS

Effective Date:

Semester	Year
Fall	2025

**Any new program or modification desiring a starting semester other than fall must include a justification

Proposed Major: Construction Management

Proposed Concentration(s): _____

Proposed Campus(es)

☑ Starkville
☐ Meridian
☑ Distance
☐ Gulf Coast*

*Gulf Coast campus for Bagley College of Engineering only

Summary of Proposed Changes:

Introduce a new Master of Construction Management program, administered by The Department of Building Construction Science (BCS) in the College of Architecture, Art, and Design (CAAD). This program is for Starkville and Distance campuses.

Approved:	Date:
Department Head	10/7/2024
Director of Academic Quality	9/30/2024
Alexis Gregory Chair, College or School Curriculum Committee	01/07/25
Dominic Lippillo Digitally signed by Dominic Lippillo Date: 2025.01.07 10:20:34 -06'00' Dean of College or School	01/07/25
Chair, University Committee on Courses and Curricula	
Chair, Graduate Council (if applicable)	
Chair, Deans Council	

Template for NEW PROGRMS (see Guide and Format for further information)

1. Justification for the New Degree Program including how it meets the mission of the university.

   The proposed Master of Science in Construction Management (MSCM) program at Mississippi State University is strategically justified by the significant demand for skilled construction managers in both the state and the broader industry, where a projected need for an additional 68 professionals annually underscores the urgency for advanced education. This program aligns closely with MSU's mission to provide access and opportunity, foster excellence in teaching, and support economic development. By offering flexible delivery options for both traditional students and working professionals, the MSCM program enhances educational access while combining theoretical knowledge with practical experience to ensure high-quality instruction. Furthermore, it fills a critical gap in advanced construction management education within Mississippi, positioning MSU as a leader in this field and preparing graduates to effectively manage complex projects, implement new technologies, and contribute to the growth of the construction sector. Ultimately, the MSCM program not only supports the university's mission but also strengthens its academic portfolio and promotes economic development in the region.

2. Catalog Description and Curriculum Outline-insert the template here:

   Core Courses (15 crh):
   BCS 6113 Construction Risk Management and Decision-Making
   BCS 8113 Leadership and Human Factors in Construction
   BCS 8123 Research Methodology in Construction
   BCS 8133 Emerging Technologies in Construction
   BCS 8143 Advanced Project Management and Control

   Elective Courses (9 crh): [Equivalent courses from other departments are accepted, if approved]
   BCS 6213 Sustainable Construction
   BCS 6223 Construction Financial Management
   BCS 6233 Construction Heavy Equipment and Methods

   Track Options (6 crh):

1) Professional Track
BCS 6313 Construction Data Analytics
BCS 6323 Special Topics in Construction
or
2) Research Track
BCS 9000 Research in Construction

BCS 6113: Construction Risk Management and Decision-Making

Three hours lecture. Examine risk identification, analysis, and mitigation in construction projects, emphasizing decision-making strategies to manage uncertainties and improve project outcomes.

BCS 8113: Leadership and Human Factors in Construction

Three hours lecture. Explore leadership skills and human factors affecting construction projects, emphasizing team collaboration, effective communication, and strategies to enhance project outcomes.

BCS 8123: Research Methodology in Construction

Three hours lecture. Introduction to research methods in construction management, focusing on data collection, analysis, and interpretation to support evidence-based decision-making in construction projects.

BCS 8133: Emerging Technologies in Construction

Three hours lecture. Introduction to emerging technologies in construction processes, focusing on innovation, implementation, and benefits in enhancing project efficiency and sustainability.

BCS 8143: Advanced Project Management and Control

Three hours lecture. Application of advanced techniques for managing and controlling construction projects, focusing on planning, execution, and performance measurement to ensure project success.

BCS 6213: Sustainable Construction

Three hours lecture. A comprehensive review of sustainable construction practices, focusing on environmentally friendly materials, energy-efficient designs, and strategies to minimize environmental impact throughout the construction lifecycle.

BCS 6223: Construction Financial Management

Three hours lecture. A comprehensive review of financial principles in construction, covering budgeting, cost control, financial analysis, and cash flow management to ensure the financial success of construction projects.

BCS 6233: Construction Heavy Equipment and Methods

Three hours lecture. A comprehensive review on the selection, operation, and management of heavy equipment in construction, focusing on methods that enhance efficiency, safety, and project success.

BCS 6313: Construction Data Analytics

Three hours lecture. Introduction to data analytics in construction, focusing on data collection, analysis, and interpretation to enhance decision-making, project efficiency, and performance evaluation.

BCS 6323: Special Topics in Construction

Three hours lecture. A comprehensive review of emerging issues and innovations in construction management, offering insights into contemporary challenges and advanced topics relevant to industry trends and practices.

3. Describe the coherence and increasing rigor of the program.

    a. Undergraduate Programs: Provide evidence that 3000-level and 4000-level courses are designed to provide a coherent program of study that enhances the degree.
    b. Graduate Programs: Provide evidence that the design of the program is not just a collection of graduate courses.

    The proposed Master of Science in Construction Management program at Mississippi State University is designed as an integrated curriculum that extends beyond a mere collection of graduate courses. It features a cohesive structure, beginning with core courses that establish essential competencies in risk management, leadership, research methodology, emerging technologies, and advanced project management. This foundation is complemented by a set of elective courses that enhance the core curriculum and ensure comprehensive coverage of key areas in construction management as well as two distinct

tracks—Professional and Research—that cater to diverse career paths. The synergistic relationships among the courses ensure a progressive development of skills, addressing both technical and managerial aspects of construction management while fostering analytical capabilities and contemporary issues like sustainability. Overall, the program offers a comprehensive educational experience that prepares graduates for leadership roles in the construction industry or further academic pursuits.

4. Student Learning Outcomes

Assessment Procedures

Learning Outcome	Assessment description & Course
Create effective and professional written communications.	Assessments include quizzes, exams, projects, and class activities. The learning objective is evaluated in BCS 8123 Research Methodology in Construction.
Apply critical thinking.	Assessments include quizzes, exams, projects, and class activities. The learning objective is evaluated in BCS 8113 Leadership and Human Factors in Construction.
Apply problem-solving techniques.	Assessments include quizzes, exams, projects, and class activities. The learning objective is evaluated in BCS 6113 Construction Risk Management and Decision-Making.
Apply decision making techniques.	Assessments include quizzes, exams, projects, and class activities. The learning objective is evaluated in BCS 6113 Construction Risk Management and Decision-Making.
Apply research methods.	Assessments include quizzes, exams, projects, and class activities. The learning objective is evaluated in BCS 8123 Research Methodology in Construction.
Apply advanced communication technology.	Assessments include quizzes, exams, projects, and class activities. The learning objective is evaluated in BCS 8133 Emerging Technologies in Construction.
Apply professional ethics.	Assessments include quizzes, exams, projects, and class activities. The learning objective is evaluated in BCS 8113 Leadership and Human Factors in Construction.
Apply advanced construction management practices.	Assessments include quizzes, exams, projects, and class activities. The learning objective is evaluated in BCS 6223 Construction Financial Management.
Understand risk management.	Assessments include quizzes, exams, projects, and class activities. The learning objective is evaluated in BCS 6113 Construction Risk Management and Decision-Making.
Understand the principles of leadership in business.	Assessments include quizzes, exams, projects, and class activities. The learning objective is evaluated in BCS 8113 Leadership and Human Factors in Construction.

5. Proposed 4-letter Abbreviation
   MSCM

6. CIP Number (contact Director of Academic Quality for help in determining number)
   CIP 15.1001.00

7. Attach Letters of Support

8. Attach IHL Appendix 8

NEW GRADUATE DEGREE OUTLINE FORM

Use the chart below to indicate your new degree outline. Please list required College and Major Required Courses and if appropriate Concentration Courses. Graduate programs that wish to specialize beyond the Major must have at least two concentrations. Add additional rows as needed for programs with more than two concentrations. Expand rows as needed

PROPOSED New Degree	
Degree: MS Major: Construction Management Concentration 1: NA Concentration 2: NA	
The Master of Science in Construction Management is an advanced degree program designed to prepare students for leadership roles in the construction industry by integrating managerial, technological, economic, and environmental aspects of construction projects. The curriculum focuses on advanced project management, risk management, emerging technologies, sustainability, and leadership in construction, ensuring a comprehensive education that balances theoretical knowledge with practical application through real-world projects and case studies. With flexible delivery methods that often include both in-person and online options, the program accommodates working professionals while addressing cutting-edge topics such as Building Information Modeling (BIM) and sustainable construction practices. Students will develop critical thinking, problem-solving, and decision-making skills tailored to the complexities of modern construction projects. Graduates are prepared for diverse roles such as project manager, construction manager, estimator, and scheduler, enhancing their career prospects and earning potential in a rapidly evolving sector. The program is aimed to be accredited by industry-recognized bodies like the American Council for Construction Education (ACCE) and requires 30 credit hours of coursework. Ultimately, this degree aims to produce skilled professionals who can effectively manage the challenges of contemporary construction projects and contribute to the advancement of the industry.	
Proposed Curriculum Outline	Required Hours
College Required Courses:	-
Major Required Courses:	
BCS 6113 Construction Risk Management and Decision-Making	3
BCS 8113 Leadership and Human Factors in Construction	3
BCS 8123 Research Methodology in Construction	3
BCS 8133 Emerging Technologies in Construction	3
BCS 8143 Advanced Project Management and Control	3
Elective Courses:	
BCS 6213 Sustainable Construction	3
BCS 6223 Construction Financial Management	3
BCS 6233 Construction Heavy Equipment and Methods	3
Track Options (6 crh):	

1) Professional Track BCS 6313 Construction Data Analytics BCS 6323 Special Topics in Construction or 2) Research Track BCS 9000 Research in Construction	 3 3 6
Concentration 1. Courses: NA	-
Total Hours	30

NEW ACADEMIC DEGREE PROGRAM PROPOSAL

Institutional Request Form – Appendix 8
(Submit in PDF format with signatures.)

Institution:	Mississippi State University
Date of anticipated implementation:	August 2025
Program title as it will appear on Academic Program Inventory, Diploma, and Transcript:	Construction Management
Name of degree(s) to be awarded:	MS in Construction Management
Six-digit CIP code:	15-1001
Total credit-hour requirement to earn the degree:	30
Responsible academic unit:	Department of Building Construction Science
Institutional contact:	Saeed Rokooei
Phone:	662-325-1298
Email:	srokooei@caad.msstate.edu
SACSCOC Substantive Change:	☒ Program proposed **IS NOT** a substantive change. ☐ Program proposed **IS** a substantive change.
Incremental, five-year cost of implementation:	$1,360,400
Incremental, five-year per student cost of implementation:	$4820
Potential five-year, new revenue:	$1,669,800
Potential new, five-year revenue per student:	7590
Will it attract new students to the university?	☒ Yes ☐ No
List any institutions within the State offering similar programs:	None

Number of students expected to enroll in first 5 years:		Number of students expected to graduate in first 5 years:	
Year 1	10	Year 1	0
Year 2	20	Year 2	10
Year 3	30	Year 3	20
Year 4	30	Year 4	30
Year 5	40	Year 5	30
Total	130	Total	90

Program summary (include second majors completed, if applicable):

There is a growing demand for graduate degree programs that provide advanced knowledge in construction management, oriented towards working professionals. However, like other higher education institutions in the state of Mississippi, MSU currently does not offer a graduate degree program that focuses on the advanced skills and managerial aspects of construction, which are in highest demand among working professionals. In the current economic environment, with consistently increasing growth in construction projects, advanced construction management knowledge and expertise are in great demand. Many working professionals must acquire an understanding of advanced methods to contribute effectively to project execution and the ongoing operation of construction organizations. These professionals seek a practical approach to advanced construction management, focusing on skills for the responsible use of relevant methods and tools across various construction sectors. Because managerial tools and techniques are used in every aspect of modern construction organizations, these professionals come from a variety of educational backgrounds, making it difficult to anticipate whether learners will have traditional preparation in subjects like leadership and emerging technologies that form a significant part of construction management. In response to this need, a growing number of construction schools in the United States are offering Master of Science degrees. MSU's proposed

NEW ACADEMIC DEGREE PROGRAM PROPOSAL

Institutional Request Form – Appendix 8

(Submit in PDF format with signatures.)

Master of Science in Construction Management (MSCM) innovatively combines concepts and skills from many construction areas to enable learners to gain mastery of construction management concepts along with practical, hands-on experience in using various methods with real-world datasets across many construction sectors. To address the needs of both traditional students and working professionals, the degree is designed to be offered both in-person and online. To address uncertainty about learner preparation and improve the accessibility of the program, the degree has been designed to require only core concepts of construction management as prerequisite courses and to facilitate the learner's path to commence the program.

The audit of recently approved academic programs ensures that the program outcomes are congruent with the Board-approved proposal.

Please respond to the questions on the following pages to aid the institution and IHL staff in making recommendations to the IHL Board of Trustees.

_____ _____

Chief Academic Officer Signature – Date Institutional Executive Officer Signature – Date

NEW ACADEMIC DEGREE PROGRAM PROPOSAL

Institutional Request Form – Appendix 8
(Submit in PDF format with signatures.)

New Academic Degree Program Questions:

1	Describe how the degree program will be administered including the name and title of person(s) who will be responsible for curriculum development and ongoing program review.

The program will be administered through the Department of Building Construction Science (BCS) in the College of Architecture, Art, and Design, by a program coordinator and a student program advisor. The program will be governed under the general direction of the BCS graduate faculty. Specific responsibility for the design, review, and revise of the curriculum will be the purview of the BCS Department Head, Program Coordinator and faculty. Degree and course additions, modifications, and deletions are subject to approval by the larger faculty (University Course and Curriculum Committee).
The Program Coordinator responsible for curriculum development and ongoing program review is Saeed Rokooei, Ph.D., Associate Professor of the Building Construction Science Program.

2	Describe the educational objectives of the degree program including the specific objectives of any concentrations, emphases, options, specializations, tracks, etc.

The Master of Science in Construction Management incorporates the following learning objectives:
1. Create effective and professional written communications.
2. Apply critical thinking.
3. Apply problem-solving techniques.
4. Apply decision making techniques.
5. Apply research methods.
6. Apply advanced communication technology.
7. Apply professional ethics.
8. Apply advanced construction management practices.
9. Understand risk management.
10. Understand the principles of leadership in business.

3	Describe any special admission requirements for the degree program including any articulation agreements that have been negotiated or planned.

Admitted applicants to the Master of Science in Construction Management program at MSU must meet the University's Graduate School Admissions requirements. Additionally, applicants are required to demonstrate knowledge in core construction concepts, including: 1) Project Management, 2) Scheduling, and 3) Estimating. This knowledge can be satisfied through relevant coursework completed in undergraduate programs that cover these subjects (which means any construction-related programs that provides those three subjects) or their equivalents (which means through professional learning platforms).

4	Describe the professional accreditation that will be sought for this degree program. If a SACSCOC visit for substantive change will be necessary, please note.

No professional body currently accredits the Master of Science in Construction Management program. However, the program is designed to meet the standard necessary for future accreditation by the American Council for Construction Education (ACCE). While no substantive change according to SACSCOC guidelines is required at this time, pursuing ACCE accreditation will remain a strategic goal to enhance the program's recognition and ensure alignment with industry standards.

5	Describe the curriculum for this degree program including the recommended course of study (appending course descriptions for all courses) and any special requirements such as clinical, field experience, community service, internships, practicum, a thesis, etc.

All students will be required to complete 30 credit hours of coursework that includes the following categories: core courses (15 credit hours), elective courses (9 credit hours), and track option courses (6 credit

hours). Track options include either two 3-credit hour courses for the professional track or a 6-credit hour research thesis for the research track.
Students may substitute any of the three elective courses with comparable offerings from other departments. Such substitutions require individual review and approval by the graduate coordinator or department head. For instance, CE 6733 may be approved as a replacement for BCS 6233.

Syllabi for each of the following courses provide greater detail on course content:

Core Courses (15 crh):
BCS 6113 Construction Risk Management and Decision-Making
BCS 8113 Leadership and Human Factors in Construction
BCS 8123 Research Methodology in Construction
BCS 8133 Emerging Technologies in Construction
BCS 8143 Advanced Project Management and Control

Elective Courses (9 crh): [Equivalent courses from other departments are accepted, if approved]
BCS 6213 Sustainable Construction
BCS 6223 Construction Financial Management
BCS 6233 Construction Heavy Equipment and Methods

Track Options (6 crh):
1) Professional Track
BCS 6313 Construction Data Analytics
BCS 6323 Special Topics in Construction
or
2) Research Track
BCS 9000 Research in Construction

6	Describe the faculty who will deliver this degree program including the members' names, ranks, disciplines, current workloads, and specific courses they will teach within the program. If it will be necessary to add faculty in order to begin the program, give the desired qualifications of the persons to be added.

The faculty necessary to teach the program courses are already present in the Department of Building Construction Science at MSU. The program courses will continue to be delivered primarily by existing faculty or approved adjunct faculty in the Department of Building Construction Science in the College of Architecture, Art and Design.

7	Describe the library holdings relevant to the proposed program, noting strengths and weaknesses. If there are guidelines for the discipline, do current holdings meet or exceed standards?

The Mississippi State Library has adequate holdings for the proposed program. The following databases and more from the Mississippi State Library are relevant to the MS in Construction Management program:
• Academic Search Premier
• CloudSource+ and CloudSourceOA that search multiple databases, journal publishers, index open access scholarly journal articles, open textbooks, and open education resources
• eBooks from EBSCO
• ERIC
• Over 2.3 million volumes (MSU Library's online catalog); Over 11,000 print volumes in the local collections at MSU Meridian
• 200,000 electronic journals in an extraordinary range of subjects and full-text content
• Access to electronic journals sufficient to meet the needs of baccalaureate studies
• Discipline-based research guides aligned to applied science majors

• Access to virtual training opportunities through the library's MaxxSouth Digital Media Center (DMC) (ex.: Excel, Adobe InDesign, CAD, and other technology) online
• ILL and document delivery services for obtaining materials not owned by MSU Libraries

8	Describe the procedures for evaluation of the program and its effectiveness in the first five years of the program, including admission and retention rates, program outcome assessments, placement of graduates, changes in job market need/demand, ex-student/graduate surveys, or other procedures.

Multiple methods will be used to evaluate student learning and program effectiveness:

• Student learning will be assessed through course assessments (exams, quizzes, homework, and projects).
• The Office of Institutional Effectiveness at MSU conducts exit surveys of graduates and tracks admission, retention, graduation, and graduate placement rates that will be used to evaluate the program's effectiveness.
• The Center for Distance Education utilizes a variety of measures to assess student learning that will also be used to help evaluate the program's effectiveness.
• The success of the program will be determined by the number of learner students who enroll in the degree program versus the number of students that successfully complete the degree during the initial five-year period of the degree program.

9	What is the specific basis for determining the number of graduates expected in the first five years?

The Master of Science in Construction Management (MSCM) program at Mississippi State University (MSU) is expected to enroll students incrementally over a five-year period. With an optimal completion time of one year, graduates are anticipated starting from the second year of the program's implementation. This MSCM program is unique in Mississippi and one of the few such degrees in the nearby states of Alabama, Arkansas, and Louisiana, designed to prepare students for administrative and leadership careers in the construction sector.
A needs assessment survey conducted in spring 2024 revealed significant industry interest in the proposed MSCM program. All responding companies expressed enthusiasm for a master's degree that provides students and professionals with a comprehensive and deeper understanding of the complexities of leadership and supervision in construction. This strong interest was further reinforced by requests from the Associated Builders and Contractors (ABC) and the Mississippi Construction Education Foundation (MCEF) to initiate this program. Additionally, the recent advancement in joint efforts between MSU and the University of Rabat in Morocco suggests a promising demand for the MSCM among international applicants.
The survey results and industry feedback have confirmed the demand for this program and motivated the development of a relevant MSCM curriculum that meets the needs of industry partners and the state of Mississippi. This program aims to fill a crucial gap in advanced construction management education and contribute to the growth and development of the construction industry in the region.

10	Using expected enrollment, provide the total anticipated budget for the program including implementation and 4 subsequent years (total of 5 years) of operation; any anticipated direct, indirect, and incremental costs necessary to start the program; anticipated, incremental annual revenue based on student enrollment; and other sources of funding.

Please explain what has been included in the costs and revenues.

<u>Start-Up Costs:</u> one-time costs associated with offering this program

<u>Direct, Incremental Costs:</u> additional annual costs to the university as a result of offering this program

<u>Incremental Revenue:</u> additional annual revenue assuming that this program will bring in new students paying full tuition

<u>Non-Tuition Revenue</u>: external funds, grants, contracts or other revenues attributable to the addition of this program

Differential: all revenues minus all costs

Year	Incoming Students	Total Enrollment	Start-Up Costs	A Additional Annual Costs	B Additional Annual Revenue	C Non-Tuition Revenue	(B+C)-A Differential
2025-26	10	10	$0.00	$108,200.00	$75,900.00	$0.00	-$32,300.00
2026-27	20	30	$0.00	$204,600.00	$227,700.00	$0.00	$23,100.00
2027-28	30	50	$0.00	$301,000.00	$379,500.00	$0.00	$78,500.00
2028-29	30	60	$0.00	$349,200.00	$455,400.00	$0.00	$106,200.00
2029-30	40	70	$0.00	$397,400.00	$531,300.00	$0.00	$133,900.00
TOTAL	130	220	$0.00	$1,360,400.00	$1,669,800.00	$0.00	$309,400.00

11 Program Demand: Select one or both of the following to address student demand:

☒ Survey of Student Interest

Number of surveys administered: 90
Number of completed surveys returned: 60
Percentage of students interested in program: 76%

Include a brief statement that provides additional information to explain the survey.
In total, the MSCM survey garnered 403 responses from Mississippi State University alumni and current students. Responses consisted of 91% Mississippi State University alumni and 15% current bachelor's students. Of the respondents, 222 people, or 55%, are currently working in the construction industry. Additionally, 385 respondents, or 95%, agree with the vision to have a master's degree focusing on developing leaders in the construction industry. 97% of respondents agree with the goal of the master's degree to produce well-rounded sophisticated graduates equipped with techno-managerial, strategic and business abilities to lead in today's increasingly complex workplace. 61% of respondents agreed that Mississippi State University is well poised to commence the MSCM. 76% of respondents agreed that MSU graduates in related disciplines would be likely to pursue the MSCM. Respondents found the following attributes as most important to include: project management, construction financial management, decision making and risk analysis in construction, construction safety management, contracts and claims, quality management in construction, leadership, construction legal environment, design-build construction, project controls, construction economic analysis, value engineering, productivity improvement, building information modeling, sustainable built environment, lean construction, and artificial intelligence in construction. Respondents identified career growth particularly in management and leadership positions as the greatest potential benefit perceived from the master's degree.

☒ Market Analysis or Evidence of Labor Market Need

The construction industry in Mississippi and the broader United States is experiencing significant growth and transformation, creating a strong demand for professionals with advanced management skills. According to the U.S. Bureau of Labor Statistics, there are currently 1,330 construction managers working in Mississippi's construction sectors. Considering a regular growth rate of 4% over a 30-year period, there is an average need for an additional 68 new construction managers annually, not accounting for the higher-than-average age of the current workforce in the industry. This demand is further amplified by several key trends shaping the construction landscape. These include the adoption of new technologies like Building Information Modeling (BIM) and construction management software, a growing focus on sustainability and green building practices, the rise of modular and prefabricated construction methods, and the implementation of design-build project delivery systems. The industry is also grappling with persistent labor shortages, creating opportunities for skilled managers who can navigate these challenges. Additionally, the influx of federal infrastructure spending and the increasing complexity of projects are driving the need for professionals with advanced knowledge in construction management. The MS in Construction Management at Mississippi State University is uniquely positioned to address these industry needs, offering a program that combines theoretical knowledge with practical, hands-on experience, and

catering to both traditional students and working professionals through flexible delivery options.

12 Employment Opportunities for Graduates (state, region, nation):

Graduates of the Master of Science in Construction Management program will possess advanced knowledge and skills that uniquely prepare them for managerial roles within the construction industry. As the construction sector continues to be a vital component of the economy, there is a consistent demand for skilled professionals equipped with the expertise necessary to navigate complex projects and lead teams effectively.

In Mississippi, graduates will be well-positioned to assume leadership roles in large construction firms operating in major cities such as Jackson, Gulfport, and Biloxi. Their advanced managerial skills and technical expertise will be invaluable in state government agencies overseeing complex infrastructure development projects. Commercial and residential developers will seek out these graduates for their ability to manage multifaceted projects efficiently. In healthcare facility construction and educational institution expansion projects, their advanced knowledge in both management and technical aspects of construction will be crucial for ensuring successful project outcomes.

The southeastern United States offers a dynamic construction market where graduates can leverage their advanced skills. In rapidly growing urban centers like Atlanta, Nashville, and New Orleans, their expertise in managing large-scale projects and teams will be in high demand. Coastal development projects along the Gulf Coast will benefit from their advanced understanding of environmental considerations and regulatory compliance. Infrastructure improvement initiatives across multiple states will require their sophisticated project management abilities and technical know-how. In industrial construction within key manufacturing hubs, their advanced knowledge of modern construction technologies and management techniques will be essential for optimizing efficiency and productivity.

On a national scale, MSCM graduates from Mississippi will be sought after by large national construction and engineering firms for their comprehensive understanding of both managerial and technical aspects of construction. Federal agencies such as the U.S. Army Corps of Engineers will value their advanced skills in managing complex, large-scale projects. Consulting firms specializing in construction management will rely on their expertise to provide high-level strategic advice to clients. Technology companies developing cutting-edge construction software and solutions will benefit from their deep understanding of both management principles and technical requirements in the construction industry. The growing field of renewable energy construction presents another avenue where their advanced knowledge in sustainable practices and project management will be highly valued.

According to projections from the U.S. Bureau of Labor Statistics, construction manager jobs are expected to grow by 8% from 2021 to 2031, which is faster than the average for all occupations. This growth, combined with the advanced skills acquired through the MSCM program, positions graduates favorably in the job market. With their comprehensive understanding of project management, scheduling, estimating, and leadership, graduates will be well-equipped to assume roles such as project manager, construction manager, estimator, scheduler, sustainability consultant, and construction technology specialist. The diverse skill set gained from the program not only enhances their employability but also empowers them to thrive in managerial positions within the construction industry and related fields. This version highlights the advanced knowledge and managerial expectations for graduates while maintaining clarity and coherence throughout the section.

NEW ACADEMIC DEGREE PROGRAM PROPOSAL

Institutional Request Form – Appendix 8

(Submit in PDF format with signatures.)

MISSISSIPPI STATE UNIVERSITY

COLLEGE OF ARCHITECTURE, ART & DESIGN
DEPARTMENT OF BUILDING CONSTRUCTION SCIENCE

P.O. Box 6222
132 Howell Building | 823 Collegeview St.
Mississippi State, MS 39762

P. 662.325.8305
www.caad.msstate.edu

Aug. 16, 2024

To: University Committee on Courses and Curricula

Re: BCS MSCM Courses

The Building Construction Science Curriculum Committee are in support of the proposal to create the following courses as a requirement for the new master's program in the Department: BCS 6113: Construction Risk Management and Decision-Making, BCS 8113: Leadership and Human Factors in Construction, BCS 8123: Research Methodology in Construction, BCS 8133: Emerging Technologies in Construction, BCS 8143: Advanced Project Management and Control, BCS 6213: Sustainable Construction, BCS 6223: Construction Financial Management, BCS 6233: Construction Heavy Equipment and Methods, BCS 6313: Construction Data Analytics, BCS 6323: Special Topics in Construction

Name/Title	Committee Role	Signature
George Ford Professor	Chair and Voting Member	
Afshin Hatami Assistant Professor	Vice Chair and Voting Member	
Michele Herrmann Associate Professor	Voting Member	
Mohsen Garshasby Assistant Professor	Voting Member	
Mahdi Ghafoori Assistant Professor	Voting Member	
Rizwan Farooqui Assistant Professor	Voting Member	

Please let the committee know if there are any questions or concerns.

Sincerely,

George Ford
Professor
BCS Curriculum Committee Chair