A MEMORANDUM

DATE: July 8, 2020

TO: UCCC Members

FROM: Dr. Dana Pomykal Franz, Chair

SUBJECT: July 31, 2020 Meeting

The agenda and proposals for the meeting on **Friday, July 31, 2020 beginning at 9:00 a.m.** are enclosed. The meeting will be held by WebEx. Please contact the UCCC Office if you are unable to participate.

The minutes from the May 1, 2020 UCCC meeting and the link for WebEx will be sent to you in a separate email.

Thank you.

Enclosures: Course/Curriculum Proposals

AGENDA
UNIVERSITY COMMITTEE ON COURSES AND CURRICULA
July 31, 2020

1. **Welcome**
2. **Approval of minutes**
3. **Course proposals by college/school:**

AGRICULTURE AND LIFE SCIENCES

+Online/Distance	EPP 2213	Introduction to Insects
Addition +Online/Distance	FNH 8713	Applied Public Health Practicum
Addition +Online/Distance	FNH 8723	Integrative Experience
Addition +Online/Distance	FNH 8733	Policy in Public Health and Health Care Systems
Addition +Online/Distance	FNH 8743	Nutrition Policy
Addition +Online/Distance	FNH 8753	Nutritional Epidemiology

ARTS & SCIENCES

Addition	CH 4221	Theoretical and Practical X-ray Course Applied in Single X-Ray and Powder Diffraction
Addition	CH 4331	Practical Mass Spectrometry
Addition	CH 4341	Practical Materials Characterization
Addition	CH 4461/6461	Practical Optical Spectroscopy
Addition	CH 4471/6471	Practical Vibrational Spectroscopy
Addition	CH 4531	Practical Nuclear Magnetic Resonance Spectroscopy 1
Addition	CH 4541	Practical Nuclear Magnetic Resonance Spectroscopy 2
Addition	CH 8323	Mass Spectrometry
Addition	CH 8523	Modern Organic Reactions and Mechanisms
Addition	CH 8543	Organic Spectroscopy
Addition +Online/Distance	FL 4423/6423	Greek History (Same as HI 4453)
Addition +Online/Distance	FL 4433/6433	Roman History (Same as HI 4463)
Addition +Online/Distance	FLL 4123/6123	Cicero
Addition +Online/Distance	FLL 4143/6143	Latin Epistolography
Addition +Online/Distance	FLL 4263/6263	Latin Epigram
Addition	GR 3011	Weather Analysis
Addition +Online/Distance	GR 4693/6693	Physical Meteorology and Climate

Addition	HI 4453	Greek History (Same as FL 4423/6423)
Addition	HI 4463	Roman History (Same as FL 4433/6433)

ENGINEERING

Addition	ABE 3773	Current Topics in Biomedical Engineering
+Online/Distance	CHE 8011	Chemical Engineering Seminar
Addition +Online/Distance +Gulf Coast +Meridian	CSE 3713	Introduction to Cybersecurity
Modification	IE 4543/6543	Logistics Engineering
Modification	IE 4733/6733	Linear Programming

FOREST RESOURCES

+Online/Distance	SBP 6023 (split level with SBP 4023)	Lignocellulosic Biomass Chemistry
Modification +Online/Distance	SBP 6123 (split level with SBP 4123)	Lumber Manufacturing
Modification +Online/Distance	SBP 4443	Capstone Sustainable Bioproducts
Addition +Online/Distance	SBP 8023	Professional Practices in Wood Products Industry
Addition +Online/Distance	SBP 8203	Graduate Capstone

VETERINARY SCIENCE

Modification	CVM 4214	Small Animal Surgery & Anesthesia Clinical Experience
Modification	CVM 5021	Professional Development II

4. Degree proposals by college/school

AGRICULTURE AND LIFE SCIENCES

Addition	MS	Public Health (Campus 1 and Campus 5)

ENGINEERING

Modification	MS	Computer Science
Modification	PhD	Computer Science
Modification	MS	Industrial Engineering
Modification	PhD	Industrial Engineering

FOREST RESOURCES

Modification	MS	Sustainable Bioproducts (Thesis)
Modification +Online/Distance	MS	Sustainable Bioproducts (Non-thesis)

VETERINARY SCIENCE

Modification	BS	Veterinary Medical Technology

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: College of Agriculture and Life Sciences
Department: Food Science, Nutrition, Health Promotion
Contact Person: Marion W. Evans, Jr; **Mail Stop:** 9805; **E-mail:** mwe59@msstate.edu
Nature of Change: Add New Degree - IHL Approval Required
Date Initiated: June 2020; **Effective Date:** Fall 2021
Current Degree Program Name: N/A; **Major:** N/A; **Concentration:** N/A
New Degree Program Name: Master of Public Health
Major: N/A **Concentration:** Public Health Nutrition

Summary of Proposed Changes:
New program. A Master of Public Health degree program would be created with a focus on Public Health Nutrition. Students would require a minimum of 42 hours of course work in nutrition, epidemiology, and health promotion at Mississippi State to receive the non-thesis, professional degree. The required courses include the 240 hours of field-based experience through the Applied Public Health Practicum course and a written report through the Integrative Experience capstone course. This program will prepare those in the nutrition field for work in public health, public policy, and national nutrition programs. Currently, there are no MPH degrees in public health nutrition at public universities in the Deep South. It would be offered both Campus 1 and 5 as existing courses are converted.

Approved:	Date:
Department Head	6-24-2020
Chair, College or School Curriculum Committee	6/28/2020
Dean of College or School	6/29/2020
Chair, University Committee on Courses and Curricula	
Chair, Graduate Council(if applicable)	
Chair, Deans Council	

PROPOSAL ELEMENTS

CATALOG DESCRIPTION and CURRICULUM OUTLINE

PROPOSED New Degree	
Degree: Master of Public Health Major: N/A Concentration: Public Health Nutrition	
The Master of Public Health program will prepare students with a professional degree in the field of public health nutrition. The program requires 42/44 credit hours, including core courses of 21/22 hours in public health and 18 hours in nutrition and foods, as well as an elective course (3 hours except EPY 8214). For programmatic accreditation, it requires applied public health practicum and integrative experience, which are part of the core curriculum.	
Proposed Curriculum Outline	Required Hours
Required Public Health Courses: *FNH 8553 Behavioral Epidemiology *KI 8313, *EPY 6214 or CVM 8503 Biostatistics *FNH 6773 Introduction to Environmental Health #FNH 8733 Policy in Public Health and Health Care Systems *FNH 8563 Principles of Epidemiology and Health Science Research #FNH 8713 Applied Public Health Practicum #FNH 8723 Integrative Experience	21/22
Required Nutrition Courses: FNH 6123 Nutrition and Chronic Disease *FNH 6353 Nutrition through the Lifecycle *FNH 8243 Community Nutrition FNH 6373 Nutrition Education and Counseling #FNH 8753 Nutritional Epidemiology #FNH 8743 Nutrition Policy	18
Elective courses (choose one): *FNH 8163 Design and Administration of Health Promotion *FNH 8653 Implementation and Evaluation of Health Promotion *FNH 6193 Social and Cultural Aspects of Food *FNH 8543 Health Education for Diverse Populations *FNH 8233 Maternal and Infant Nutrition FNH 8263 Nutritional Genomics FNH 8293 Molecular Nutrition FNH/CVM 8333 Food Safety and Security in Public Health *EPY 8214 Int Educational and Psychological Statistics FNH 8773 Human Microbiome and Health FNH 6253 Macronutrients FNH 6293 Micronutrients *FNH 6393 Prevention and Control of Disease AN 6113 Medical Anthropology	3/4
Total Hours	42/44

*Existing courses with an online option; #New courses with an online option; others would be converted to have an online option

STUDENT LEARNING OUTCOMES AND ASSESSMENT

Students will need an undergraduate basis for understanding human health and nutrition. Those without this background may be required to take leveling courses. All Master of Public Health courses are aimed at the Council on Education for Public Health's Master of Public Health competencies and the Essential Public Health Services. These are:

Public Health Foundational Objectives

1. Explain public health history, philosophy, and values
2. Identify the core functions of public health and the 10 essential services
3. Explain the role of quantitative and qualitative methods and sciences describing and assessing a population's health
4. List major causes and trends of morbidity and mortality in the US or other communities relevant to the program
5. Discuss the science of primary, secondary, and tertiary prevention in population health including health promotion and screening
6. Explain the critical importance of evidence in advancing public health knowledge
7. Explain the effects of environmental factors on a population's health
8. Explain biological and genetic factors that affect populations health
9. Explain behavioral and psychological factors that affect populations health
10. Explain social, political, and economic determinants of health and how they contribute to population health and health inequities
11. Explain how globalization affects global burdens of disease
12. Explain an ecological perspective on the connections among human health, animal health and ecosystem health (e.g One Health).

Public Health Nutrition Competencies

1. Assess the acquisition of public health nutrition knowledge and skills and evaluate information effectively for public health practice and health literacy
2. Examine chronic disease surveillance, policy, program planning and management, and evaluate for the ability of programming to translate research into practice
3. Examine and develop the administration of population-based food, nutrition, and health services in a research informed manner
4. Examine the epidemiological aspects of human nutrition to improve population health and reduce risks for disease
5. Review and successfully evaluate national epidemiological nutrition information and research design methods for efficacy and relevance in population health
6. Explain the link between food safety, food security, and population health and wellbeing

Supervised Practice Experience and Culmination of Master of Public Health Program

1. Describe the educational objectives of the degree program including the specific objectives of any concentrations, emphases, options, specializations, tracks, etc.
The Master of Public Health in Public Health Nutrition will prepare students with a professional degree in the field of public health nutrition. The program requires 42/44 credit hours, including a core lecture courses of 15/16 hours in public health and 18 hours in public health nutrition. In addition, for programmatic accreditation, it requires a field-based internship (Applied Public Health Practicum; 3 credit hours) and a comprehensive exam including a written report and an oral presentation (Integrative Experience; 3 credit hours). Furthermore, students will choose a 3 or 4 credit hour elective course from the list. All Master of Public Health courses are aimed at the Council on Education for Public Health's 22 Master of Public Health competencies and the 10 Essential Public Health Services. These are:

Master of Public Health competencies

Evidence-based Approaches to Public Health
1. Apply epidemiological methods to the breadth of settings and situations in public health practice
2. Select quantitative and qualitative data collection methods appropriate for a given public health context
3. Analyze quantitative and qualitative data using biostatistics, informatics, computer-based programming and software, as appropriate
4. Interpret results of data analysis for public health research, policy or practice Public Health & Health Care Systems
5. Compare the organization, structure and function of health care, public health and regulatory systems across national and international settings
6. Discuss the means by which structural bias, social inequities and racism undermine health and create challenges to achieving health equity at organizational, community and societal levels
Planning & Management to Promote Health
7. Assess population needs, assets and capacities that affect communities' health
8. Apply awareness of cultural values and practices to the design or implementation of public health policies or programs
9. Design a population-based policy, program, project or intervention
10. Explain basic principles and tools of budget and resource management
11. Select methods to evaluate public health programs
Policy in Public Health
12. Discuss multiple dimensions of the policy-making process, including the roles of ethics and evidence
13. Propose strategies to identify stakeholders and build coalitions and partnerships for influencing public health outcomes
14. Advocate for political, social or economic policies and programs that will improve health in diverse populations
15. Evaluate policies for their impact on public health and health equity
Leadership
16. Apply principles of leadership, governance and management, which include creating a vision, empowering others, fostering collaboration and guiding decision making
17. Apply negotiation and mediation skills to address organizational or community challenges
Communication
18. Select communication strategies for different audiences and sectors
19. Communicate audience-appropriate public health content, both in writing and through oral presentation
20. Describe the importance of cultural competence in communicating public health content
Interprofessional Practice
21. Perform effectively on interprofessional teams
Systems Thinking
22. Apply systems thinking tools to a public health issue

Essential Public Health Services
1. Monitor health status to identify and solve community health problems
2. Diagnose and investigate health problems and health hazards in the community
3. Inform, educate, and empower people about health issues
4. Mobilize community partnerships and action to identify and solve health problems
5. Develop policies and plans that support individual and community health efforts
6. Enforce laws and regulations that protect health and ensure safety
7. Link people to needed personal health services and assure the provision of health care when otherwise unavailable
8. Assure competent public and personal health care workforce
9. Evaluate effectiveness, accessibility, and quality of personal and population-based health services
10. Research for new insights and innovative solutions to health problems

Students will also acquire specific public health nutrition competencies, which include:

1. Assess the acquisition of public health nutrition knowledge and skills and evaluate information effectively for public health practice and health literacy
2. Examine chronic disease surveillance, policy, program planning and management, and evaluate for the ability of programming to translate research into practice
3. Examine and develop the administration of population-based food, nutrition, and health services in a research informed manner
4. Examine the epidemiological aspects of human nutrition in order to improve population health and reduce risks for disease
5. Review and successfully evaluate national epidemiological nutrition information and research design methods for efficacy and relevance in population health
6. Explain the link between food safety, food security, and population health and wellbeing

Supervised Practice Experience and Culmination of Master of Public Health Program

The Applied Public Health Practicum course will consist of no less than 240 contact hours of supervised field-based experience in public health sites. The experience is completed either on-campus or off-campus and requires students:

- to gain practical experience in which they can bridge their academic preparation and public health practice;
- to apply the knowledge and skills learned in core lecture courses in an outreach setting under the supervision and guidance of practicum director and preceptor who have significant public health training and/or experience.

The integrative experience is the capstone course in which students synthesize and document their understanding of the chosen Foundational Competencies and unique Concentration Competencies. During the last term of the program, students will have a culminating experience through a written report and an oral presentation in the Integrative Experience course. Students must discuss at least 5 of the 22 Public Health Competencies and how they are applied to the project or work. Students can choose either their supervised field experience or another public health nutrition topic for the report and oral presentation of the Integrative Experience. The written report needs to be of high quality and is presented with the comprehensive exam, which includes the oral presentation. The project must be a culmination of the experience from the supervised field practice and knowledge gained in lecture courses and of the quality to advance our understanding in public health. Students are encouraged to work with their supervisors for publication of the written report.

SUPPORT

A letter of support from the Curriculum Committee of the Department of Food Science, Nutrition and Health Promotion is attached.

PROPOSED 4-LETTER ABBREVIATION: PUBH

EFFECTIVE DATE: Fall 2021

CIP number: 51.2201

MISSISSIPPI STATE UNIVERSITY

DEPARTMENT OF FOOD SCIENCE, NUTRITION AND HEALTH PROMOTION
P. O. Box 9805
Mississippi State, MS 39762
P. 662.325.3200
fsnhp.msstate.edu

Date: June 24th, 2020

To: Dr. Will Evans, Department Head
From: Dr. Wes Schilling, Curriculum Committee Chair

Re: Master of Public Health Nutrition program

Dr. Evans,

This letter serves as verification that the Curriculum Committee has approved the addition of a Master of Public Health Nutrition program within the department of Food Science, Nutrition, and Health Promotion. In addition, the Master of Public Health Nutrition curriculum and Appendix 8 was voted on by departmental faculty and approved by a vote of 10 yes votes and 4 no votes.

Sincerely,

Wes Schilling, PhD
Chair

Wen-Hsing Cheng, PhD
Committee Member

Terezie Tolar-Peterson, EdD
Committee Member

Shecoya White, PhD
Committee Member

Appendix 8: New Degree Program Proposal MPH- Public Health Nutrition
(Submit Appendix 8 in both PDF and Word Document Formats)

Institution: Mississippi State University

Date of Implementation: Fall 2021	**Incremental, Six-Year Cost of Implementation:**	**Incremental, Six-Year Per Student Cost of Implementation:**
	$1,096,238	$8,305
Will it attract new students to the university? ☒ **Yes** ☐ **No**	**Potential Six-Year, New Revenue:**	**Potential New, Six-Year Revenue Per Student:**
	$ 3,796,464	$28,761

Program Title as will Appear on Academic Program Inventory, Diploma, and Transcript: Master of Public Health

Six-Digit CIP Code: 51.2201

Name of Degree(s) to be Awarded: Master of Public Health

Total Credit Hour Requirements to earn the degree: 42

List any institutions within the state offering similar programs:

Jackson State University, Southern Mississippi, Mississippi University for Women

Responsible Academic Unit(s):
College of Agriculture and Life Sciences, Department of Food Science, Nutrition, and Health Promotion

Institutional Contact: Marion W. Evans, Jr.
Phone: 662-325-5508
Email: mwe59@msstate.edu

Check one of the boxes below related to SACSCOC Substantive Changes.

☐ **Proposed Program is Not a Substantive Change**

☒ **Proposed Program is a Substantive Change**

Number of Students Expected to Enroll in First Six Years:		**Number of Graduates Expected in First Six Years:**	
Year One	12	**Year One**	0
Year Two	24	**Year Two**	12
Year Three	24	**Year Three**	24
Year Four	24	**Year Four**	24
Year Five	24	**Year Five**	24
Year Six	24	**Year Six**	24
Total	132	**Total**	120

Program Summary: This proposal would create a Master of Public Health degree program with a focus on Public Health Nutrition. Currently, there are no Master of Public Health degrees in public health nutrition at public universities in Mississippi or the Deep South. Students in this non-thesis, professional degree program will complete a minimum of 42 hours of course work in nutrition, epidemiology, and health promotion at Mississippi State University through lecture courses, field experience and a scholarly report. This program will prepare those in the nutrition field for work in public health, public policy, and national nutrition programs. According to the U.S. Bureau of Labor Statistics, employment opportunities in both the categories of "Dietitians and Nutritionists" and "Health Educators and Community Health Workers" will increase 11% from 2018-2028. In comparison, the average growth rate for all occupations is 5%. The program would be offered face-to-face and online to accommodate the working individual.

_____ _____

Chief Academic Officer Signature **Date**

_____ _____

Institutional Executive Officer Signature **Date**

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 degree program will be offered on campus and online and will be primarily housed in the Department of Food Science, Nutrition, and Health Promotion. Dr. Marion W. Evans, Jr. is the Department Head and will be responsible for curriculum development and program review.

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

The Master of Public Health in Public Health Nutrition will prepare students with a professional degree in the field of public health nutrition. The program requires 42/44 credit hours, including a core lecture courses of 15/16 hours in public health and 18 hours in public health nutrition. In addition, for programmatic accreditation, it requires a field-based internship (Applied Public Health Practicum; 3 credit hours) and a comprehensive exam including a written report and an oral presentation (Integrative Experience; 3 credit hours). Furthermore, students will choose a 3 or 4 credit hour elective course from the list. All Master of Public Health courses are aimed at the Council on Education for Public Health's 22 Master of Public Health competencies and the 10 Essential Public Health Services. These are:

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Planning & Management to Promote Health

7. Assess population needs, assets and capacities that affect communities' health
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12. Discuss multiple dimensions of the policy-making process, including the roles of ethics and evidence
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14. Advocate for political, social, or economic policies and programs that will improve health in diverse populations
15. Evaluate policies for their impact on public health and health equity

Leadership

16. Apply principles of leadership, governance, and management, which include creating a vision, empowering others, fostering collaboration and guiding decision making

17. Apply negotiation and mediation skills to address organizational or community challenges

Communication

18. Select communication strategies for different audiences and sectors
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- to gain practical experience in which they can bridge their academic preparation and public health practice;
- to apply the knowledge and skills learned in core lecture courses in an outreach setting under the supervision and guidance of practicum director and onside preceptor who has significant public health training and/or experience.

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

There are no additional admission requirements being proposed beyond the requirements already imposed by the Office of the Graduate School. No articulation agreements have been negotiated, but some are planned to be made with sites of supervised field experience.

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.

Council on Education for Public Health (CEPH) accreditation will be critical for this program.

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.

The Master of Public health program will consist of 42/44 credit hours and includes a required applied field-based internship (Applied Public Health Practicum). The experience culminates into a required applied project through the Integrative Experience course with specific outcomes as detailed above. The field experience will have a minimum of 240 contact hours at a public health site approved by the Program Director. Course descriptions are listed on Attachment A, and the degree outline as Attachment B.

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.

- Hart Bailey, PhD – Professor, Veterinary Medicine and Food Science, FNH/CVM 8333
- David Buys, PhD, MSPH, CPH –Assistant Professor, Health Sciences & State Health Specialist, FNH 8243
- Wen-Hsing Cheng, PhD – Professor, Nutrition, FNH 8263, FNH 8293, FNH 8773, FNH 6253, FNH 6293
- Marion W. Evans, Jr., PhD, MCHES – Professor, Health Sciences, FNH 8733
- Antonio Gardner, PhD, CHES – Assistant Professor, Health Sciences, FNH 8563, FNH 8613, FNH 8653, FNH 8543
- Barry Hunt, EdD – Professor, Health Sciences, FNH 8543, FNH 8553
- Adam Knight, PhD – Associate Professor, Biomechanics, KI 8313
- Rahel Mathews, PhD, MPH, RD – Assistant Professor, Nutrition, FNH 8243, FNH 6353, FNH 8753
- Milena Melo, PhD – Assistant Professor, Anthropology, AN 6133
- Arnita Norwood, PhD, MPH, RD – Assistant Professor, Nutrition, FNH 6123, FNH 6373,

FNH 8743

- Leah Pylate, PhD, CHES – Assistant Professor, Health Sciences, FNH 8543
- Terezie Tolar-Peterson, EdD, MS, RD – Associate Professor, Nutrition & Dietetic Internship Director, FNH 8233
- Tianlan Wei, PhD – Assistant Professor, Educational Psychology, EPY 6214, EPY 8214
- Robert Wills, PhD, DVM – Professor, Veterinary Medicine, CVM 8503
- 2 Adjunct lecturers: Michael Hall, FNH 6773; Fauzia Khan, FNH 6193
- Three new faculty positions with expertise in food science, nutrition and health promotion are expected to be provided by the College of Agriculture of Life Science upon approval of the new degree program. One of them reputable in public health nutrition would serve as the Program Director and be responsible for the Applied Public Health Practicum (FNH 8713) and Integrative Experience (FNH 8723) courses. New faculty members will help on teaching the proposed courses as needed.
- Additional affiliate faculty will be included as needed such as Holli Seitz, PhD, MPH, Assistant Professor of Communications

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?

   Mississippi State has a comprehensive library with journal, e-journal, an interlibrary system and text holdings to fully support this program. Mr. Bradley Brazzeal is the designated librarian for our college and has extensive knowledge on holdings in the MSU library system as well as mechanisms to acquire any additional holdings. Current holdings meet the demands and there is no known weakness. The current system is sufficient and is not expected to have any deficiencies in regard to this proposed degree program.

8. Describe the procedures for evaluation of the program and its effectiveness in the first six 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.

   The Office of Institutional Effectiveness at MSU tracks admission, retention, graduation, and graduate placement rates. They also conduct exit surveys of graduates. In addition, each concentration documents institutional effectiveness in an annual report. These institutional effectiveness reports will be formulated for this new degree program as well. Furthermore, the CEPH accreditation process will require its own set of credentials to assess program outcome and provide job market projections. Our Department will conduct exit interviews for students to be graduated from this proposed program. The Program Director will survey job placements of ex-students annually. Based on other degree programs of our Department, the Master of Public Health program expects to achieve graduation rate of 95% or greater and rates of 80% or greater for employment or enrollment in further education within one year of graduation.

   There are many job opportunities for healthcare professionals of graduates with Master of Public Health degree. Based on the U.S. Bureau of Labor Statistics, annual mean wages of the higher paid public health jobs in the U.S. range from $65,320 to $99,730. Specifically in the State of Mississippi, some of these jobs and annual wages are: Medical and Health Services Managers, $96,210; Emergency Management Directors, $52,170; Health and Safety Engineers, $82,760; Epidemiologists, $37,740; Environmental and Health Scientists and Specialists, Including Health, $64,460; Healthcare Social Workers, $47,460; Community Health Workers, $32,740. Employment opportunities in both the categories of “Dietitians and Nutritionists” and “Health Educators and Community Health Workers” will increase 11% from 2018-2028, which is twice as

high as the 5% average growth rate for all occupations. Not only stimulating economic growth and working in this high growth profession, students who graduate from the proposed Master of Public Health program and stay in Mississippi will benefit the health and wellness of Mississippians and reduce the burden of long term healthcare resources of this State.

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

Our projects are primarily based on enrollment in our dietetic internship, a program accredited by the Accreditation Council for Education in Nutrition and Dietetics. This agency accredits education programs preparing students for careers as registered dietitian nutritionists or nutrition and dietetics technicians. We have 16 students per year entering the program; about 75% of them enter without a master's degree and elect to pursue a degree. Because other degree options are available, we expect that half of those 12 (n = 6) will enter the proposed Master of Public Health program. We will recruit additional students to meet the expectation of 12 students for the first year. In particular, students interested in a gap program, between their undergraduate degrees in health sciences and professional school often choose Master of Public Health programs. We will reach those students and others who seek a terminal Master of Public Health degree for their career. These 12 will fill the first class. As the program becomes established and new faculty members onboard in Fall 2021, we expect to expand the program to enroll 24 students annually in the following five years.

Attachment A: Course Description

Course Number	Course Name and description
FNH 8553	**Behavioral Epidemiology.** Three hour lecture. Behavioral and social environmental issues related to premature morbidity and mortality patterns Current research literature and application of epidemiological principles to health education/promotion.
KI 8313 or EPY 6214 or CVM 8503	**KI 8313 Interpretation of Data in Kinesiology**. Three hours lecture. Statistical interpretation of qualitative and quantitative data in the various disciplines of kinesiology. **EPY 6214 Educational and Psychological Statistics.** Three hours lecture and three hours laboratory. A course in statistics for education and educational psychology majors. Analysis, description of and inference from various types of data. **CVM 8503 Epidemiology/Biostatistics.** Three hours lecture. Fundamental principles of descriptive and analytical epidemiology.
FNH 6773	**Introduction to Environmental Health.** Three hours lecture. Examines the relationship of people to their environment, how the environment can influence physical well-being, and importance of environmental protection to overall community health.
FNH 8733	**Policy in Public Health and Health Care Systems.** Three hours lecture. A comprehensive review of today's health care institutions and their response to the economic, social/ethical, political/legal, technological, and ecological environments.
FNH 8563	**Principles of Epi and Health Science Research.** Development of skills to interpret epidemiological research. Evaluation of various study design commonly used in the field of epidemiology related to health sciences.
FNH 8713	**Applied Public Health Practicum.** Three hours practicum. A field-based experience for application of key concepts in public health necessary for success as a public health professional.
FNH 8723	**Integrative Experience.** Three hours integrative experience. Provide an opportunity to integrate the knowledge and competencies from all Master of Public Health coursework.
FNH 6123	**Nutrition and Chronic Diseases.** Three hours lecture. The study of principles of nutrition and pathophysiology of chronic diseases and medical and nutrition management/treatment of chronic diseases and impact on nutritional status.
FNH 6353	**Nutrition Throughout the Lifecycle.** Three hours lecture. Study of interrelationships of physiological, biochemical and sociological factors and nutrient needs of individuals and groups during the life cycle; infancy through the later years.
FNH 8243	**Community Nutrition.** Three hours lecture. Nutrition services and problems in the community. Supervised experience in methods of determining and implementing action programs in nutrition education.
FNH 6373	**Nutrition Education and Counseling.** Three hours lecture. Examination of nutrition education and counseling in the delivery of food/nutrition interventions. Use of technology, interviewing, activities, and application strategies to enhance dietary change.
FNH 8753	**Nutritional Epidemiology.** Three hours lecture. An introduction to key concepts in epidemiology necessary to design, analyze, interpret, and critically evaluate population-based research in nutrition.

Attachment A: Course Description

FNH 8743	**Nutrition Policy.** Three hours lecture. This course provides and overview of food and nutrition policy concepts and examines interactions among stakeholders affect policy design and implementation. This course will explore historical and contemporary food and nutrition policy issues.
FNH 8613	**Design and Administration of Health Promotion.** Three hours lecture. Principles of health promotion planning models applicable to school, community, and worksite programs. Investigation of existing programs and current literature.
FNH 8653	**Implementation and Evaluation of Health Promotion.** Three hours lecture. Development and application of evaluation protocols for health promotion programs. Process, impact and outcome measures are examined.
FNH 6193	**Social and Cultural Aspects of Food.** Three hours lecture. A study of international, regional and religious history, customs, beliefs and other impacts upon food preparation and consumption.
FNH 8543	**Health Education for Diverse Populations.** Three hours lecture. This course is designed to help students identify and develop programs to overcome the health disparities that exist in diverse populations.
FNH 8233	**Maternal and Infant Nutrition.** Three hours lecture. Nutritional needs during reproduction and growth; problems in nourishing women during the reproductive period, infants, and children; indices of growth and development.
FNH 8263	**Nutritional Genomics.** Three hours lecture. An in-depth study of the reciprocal interactions between genomic variations and nutrients and how they impact health.
FNH 8293	**Molecular Nutrition**. Three hours lecture. An in-depth study of the mechanisms of nutrients and their impact on human nutrition and health.
FNH/CVM 8333	**Food Safety and Security in Public Health.** Three hours lecture. Epidemiology and risk factors of illness from microbial food contaminates. Pre- and post-harvest interventions will be addressed.
EPY 8214	**Int Ed & Psy Stat.** Three hours lecture and three hours laboratory. ANOVA techniques and regression analysis are discussed with emphasis upon the design and analysis of research problems in education and psychology.
FNH 8773	**Human Microbiome and Health.** Three hours lecture. In-depth study to explore and better understand those microorganisms living in our bodies, with a focus on the gut, and the cross-talks between microbiomes and host health.
FNH 6253	**Macronutrients.** Three hours face to face lecture or web-based distance instruction. In-depth study of the chemistry and functionality of macronutrients in food systems and their biochemical impact on the human body.
FNH 6293	**Micronutrients.** Three hours lecture. Advanced human nutrition and metabolism of regulatory micronutrients.
FNH 6393	**Prevention and Control of Disease.** Three hours lecture. An examination of how food science, nutrition and health promotion relate to chronic diseases. Prevention, control and detection are examined.
AN 6133	**Medical Anthropology.** Three hours lecture. The cross-cultural study of health, sickness, and medicine from a holistic perspective emphasizing in- teractions between culture and biology and between bio- medicine and local healing traditions.

Attachment B: Degree Outline

PROPOSED New Degree	
Degree: Master of Public Health Major: N/A Concentration: Public Health Nutrition	
The Master of Public Health program will prepare students with a professional degree in the field of public health nutrition. The program requires 42/44 credit hours, including core courses of 21/22 hours in public health and 18 hours in nutrition and foods, as well as an elective course (3 hours except EPY 8214). For programmatic accreditation, it requires applied public health practicum and integrative experience, which are part of the core courses.	
Proposed Curriculum Outline*	Required Hours
Required Public Health Courses: FNH 8553 Behavioral Epidemiology KI 8313, EPY 6214 or CVM 8503 Biostatistics FNH 6773 Introduction to Environmental Health FNH 8733 Policy in Public Health and Health Care Systems FNH 8563 Principles of Epidemiology and Health Science Research FNH 8713 Applied Public Health Practicum FNH 8723 Integrative Experience	21/22
Required Nutrition Courses: FNH 6123 Nutrition and Chronic Disease FNH 6353 Nutrition through the Lifecycle FNH 8243 Community Nutrition FNH 6373 Nutrition Education and Counseling FNH 8753 Nutritional Epidemiology FNH 8743 Nutrition Policy	18
Elective courses (choose one): FNH 8163 Design and Administration of Health Promotion FNH 8653 Implementation and Evaluation of Health Promotion FNH 6193 Social and Cultural Aspects of Food FNH 8543 Health Education for Diverse Populations FNH 8233 Maternal and Infant Nutrition FNH 8263 Nutritional Genomics FNH 8293 Molecular Nutrition FNH/CVM 8333 Food Safety and Security in Public Health EPY 8214 Int Educational and Psychological Statistics FNH 8773 Human Microbiome and Health FNH 6253 Macronutrients FNH 6293 Micronutrients FNH 6393 Prevention and Control of Disease AN 6113 Medical Anthropology	3/4
Total Hours	42/44

*Students will need an undergraduate basis for understanding human health and nutrition. Those without this background may be required to take leveling courses. All Master of Public Health courses are aimed at the Council on Education for Public Health's 22 Master of Public Health competencies and the 10 Essential Public Health Services. Student learning outcomes and assessment are described in #2 of Appendix 8.

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: Bagley College of Engineering **Department: Computer Science & Eng.**

Contact Person: Dr. T.J. Jankun-Kelly **Mail Stop: 9637 E-mail: tjk@cse.msstate.edu**

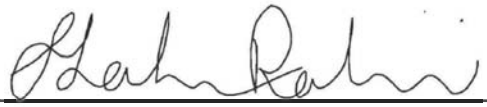
Nature of Change: Modification **Date Initiated: 6/20 Effective Date: 8/20**

Current Degree Program Name: Computer Science (Starkville & Distance)
Major: MS **Concentration: None**

Current Degree Program Name: Computer Science (Starkville & Distance)
Major: PhD **Concentration: None**

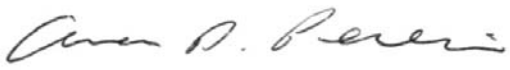
Summary of Proposed Changes:
Modifications due to course splits and required vs. elective changes.

Approved: **Date:**



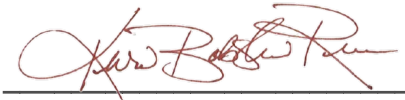
6/30/2020

Department Head



07/06/2020

Chair, College or School Curriculum Committee



7/6/2020

Dean of College or School

Chair, University Committee on Courses and Curricula

Chair, Graduate Council(if applicable)

Chair, Deans Council

1. Catalog Description

Graduate study is offered in the Department of Computer Science and Engineering leading to the degrees of Master of Science in Computer Science, Master of Science in Cyber Security and Operations, and Doctor of Philosophy in Computer Science.

The program of study of a Master of Science in Computer Science degree includes advanced courses in computer science that are selected according to the goals of the student. Masters students may choose between a professional degree General concentration or a more specialized Research concentration. The program of study of a Doctor of Philosophy (Ph.D.) in Computer Science degree includes advanced courses in computer science and significant scholarly research in computer science, presented in a dissertation. Applicants with bachelor degrees can apply for direct admission to the Ph.D. program. Applicants with master's degrees are also welcome.

The department's core research areas include the following.
- Artificial intelligence
- Computational science
- Graphics
- Human centered computing
- Software engineering
- Systems & Security

These core competencies support research applications in areas such as bioinformatics, visualization, computer security and forensics, human-computer interactions and high performance computing. Faculty, research assistants, thesis students, and dissertation students participate in a wide variety of research projects. Many research projects are multi-disciplinary or multi-specialty in nature.

2. Graduate Degree Curriculum Outline

Deletions in *italics* and additions in **bold.**

CURRENT Degree Description	PROPOSED Degree Description
Degree: Computer Science Major: MS (Thesis & Non-Thesis) Concentrations: *None*	Degree: Computer Science Major: MS (Thesis & Non-Thesis) Concentrations: **General, Research**

Graduate study is offered in the Department of Computer Science and Engineering leading to the degrees of Master of Science in Computer Science, Master of Science in Cyber Security and Operations, and Doctor of Philosophy in Computer Science. Masters and PhD in Computer Science The program of study of a Master of Science in Computer Science degree includes advanced courses in computer science that are selected according to the goals of the student. *The program of study includes a thesis option, a professional project option, or courses-only option.* The program of study of a Doctor of Philosophy (Ph.D.) in Computer Science degree includes advanced courses in computer science and significant scholarly research in computer science, presented in a dissertation. The department's core research areas include the following. • Artificial intelligence • Computational science • Graphics • Human centered computing • Software engineering *and systems* These core competencies support research applications in areas such as bioinformatics, visualization, computer security and forensics, human-computer interactions, robotics, and high performance computing. Faculty, research assistants, thesis students, and dissertation students participate in a wide variety of research projects. Many research projects are multi-disciplinary or multi-specialty in nature. MS applicants are required to have a 3.0 GPA in overall undergraduate work and must complete the GRE with a competitive score before admission; *international students require a suitable demonstration of English proficiency.* Candidates for the master's degree must have completed all prerequisite courses or their equivalent. For additional details, consult the CS Department's Graduate Handbook.	Graduate study is offered in the Department of Computer Science and Engineering leading to the degrees of Master of Science in Computer Science, Master of Science in Cyber Security and Operations, and Doctor of Philosophy in Computer Science. Masters and PhD in Computer Science The program of study of a Master of Science in Computer Science degree includes advanced courses in computer science that are selected according to the goals of the student. **Masters students may choose between a professional degree General concentration or a more specialized Research concentration**. The program of study of a Doctor of Philosophy (Ph.D.) in Computer Science degree includes advanced courses in computer science and significant scholarly research in computer science, presented in a dissertation. The department's core research areas include the following. • Artificial intelligence • Computational science • Graphics • Human centered computing • Software engineering • **Systems & Security** These core competencies support research applications in areas such as bioinformatics, visualization, computer security and forensics, human-computer interactions, robotics, and high performance computing. Faculty, research assistants, thesis students, and dissertation students participate in a wide variety of research projects. Many research projects are multi-disciplinary or multi-specialty in nature**.** MS applicants are required to have a 3.0 GPA in overall undergraduate work and must complete the GRE with a competitive score before admission; **graduates of Mississippi State University with a 3.5 GPA do not have to take the GRE. International students require a suitable demonstration of English proficiency.** Candidates for the master's degree must have completed all prerequisite courses or their equivalent. For additional details, consult the CS Department's Graduate Handbook.

CURRENT CURRICULUM OUTLINE	Required Hours	**PROPOSED CURRICULUM OUTLINE**	Required Hours
Core Courses (No Changes)	4	Core Courses (No Changes)	4

Primary Specialization *Students will complete 9 hours in a primary specialization approved by their committee. One of these courses must be a required introductory course at the split level. A separate course must also be completed at the full graduate level in the specialization.*	*9*	**(Removed)**	**0**
Secondary Specialization *Students will complete 6 hours in a primary specialization approved by their committee. One of these courses must be a required introductory course at the split level.*	*18*	**(Removed)**	**0**
Additional Coursework • *Graduate Coursework, possibly including directed project or thesis* *Students, in cooperation with their committee, can choose to do a directed project or a thesis to replace some of these additional 12 hours. A directed project requires taking course CSE 8080 under the direction of the student's major professor or other member of the student's committee. A thesis requires 6 hours of CSE 8000 under the guidance of a thesis director as per the Catalog.* *Any required courses in the Core or a Specialization previously completed by a student may be applied for completion and replaced with another free course of the student's and committee's choosing* *A minimum of 15 credit hours of the courses in the total program of study must be at the full graduate level (numbered 8000 or 9000).*	*18*	**(Removed)**	**0**

		Concentration: General **Breadth Requirement** **Students will complete an 9 hours from 3 different areas of computer science.** **Additional Hours** **Students will complete 18 additional hours of graduate coursework. Up to 3 of these hours may be CSE 8080 (Directed Project).** **A minimum of 15 credit hours of the courses in the total program of study must be at the full graduate level (numbered 8000 or 9000). Coursework outside CSE may count only at a student's committee's discretion. The majority of hours must come from CSE. General students cannot count CSE 8000 (Thesis Research) for program hours.**	**9** **18**

		<u>Concentration: Research</u> **<u>Depth Requirement</u>** **Students will complete 9 hours in a research area approved by their committee.** **<u>Breadth Requirement</u>** **Students will complete an additional 6 hours outside of their research area. These hours should be from 3 different areas.** **<u>Research Requirement</u>** **Students will complete 6 hours of CSE 8000 (Thesis Research).** **<u>Additional Hours</u>** **Students will complete 6 additional hours of graduate coursework.** **A minimum of 15 credit hours of the courses in the total program of study must be at the full graduate level (numbered 8000 or 9000). Coursework outside CSE may count only at a student's committee's discretion. The majority of hours must come from CSE. Research students cannot count CSE 8080 (Directed Project) for program hours.**	**9** **6** **6** **6**
Total Hours	31	Total Hours	31

3. Justification and Student Learning Outcomes

The goals of these changes are two-fold:

- Provide students with flexibility, primarily by removing the need for Secondary specializations. Giving students more options, especially under constrained graduate offerings for Starkville and Distance campuses, allows smoother matriculation.
- Reduce load on scheduling by reducing the requirement for required diversity in 8xxx offerings due to the removal of Secondary specializations. However, this should not be seen as limiting 8xxx offerings only to "popular" topics; these change over time and our faculty need to train students in their area of research.

At the MS level, we have split our program into a General MS Concentration and a Research MS concentration. The former is designed for professional students, such as our online cohort, that seek higher education but do not need the course focus of a research degree. The Research concentration requires a focus of coursework in an area and a thesis. Making this choice at a Concentration level allows better planning of resources and forces students to consider the goals early (during the application process). Students may still change between as desired, assuming committee permission.

We are also waiving the GRE requirement for graduates of Mississippi State with a sufficient GPA, in this case, 3.5. This is the cut-off of our MS/BS program and PhD admits.

The learning outcomes are the same for our current MS program and will not be changed, only clarified (we already only measure publications for thesis students; this will be transferred to Research Concentration students):

- **Advanced knowledge in computer science** Students will demonstrate mastery of a relevant body of knowledge at an advanced level in computer science. Measured via technical competency at the Comprehensive Exam and our Core classes.
- **Computer Sciences research** Students will demonstrate the ability to perform computer-science research, and/or to communicate technical material effectively. Measured via publication or submission counts for Research and presentation quality for both Concentrations.
- **Readiness for professional careers** Students will demonstrate readiness for professional careers in the field of computing. Measured via job acceptance and professional experience activities (e.g., projects, co-ops, etc.).

4. Support

A letter of support from the Graduate Coordinator of the Department of Computer Science and Engineering is attached.

5. Proposed 4-Letter Abbreviation

The MSU registrar has adopted CS as the abbreviation of Computer Science degrees.

6. Effective Date

Fall 2020

MISSISSIPPI STATE UNIVERSITY
JAMES WORTH BAGLEY COLLEGE OF ENGINEERING

DEPARTMENT OF
COMPUTER SCIENCE & ENGINEERING

Andy D. Perkins, Ph.D.
Associate Professor
perkins@cse.msstate.edu

June 25, 2020

University Committee on Courses and Curricula
PO Box 5268
Mississippi State, MS 39762

Dr. Franz:

Please find attached a proposal to modify the MS and PhD in Computer Science. These modifications were approved by the CSE faculty at a meeting on April 24, 2020. Please feel free to contact me if there are any questions or concerns.

Sincerely,

Andy D. Perkins, Ph.D.
CSE Courses and Curricula Committee Chair
Associate Professor

Joseph Crumpton, Ph.D.
CSE Courses and Curricula Committee Member
Assistant Clinical Professor

Christopher McDaniel
CSE Courses and Curricula Committee Member
Instructor

Kortni Neal
CSE Courses and Curricula Committee Member
Instructor

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: Bagley College of Engineering **Department: Computer Science & Eng.**

Contact Person: Dr. T.J. Jankun-Kelly **Mail Stop: 9637 E-mail: tjk@cse.msstate.edu**

Nature of Change: Modification **Date Initiated: 6/20** **Effective Date: 8/20**

Current Degree Program Name: Computer Science (Starkville & Distance)
Major: MS **Concentration: None**

Current Degree Program Name: Computer Science (Starkville & Distance)
Major: PhD **Concentration: None**

Summary of Proposed Changes:
Modifications due to course splits and required vs. elective changes.

Approved:	**Date:**
_____	6/30/2020
Department Head	
_____	07/06/2020
Chair, College or School Curriculum Committee	
_____	7/6/2020
Dean of College or School	
_____	_____
Chair, University Committee on Courses and Curricula	
_____	_____
Chair, Graduate Council(if applicable)	
_____	_____
Chair, Deans Council	

1. Catalog Description

Graduate study is offered in the Department of Computer Science and Engineering leading to the degrees of Master of Science in Computer Science, Master of Science in Cyber Security and Operations, and Doctor of Philosophy in Computer Science.

The program of study of a Master of Science in Computer Science degree includes advanced courses in computer science that are selected according to the goals of the student. Masters students may choose between a professional degree General concentration or a more specialized Research concentration. The program of study of a Doctor of Philosophy (Ph.D.) in Computer Science degree includes advanced courses in computer science and significant scholarly research in computer science, presented in a dissertation. Applicants with bachelor degrees can apply for direct admission to the Ph.D. program. Applicants with master's degrees are also welcome.

The department's core research areas include the following.
- Artificial intelligence
- Computational science
- Graphics
- Human centered computing
- Software engineering
- Systems and Security

These core competencies support research applications in areas such as bioinformatics, visualization, computer security and forensics, human-computer interactions and high performance computing. Faculty, research assistants, thesis students, and dissertation students participate in a wide variety of research projects. Many research projects are multi-disciplinary or multi-specialty in nature.

2. Graduate Degree Curriculum Outline

Deletions in *italics* and additions in **bold.**

CURRENT Degree Description	PROPOSED Degree Description
Degree: Computer Science Major: PhD Concentrations: None	Degree: Computer Science Major: PhD Concentrations: None

Graduate study is offered in the Department of Computer Science and Engineering leading to the degrees of Master of Science in Computer Science, Master of Science in Cyber Security and Operations, and Doctor of Philosophy in Computer Science.

Masters and PhD in Computer Science

The program of study of a Master of Science in Computer Science degree includes advanced courses in computer science that are selected according to the goals of the student. *The program of study includes a thesis option, a professional project option, or courses-only option.* The program of study of a Doctor of Philosophy (Ph.D.) in Computer Science degree includes advanced courses in computer science and significant scholarly research in computer science, presented in a dissertation.

The department's core research areas include the following.
- Artificial intelligence
- Computational science
- Graphics
- Human centered computing
- Software engineering *and systems*

These core competencies support research applications in areas such as bioinformatics, visualization, computer security and forensics, human-computer interactions, robotics, and high performance computing. Faculty, research assistants, thesis students, and dissertation students participate in a wide variety of research projects. Many research projects are multi-disciplinary or multi-specialty in nature.

An entering PhD student with an MS degree should have a 3.50/4.00 grade point average on MS work, while a PhD student entering with only a BS degree is expected to have a 3.50/4.00 on overall undergraduate work. A student with a lower GPA may still be eligible for admission based on outstanding qualifications in other areas. *A student must complete the GRE with a competitive score before admission; international students require a suitable demonstration of English proficiency.* Candidates for the PhD degree must have completed all prerequisite courses or their equivalent. Finally, a student must possess those qualifications and research interests that indicate to the Computer Science and Engineering Graduate Studies Committee that the applicant will be successful in the computer science doctoral program. For additional details, consult the CS Department's Graduate Handbook.

Graduate study is offered in the Department of Computer Science and Engineering leading to the degrees of Master of Science in Computer Science, Master of Science in Cyber Security and Operations, and Doctor of Philosophy in Computer Science.

Masters and PhD in Computer Science

The program of study of a Master of Science in Computer Science degree includes advanced courses in computer science that are selected according to the goals of the student. **Masters students may choose between a professional degree General concentration or a more specialized Research concentration.** The program of study of a Doctor of Philosophy (Ph.D.) in Computer Science degree includes advanced courses in computer science and significant scholarly research in computer science, presented in a dissertation.

The department's core research areas include the following.
- Artificial intelligence
- Computational science
- Graphics
- Human centered computing
- Software engineering
- **Systems & Security**

These core competencies support research applications in areas such as bioinformatics, visualization, computer security and forensics, human-computer interactions, robotics, and high performance computing. Faculty, research assistants, thesis students, and dissertation students participate in a wide variety of research projects. Many research projects are multi-disciplinary or multi-specialty in nature.

An entering PhD student with an MS degree should have a 3.50/4.00 grade point average on MS work, while a PhD student entering with only a BS degree is expected to have a 3.50/4.00 on overall undergraduate work. A student with a lower GPA may still be eligible for admission based on outstanding qualifications in other areas. **A student must complete the GRE with a competitive score before admission; graduates of Mississippi State University with a 3.5 GPA do not have to take the GRE. International students require a suitable demonstration of English proficiency.** Candidates for the PhD degree must have completed all prerequisite courses or their equivalent. Finally, a student must possess those qualifications and research interests that indicate to the Computer Science and Engineering Graduate Studies Committee that the applicant will be successful in the doctoral program. For additional details, consult the CS Department's Graduate Handbook.

CURRENT CURRICULUM OUTLINE	Required Hours	PROPOSED CURRICULUM OUTLINE	Required Hours
CS Core (No Changes)	3–7	CS Core (No Changes)	3–7
Primary Specialization Students will complete 15 hours in a *primary specialization* approved by their committee. *One of these courses must be a required introductory course at the split level. Two separate courses must also be completed at the full graduate level in the specialization.* Students with a previous MS must complete 6 hours in *their primary specialization, 3 hours of which must be at the full graduate level. If the student did not complete the required introductory course in their previous work, it must still be completed.* *Secondary Specialization* Students will complete 9 hours *in a primary specialization approved by their committee. One of these courses must be a required introductory course at the split level. A separate course must also be completed at the full graduate level in the specialization.* Students with a previous MS must complete 3 hours *in their secondary specialization at the split or full graduate level. If the student did not complete the required introductory course in their previous work, it must still be completed.*	6–15 3–9	**Depth Requirement** Students will complete 15 hours in a **research area** approved by their committee. Students with a previous MS must complete 6 hours in **a research area approved by their committee.** **Breadth Requirement** Students will complete **an additional** 9 hours **outside of their research area. These hours should be from 3 different areas.** Students with a previous MS must complete **an additional** 3 hours **from any area.**	6–15 3–9

Additional Coursework For direct admit students, *additional graduate work must be completed:* • *Graduate Coursework* *Any required courses in the Core or a Specialization previously completed by a student may be applied for completion and replaced with another free course of the student's and committee's choosing* *A* minimum of 21 credit hours of the courses in the total program of study for direct admit students must be at the full graduate level (numbered 8000 or 9000). *This* excludes dissertation hours.	0–12	Additional Coursework For direct admit students, **students must complete 12 additional graduate credit hours. No additional coursework hours are required for previous MS students.** **For** direct admit students, a minimum of 21 credit hours of the courses in the total program of study must be at the full graduate level (numbered 8000 or 9000). **For previous MS students, 6 hours must be at the full graduate level. These totals** exclude dissertation hours. **Coursework outside CSE may count only at a student's committee's discretion. The majority of non-dissertation hours must come from CSE.**	0–12
Dissertation Hours (No Change)	20	Dissertation Hours (No Change)	20
Total Hours	63	Total Hours	32–63

3. Justification and Student Learning Outcomes

The goals of these changes are two-fold:

- Provide students with flexibility, primarily by removing the need for Secondary specializations. Giving students more options, especially under constrained graduate offerings for Starkville and Distance campuses, allows smoother matriculation.
- Reduce load on scheduling by reducing the requirement for required diversity in 8xxx offerings due to the removal of Secondary specializations. However, this should not be seen as limiting 8xxx offerings only to "popular" topics; these change over time and our faculty need to train students in their area of research.

At the PhD level, the changes means that we have replaced the Primary/Secondary Specialization system with a Breadth/Depth requirement. No other significant changes were required.

We are also waiving the GRE requirement for graduates of Mississippi State with a sufficient GPA, in this case, 3.5. This is the cut-off of our MS/BS program and PhD admits.

The learning outcomes are the same for our current PhD program and will not be changed:
- **Mastery of a computer-science knowledge** Students will demonstrate mastery of a computer- science body of knowledge at appropriate depth for support of research in the student's area of interest within computer science. Measured via technical competency at the Qualifying Exam, Preliminary Exam, and our Core classes.
- **Conduct and communicate advanced research** Students will demonstrate ability to conduct and communicate advanced level research that contributes to a field in computer science. Measured via publication or submission counts, presentation quality, and Dissertation Defenses.
- **Readiness for professional careers** Students will demonstrate readiness for professional careers in the field of computing. Measured via job acceptance and classroom teaching experience.

4. Support

A letter of support from the Courses & Curriculum Committee of the Department of Computer Science and Engineering is attached.

5. Proposed 4-Letter Abbreviation

The MSU registrar has adopted CS as the abbreviation of Computer Science degrees.

6. Effective Date

Fall 2020

MISSISSIPPI STATE UNIVERSITY
JAMES WORTH BAGLEY COLLEGE OF ENGINEERING

DEPARTMENT OF
COMPUTER SCIENCE & ENGINEERING

Andy D. Perkins, Ph.D.
Associate Professor
perkins@cse.msstate.edu

June 25, 2020

University Committee on Courses and Curricula
PO Box 5268
Mississippi State, MS 39762

Dr. Franz:

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Assistant Clinical Professor

Christopher McDaniel
CSE Courses and Curricula Committee Member
Instructor

Kortni Neal
CSE Courses and Curricula Committee Member
Instructor

APPROVAL FORM FOR

DEGREE PROGRAMS

MISSISSIPPI STATE UNIVERSITY

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College: BCoE **Department:** Industrial and Systems Engineering

Contact Person: Dr. Linkan Bian **Mail Stop:** 9542 **E-mail:** bian@ise.msstate.edu

Nature of Change: Modification **Date Initiated:** 06/01/2020 **Effective Date:** 08/16/2020

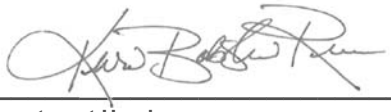
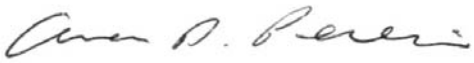
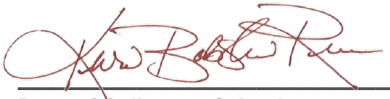
New or Current Degree Program Name: Master of Science in Industrial and Systems Engineering

Summary of Proposed Changes:

1. We propose to add Computer Science and Engineering courses as electives for Human Factors and Ergonomics concentration. This will keep our program in line with our peer schools and help with the career development of students.

2. We propose to replace a required course IE 8353 Manufacturing Systems Modeling by IE 6773 Systems Simulation I. Several courses are added as electives. This change will provide more flexibility to our students and allow them to complete the degree on time.

3. We propose to allow students to take up to 15 hours of courses that are required in the bachelor's degree curriculum. This will provide more flexibility for students, who did not receive the undergraduate ISE degree from MSU.

Approved:	Date:
	6/10/2020
Department Head	
	07/06/2020
Chair, College or School Curriculum Committee	
	7/6/2020
Dean of College or School	
Chair, University Committee on Courses and Curricula	
Chair, Graduate Council(if applicable)	
Chair, Deans Council	

MISSISSIPPI STATE UNIVERSITY
JAMES WORTH BAGLEY COLLEGE OF ENGINEERING

DEPARTMENT OF INDUSTRIAL & SYSTEMS ENGINEERING

Linkan Bian, Ph.D.
bian@ise.msstate.edu

June 3, 2020

University Committee on Courses and Curricula
Mailstop: 9702
Mississippi State, MS 39762

Dear UCCC,

The Industrial and Systems Engineering (ISE) department discussed the proposal for the following changes the M.S. degree program.

(1) We propose to add Computer Science and Engineering courses as electives for Human Factors and Ergonomics concentration.
(2) We propose to add several elective courses for Manufacturing Systems concentration and replace required IE 8353 by IE 6773.
(3) We propose to allow students to take up to 15 hours of courses that are required in the bachelor's degree curriculum.

After some discussion we put this proposal to the entire ISE faculty for a vote. The graduate faculty are in favor of making this change.

Sincerely,

Linkan Bian

Linkan Bian, Ph.D.
Thomas B. & Terri L. Nusz Professor
Associate Professor and Graduate Coordinator
Industrial and Systems Engineering

MISSISSIPPI STATE UNIVERSITY
JAMES WORTH BAGLEY COLLEGE OF ENGINEERING

DEPARTMENT OF INDUSTRIAL & SYSTEMS ENGINEERING

Linkan Bian, Ph.D.
bian@ise.msstate.edu

Approved:	Signature and Date:
Linkan Bian, Ph.D.	Linkan Bian 06/03/2020
Stanley Bullington, Ph.D.	
Reuben Burch, Ph.D.	Reuben F. Burch V — Digitally signed by Reuben F. Burch V Date: 2020.06.04 08:57:48 -05'00'
Raed Jaradat, Ph.D.	Digitally signed by Raed m Jaradat DN: cn=Raed m Jaradat, o=MSU, ou=ISE, email=jaradat@ise.msstate.ed Date: 2020.06.05 10:05:05 -05'00'
Junfeng Ma, Ph.D.	Junfeng Ma — Digitally signed by Junfeng Ma Date: 2020.06.04 12:00:25 -05'
Mohammad Marufuzzaman, Ph.D.	Mohammad Marufuzzaman — Digitally signed by Mohammad Marufuzzama DN: cn=Mohammad Marufuzzaman, o=0613(ou=Mississippi State University, email=maruf@ise.msstate.edu, c=US Date: 2020.06.04 12:19:26 -05'00'
Nazanin Morshedlou, Ph.D.	Nazanin Morshedlo — Digitally signed by Nazanin Morshedlou Date: 2020.06.03 14:02:52 -05'
Brian Smith, Ph.D.	B. K. Smith 6/3/2020
Lesley Strawderman, Ph.D.	Lesley Strawderman — Digitally signed by Lesley Strawderman Date: 2020.06.03 13:07:41 -05'
Wenmeng Tian, Ph.D.	Wenmeng Tian — Digitally signed by Wenmeng Tia Date: 2020.06.04 14:44:39 -05'0
Haifeng Wang, Ph.D.	Haifeng Wang 6/4/2020

MISSISSIPPI STATE UNIVERSITY
JAMES WORTH BAGLEY COLLEGE OF ENGINEERING

DEPARTMENT OF
COMPUTER SCIENCE & ENGINEERING

Dr. Shahram Rahimi
Professor & Department Head
rahimi@cse.msstate.edu

5/18/2020

To Whom It May Concern:

I am writing this memo to express the Department of Computer Science and Engineering's support for the proposal to add a CSE course as electives for Human Factors and Ergonomics concentration of the ISE MS program (in addition to Math/Stat electives).

I would be happy to provide detailed reasoning behind our support, if it is requested.

Sincerely,

Shahram Rahimi, Ph.D.
Professor and Department Head

GRADUATE DEGREE MODIFICATION OUTLINE FORM

Use the chart below to make modifications to an existing Graduate Degree. All deleted courses and information should be shown in *italics* and all new courses and information in bold. Please include the course prefix, number, and title in both columns. Expand rows as needed.

CURRENT Degree Description	PROPOSED Degree Description
Degree: M.S. Major: Industrial and Systems Engineering Concentrations: Human Factors and Ergonomics, Industrial Systems, Operations Research, Management Systems Engineering, Manufacturing Systems	Degree: M.S. Major: Industrial and Systems Engineering Concentrations: Human Factors and Ergonomics, Industrial Systems, Operations Research, Management Systems Engineering, Manufacturing Systems
Old degree catalog description: Admission Criteria Typically, an entering M.S. student should have a grade point average of 3.00 out of 4.00 for the junior and senior years. Likewise, an entering Ph.D. student with an M.S. degree should have a 3.50 out of 4.00 grade point average on the M.S. work, while a Ph.D. student entering with only a B.S. degree is expected to have a 3.50 out of 4.00 on the last two years of the undergraduate program. A student with a lower GPA may still be eligible for admission based on outstanding qualifications in other areas. All entering students must submit GRE general-test scores. International students must have a minimum TOEFL score of 550 PBT (79 iBT) or IELTS score of 6.5. The department reviews completed applications four times a year: February 15, May 15, August 15, and November 15. Incomplete or not fully processed applications will be reviewed during the next cycle. Provisional Admission An applicant who has not fully met the GPA requirement stipulated by the University may be admitted on a provisional basis. The provisionally-admitted student is eligible for a change to regular status after receiving a 3.00 GPA on the first 9 hours of graduate courses at Mississippi State University (with no grade lower than a C). The first 9 hours of graduate courses must be within the student's Program of Study. Courses with an S grade, transfer credits, or credits earned while in Unclassified status cannot be used to satisfy this requirement. If a 3.00 is not attained, the provisional student shall be dismissed from the graduate program. Academic departments may set higher standards for students to fulfill provisional requirements; a student admitted with provisional status should contact the graduate coordinator for the program's specific requirements. While in the provisional status, a student is not eligible to hold a graduate assistantship. Academic Performance In addition to the criteria defined in the current Bulletin	New degree catalog description: With the proposed degree program modification, all degree catalog description will remain unchanged.

of the Graduate School, unsatisfactory performance in the graduate program in Industrial and Systems Engineering is defined as any of the following.

- Failure to maintain a 3.00 average in the M.S. program or 3.30 in the Ph.D. program,
- Failure of the qualifying exam (Ph.D. students only),
- Failure of the preliminary exam (Ph.D. students only);
- Failure of the comprehensive final exam (M.S. non-thesis option only),
- Unsatisfactory evaluation of thesis or dissertation, or
- A failure of the required component of the program of study.

Any one of these will constitute the basis for review for possible dismissal. If the students drops six or more quality points below the required average (3.00 for M.S. or 3.30 for Ph.D.), the graduate coordinator will review the record along with the student's graduate committee and will recommend a final course of action, which will be immediate dismissal or the establishment of a probationary period in which corrective action must take place.

While on probation, the student is not eligible to receive an assistantship and is required to raise his/her cumulative GPA to 3.00 for M.S. or 3.30 for Ph.D. by the end of the following semester of enrollment. During that semester, the student must enroll in 9 credit hours of coursework; Directed Individual Study courses are excluded.

Old Concentration description:

Master of Science in Industrial Engineering with Human Factors and Ergonomics Concentration (HFE) – Thesis

Prerequisites (foundational courses) are:

- MA 1713
- MA 1723
- MA 2733
- MA 2743
- IE 3123
- IE 4613/6613

IE 6773	Systems Simulation I	3
IE 6623	Engineering Statistics II	3
At least 3 HFE ISE courses		9
IE 8000	Thesis Research/ Thesis in Industrial	6

New Concentration description:

Master of Science in Industrial Engineering with Human Factors and Ergonomics Concentration (HFE) – Thesis

Prerequisites (foundational courses) are:

- MA 1713
- MA 1723
- MA 2733
- MA 2743
- IE 3123
- IE 4613/6613

IE 6773	Systems Simulation I	3
IE 6623	Engineering Statistics II	3
At least 3 HFE ISE courses		9
IE 8000	Thesis Research/ Thesis in Industrial Engineering	6

Engineering	
At least one non-HFE ISE course	3
At least one course from Mathematics (MA) or Statistics (ST)	3
At least one course from a supporting area (Biological Engineering [ABE], Psychology [PSY], Kinesiology [KI], Mechanical Engineering [ME], Mathematics [MA], Statistics [ST], etc.)	3
Total Hours	30

A thesis and an oral comprehensive examination in defense of the thesis are required.
Additional requirements are:

1. A minimum of 12 hours coursework must be at the 8000-level or higher.
2. No ISE graduate student may list ST 8114 or IE 6613 on his/her graduate program
3. No program can contain more than *9* hours of courses that are required in the bachelor's degree curriculum
4. No program can contain more than 6 hours of Directed Individual Study (IE 7000).

The thesis-option Master of Science in Industrial Engineering requires at least 24 credit hours of coursework above the baccalaureate degree. IE 9000 does not apply to M.S. students.

Master of Science in Industrial Engineering with Human Factors and Ergonomics Concentration (HFE) - Non-Thesis

Prerequisites (foundational courses) are:

- MA 1713
- MA 1723
- MA 2733
- MA 2743
- IE 3123
- IE 4613/6613

IE 6773	Systems Simulation I	3
IE 6623	Engineering Statistics II	3
At least three HFE ISE courses		9
At least two non-HFE ISE courses		6
At least two courses from Mathematics (MA) or Statistics (ST)		6
At least one course from a supporting area (Biological Engineering [ABE], Psychology [PSY], Kinesiology [KI], Mechanical Engineering [ME], Mathematics [MA], Statistics [ST], etc.)		3

At least one non-HFE ISE course	3
At least one course from Mathematics (MA), Statistics (ST), or **Computer Science and Engineering (CSE)**	3
At least one course from a supporting area (Biological Engineering [ABE], Psychology [PSY], Kinesiology [KI], Mechanical Engineering [ME], Mathematics [MA], Statistics [ST], etc.)	3
Total Hours	30

A thesis and an oral comprehensive examination in defense of the thesis are required.
Additional requirements are:

5. A minimum of 12 hours coursework must be at the 8000-level or higher.
6. No ISE graduate student may list ST 8114 or IE 6613 on his/her graduate program
7. No program can contain more than **15** hours of courses that are required in the bachelor's degree curriculum
8. No program can contain more than 6 hours of Directed Individual Study (IE 7000).

The thesis-option Master of Science in Industrial Engineering requires at least 24 credit hours of coursework above the baccalaureate degree. IE 9000 does not apply to M.S. students.

Master of Science in Industrial Engineering with Human Factors and Ergonomics Concentration (HFE) - Non-Thesis

Prerequisites (foundational courses) are:

- MA 1713
- MA 1723
- MA 2733
- MA 2743
- IE 3123
- IE 4613/6613

IE 6773	Systems Simulation I	3
IE 6623	Engineering Statistics II	3
At least three HFE ISE courses		9
At least two non-HFE ISE courses		6
At least two courses from Mathematics (MA), Statistics (ST), or **Computer Science and Engineering (CSE)**		6
At least one course from a supporting area (Biological Engineering [ABE], Psychology [PSY], Kinesiology [KI], Mechanical Engineering [ME], Mathematics [MA],		3

Total Hours	30

A written and oral comprehensive final exam on the coursework. At least 15 hours for the M.S. non-thesis degree must be from 8000-level courses or above. The specific courses required depend upon the student's area of concentration. IE 8000 Research/Thesis does not apply to non-thesis students.

Additional requirements are:

1. No ISE graduate student may list ST 8114 or IE 6613 on his/her graduate program.
2. No program can contain more than *9* hours of courses that are required in the bachelor's degree curriculum.
3. No program can contain more than 6 hours of Directed Individual Study (IE 7000).

The non-thesis Master of Science requires at least 30 credit hours of coursework above the baccalaureate degree. IE 9000 does not apply to M.S. students.

Master of Science in Industrial Engineering with Industrial Systems Concentration (SYS) - Thesis

Prerequisites (foundational courses) are:

- MA 1713
- MA 1723
- MA 2733
- MA 2743
- Computer programming proficiency
- IE 3123
- IE 3913
- IE 4333
- IE 4613/6613

IE 6773	Systems Simulation I	3
IE 8000	Thesis Research/ Thesis in Industrial Engineering	6
All other courses to be selected by the student along with the academic advisor and graduate program committee		21
Total Hours		30

A thesis and an oral comprehensive examination in defense of the thesis are required.
Additional requirements are:

1. A minimum of 12 hours coursework must be at the 8000-level or higher.
2. No ISE graduate student may list ST 8114 or IE 6613 on his/her graduate program

Statistics [ST], etc.)	
Total Hours	30

A written and oral comprehensive final exam on the coursework. At least 15 hours for the M.S. non-thesis degree must be from 8000-level courses or above. The specific courses required depend upon the student's area of concentration. IE 8000 Research/Thesis does not apply to non-thesis students.

Additional requirements are:

4. No ISE graduate student may list ST 8114 or IE 6613 on his/her graduate program.
5. No program can contain more than **15** hours of courses that are required in the bachelor's degree curriculum.
6. No program can contain more than 6 hours of Directed Individual Study (IE 7000).

The non-thesis Master of Science requires at least 30 credit hours of coursework above the baccalaureate degree. IE 9000 does not apply to M.S. students.

Master of Science in Industrial Engineering with Industrial Systems Concentration (SYS) - Thesis

Prerequisites (foundational courses) are:

- MA 1713
- MA 1723
- MA 2733
- MA 2743
- Computer programming proficiency
- IE 3123
- IE 3913
- IE 4333
- IE 4613/6613

IE 6773	Systems Simulation I	3
IE 8000	Thesis Research/ Thesis in Industrial Engineering	6
All other courses to be selected by the student along with the academic advisor and graduate program committee		21
Total Hours		30

A thesis and an oral comprehensive examination in defense of the thesis are required.
Additional requirements are:

5. A minimum of 12 hours coursework must be at the 8000-level or higher.
6. No ISE graduate student may list ST 8114 or IE 6613 on his/her graduate

3. No program can contain more than *9* hours of courses that are required in the bachelor's degree curriculum
4. No program can contain more than 6 hours of Directed Individual Study (IE 7000).

The thesis-option Master of Science in Industrial Engineering requires at least 24 credit hours of coursework above the baccalaureate degree. IE 9000 does not apply to M.S. students.

Master of Science in Industrial Engineering with Industrial Systems Concentration (SYS) - Non-Thesis

Prerequisites (foundational courses) are:

- MA 1713
- MA 1723
- MA 2733
- MA 2743
- Computer programming proficiency
- IE 3123
- IE 3913
- IE 4333
- IE 4613/6613

At least 15 hours of 8000-level courses selected by the student along with the academic advisor and grade program committee.	15
Other courses to be selected by the student along with the academic advisor and grade program committee.	15
Total Hours	30

A written and oral comprehensive final exam on the coursework. At least 15 hours for the M.S. non-thesis degree must be from 8000-level courses or above. The specific courses required depend upon the student's area of concentration. IE 8000 Research/Thesis does not apply to non-thesis students.

Additional requirements are:

1. No ISE graduate student may list ST 8114 or IE 6613 on his/her graduate program.
2. No program can contain more than *9* hours of courses that are required in the bachelor's degree curriculum
3. No program can contain more than 6 hours of Directed Individual Study (IE 7000).

The non-thesis Master of Science requires at least 30 credit hours of coursework above the baccalaureate degree. IE 9000 does not apply to M.S. students.

Master of Science in Industrial Engineering with Management Systems Engineering Concentration

program
7. No program can contain more than **15** hours of courses that are required in the bachelor's degree curriculum
8. No program can contain more than 6 hours of Directed Individual Study (IE 7000).

The thesis-option Master of Science in Industrial Engineering requires at least 24 credit hours of coursework above the baccalaureate degree. IE 9000 does not apply to M.S. students.

Master of Science in Industrial Engineering with Industrial Systems Concentration (SYS) - Non-Thesis

Prerequisites (foundational courses) are:

- MA 1713
- MA 1723
- MA 2733
- MA 2743
- Computer programming proficiency
- IE 3123
- IE 3913
- IE 4333
- IE 4613/6613

At least 15 hours of 8000-level courses selected by the student along with the academic advisor and grade program committee.	15
Other courses to be selected by the student along with the academic advisor and grade program committee.	15
Total Hours	30

A written and oral comprehensive final exam on the coursework. At least 15 hours for the M.S. non-thesis degree must be from 8000-level courses or above. The specific courses required depend upon the student's area of concentration. IE 8000 Research/Thesis does not apply to non-thesis students.

Additional requirements are:

4. No ISE graduate student may list ST 8114 or IE 6613 on his/her graduate program.
5. No program can contain more than **15** hours of courses that are required in the bachelor's degree curriculum
6. No program can contain more than 6 hours of Directed Individual Study (IE 7000).

The non-thesis Master of Science requires at least 30 credit hours of coursework above the baccalaureate degree. IE 9000 does not apply to M.S. students.

Master of Science in Industrial Engineering with

(MGTS) – Thesis

Prerequisites (foundational courses) are:

- B.S. in engineering from an ABET-accredited program or permission frm the MSE Technical Committee
- IE 3913
- IE 4613/6613

IE 6513	Engineering Administration	3
IE 6533	Project Management	3
IE 6573	Process Improvement Engineering	3
IE 8583	Enterprise Systems Engineering	3
IE 8913	Engineering Economy II	3
IE 8000	Thesis Research/ Thesis in Industrial Engineering	6
At least two non-MSE ISE courses		6
Course to be selected by the student along with academic advisor and graduate program committee		3
Total Hours		30

A thesis and an oral comprehensive examination in defense of the thesis are required.
Additional requirements are:

1. A minimum of 12 hours at the 8000-level is required.
2. No ISE graduate student may list ST 8114 or IE 6613 on his/her graduate program
3. No program can contain more than *9* hours of courses that are required in the bachelor's degree curriculum
4. No program can contain more than 6 hours of Directed Individual Study (IE 7000).

The thesis-option Master of Science in Industrial Engineering requires at least 24 credit hours of coursework above the baccalaureate degree. IE 9000 does not apply to M.S. students.

Master of Science in Industrial Engineering with Management Systems Engineering Concentration (MGTS) - Non-Thesis

Prerequisites (foundational courses) are:

- B.S. in engineering from an ABET-accedited program or permission from the MSE Technical Committee
- IE 3913
- IE 4613/6613

IE 6513	Engineering Administration	3
IE 6533	Project Management	3

Management Systems Engineering Concentration (MGTS) – Thesis

Prerequisites (foundational courses) are:

- B.S. in engineering from an ABET-accredited program or permission frm the MSE Technical Committee
- IE 3913
- IE 4613/6613

IE 6513	Engineering Administration	3
IE 6533	Project Management	3
IE 6573	Process Improvement Engineering	3
IE 8583	Enterprise Systems Engineering	3
IE 8913	Engineering Economy II	3
IE 8000	Thesis Research/ Thesis in Industrial Engineering	6
At least two non-MSE ISE courses		6
Course to be selected by the student along with academic advisor and graduate program committee		3
Total Hours		30

A thesis and an oral comprehensive examination in defense of the thesis are required.
Additional requirements are:

5. A minimum of 12 hours at the 8000-level is required.
6. No ISE graduate student may list ST 8114 or IE 6613 on his/her graduate program
7. No program can contain more than **15** hours of courses that are required in the bachelor's degree curriculum
8. No program can contain more than 6 hours of Directed Individual Study (IE 7000).

The thesis-option Master of Science in Industrial Engineering requires at least 24 credit hours of coursework above the baccalaureate degree. IE 9000 does not apply to M.S. students.

Master of Science in Industrial Engineering with Management Systems Engineering Concentration (MGTS) - Non-Thesis

Prerequisites (foundational courses) are:

- B.S. in engineering from an ABET-accedited program or permission from the MSE Technical Committee
- IE 3913
- IE 4613/6613

IE 6513	Engineering Administration	3

IE 6573	Process Improvement Engineering	3
IE 8583	Enterprise Systems Engineering	3
IE 8913	Engineering Economy II	3
At least two non-MSE ISE courses		6
Other courses to be selected by the student along with the academic advisor and graduate program committee		9
Total Hours		30

A written and oral comprehensive final exam on the coursework. At least 15 hours for the M.S. non-thesis degree must be from 8000-level courses or above. The specific courses required depend upon the student's area of concentration. IE 8000 Research/Thesis does not apply to non-thesis students.

Additional requirements are:

1. No ISE graduate student may list ST 8114 or IE 6613 on his/her graduate program
2. No program can contain more than *9* hours of courses that are required in the bachelor's degree curriculum
3. No program can contain more than 6 hours of Directed Individual Study (IE 7000).

The non-thesis Master of Science requires at least 30 credit hours of coursework above the baccalaureate degree. IE 9000 does not apply to M.S. students.

Master of Science in Industrial Engineering with Manufacturing Systems Concentration (MFGS) – Thesis

Prerequisites (foundational courses) are:

- B.S. in engineering from an ABET-accredited program or permission from the Manufacturing Systems Technical Committee
- Computer programming proficiency
- IE 4333/6333
- IE 4613/6613

IE 6653	Industrial Quality Control	3
IE 8333	Production Control Systems II	3
IE 8353	*Manufacturing Systems Modeling*	3
IE 8000	Thesis Research/ Thesis in Industrial Engineering	6
At least two Manufacturing Systems ISE courses		6
At least two non-Manufacturing Systems ISE courses		6
Course to be selected by the student along with the academic advisor and graduate program committee		3

IE 6533	Project Management	3
IE 6573	Process Improvement Engineering	3
IE 8583	Enterprise Systems Engineering	3
IE 8913	Engineering Economy II	3
At least two non-MSE ISE courses		6
Other courses to be selected by the student along with the academic advisor and graduate program committee		9
Total Hours		30

A written and oral comprehensive final exam on the coursework. At least 15 hours for the M.S. non-thesis degree must be from 8000-level courses or above. The specific courses required depend upon the student's area of concentration. IE 8000 Research/Thesis does not apply to non-thesis students.

Additional requirements are:

4. No ISE graduate student may list ST 8114 or IE 6613 on his/her graduate program
5. No program can contain more than **15** hours of courses that are required in the bachelor's degree curriculum
6. No program can contain more than 6 hours of Directed Individual Study (IE 7000).

The non-thesis Master of Science requires at least 30 credit hours of coursework above the baccalaureate degree. IE 9000 does not apply to M.S. students.

Master of Science in Industrial Engineering with Manufacturing Systems Concentration (MFGS) – Thesis

Prerequisites (foundational courses) are:

- B.S. in engineering from an ABET-accredited program or permission from the Manufacturing Systems Technical Committee
- Computer programming proficiency
- IE 4333/6333
- IE 4613/6613

IE 6653	Industrial Quality Control	3
IE 8333	Production Control Systems II	3
IE 6773	**Systems Simulation I**	3
IE 8000	Thesis Research/ Thesis in Industrial Engineering	6
At least two Manufacturing Systems ISE courses		6
At least two non-Manufacturing Systems ISE courses		6

Total Hours	30

A thesis and an oral comprehensive examination in defense of the thesis are required.
Additional requirements are:

1. A minimum of 12 hours coursework must be at the 8000-level or higher.
2. No ISE graduate student may list ST 8114 or IE 6613 on his/her graduate program
3. No program can contain more than *9* hours of courses that are required in the bachelor's degree curriculum
4. No program can contain more than 6 hours of Directed Individual Study (IE 7000).

The thesis-option Master of Science in Industrial Engineering requires at least 24 credit hours of coursework above the baccalaureate degree. IE 9000 does not apply to M.S. students.

Master of Science in Industrial Engineering with Manufacturing Systems Concentration (MFGS) - Non-Thesis

Prerequisites (foundational courses) are:

- B.S. in engineering from an ABET-accredited program or permission from the Manufacturing Systems Technical Committee
- Computer programming proficiency
- IE 4333/6333
- IE 4613/6613

IE 6653	Industrial Quality Control	3
IE 8333	Production Control Systems II	3
IE 8353	Manufacturing Systems Modeling	3
At least two Manufacturing Systems ISE courses		6
At least two non-Manufacturing Systems ISE courses		6
Other courses to be selected by the student along with the academic advisor and graduate program committee		9
Total Hours		30

A written and oral comprehensive final exam on the coursework. At least 15 hours for the M.S. non-thesis degree must be from 8000-level courses or above. The specific courses required depend upon the student's area of concentration. IE 8000 Research/Thesis does not apply to non-thesis students. IE 9000 does not apply to M.S. students.

Additional requirements are:

1. No ISE graduate student may

Course to be selected by the student along with the academic advisor and graduate program committee	3
Total Hours	30

A thesis and an oral comprehensive examination in defense of the thesis are required.
Additional requirements are:

5. A minimum of 12 hours coursework must be at the 8000-level or higher.
6. No ISE graduate student may list ST 8114 or IE 6613 on his/her graduate program
7. No program can contain more than **15** hours of courses that are required in the bachelor's degree curriculum
8. No program can contain more than 6 hours of Directed Individual Study (IE 7000).

The thesis-option Master of Science in Industrial Engineering requires at least 24 credit hours of coursework above the baccalaureate degree. IE 9000 does not apply to M.S. students.

Master of Science in Industrial Engineering with Manufacturing Systems Concentration (MFGS) - Non-Thesis

Prerequisites (foundational courses) are:

- B.S. in engineering from an ABET-accredited program or permission from the Manufacturing Systems Technical Committee
- Computer programming proficiency
- IE 4333/6333
- IE 4613/6613

IE 6653	Industrial Quality Control	3
IE 8333	Production Control Systems II	3
IE 8353	Manufacturing Systems Modeling	3
At least two Manufacturing Systems ISE courses		6
At least two non-Manufacturing Systems ISE courses		6
Other courses to be selected by the student along with the academic advisor and graduate program committee		9
Total Hours		30

A written and oral comprehensive final exam on the coursework. At least 15 hours for the M.S. non-thesis degree must be from 8000-level courses or above. The specific courses required depend upon the student's area of concentration. IE 8000 Research/Thesis does not apply to non-thesis students. IE 9000 does not apply to M.S. students.

list ST 8114 or IE 6613 on his/her graduate program
2. No program can contain more than *9* hours of courses that are required in the bachelor's degree curriculum
3. No program can contain more than 6 hours of Directed Individual Study (IE 7000).

The non-thesis Master of Science requires at least 30 credit hours of coursework above the baccalaureate degree. IE 9000 does not apply to M.S. students.

Master of Science in Industrial Engineering with Operations Research Concentration (OPRS) – Thesis

Prerequisites (foundational courses) are:

- MA 1713
- MA 1723
- MA 2733
- MA 2743
- Computer programming proficiency
- IE 4613/6613

IE 6733	Linear Programming	3
IE 6773	Systems Simulation I	3
IE 8000	Thesis Research/ Thesis in Industrial Engineering	6
At least two OR ISE courses		6
At least two non-OR ISE courses		6
At least one course from Computer Science (CSE), Mathematics (MA), or Statistics (ST)		3
Course to be selected by the student along with the academic advisor and graduate program committee		3
Total Hours		30

A thesis and an oral comprehensive examination in defense of the thesis are required.

Additional requirements are:

1. A minimum of 12 hours coursework must be at the 8000-level or higher.
2. No ISE graduate student may list ST 8114 or IE 6613 on his/her graduate program
3. No program can contain more than *9* hours of courses that are required in the bachelor's degree curriculum
4. No program can contain more than 6 hours of Directed Individual Study (IE 7000).

The thesis-option Master of Science in Industrial Engineering requires at least 24 credit hours of coursework above the baccalaureate degree. IE 9000 does not apply to M.S. students.

Additional requirements are:

4. No ISE graduate student may list ST 8114 or IE 6613 on his/her graduate program
5. No program can contain more than **15** hours of courses that are required in the bachelor's degree curriculum
6. No program can contain more than 6 hours of Directed Individual Study (IE 7000).

The non-thesis Master of Science requires at least 30 credit hours of coursework above the baccalaureate degree. IE 9000 does not apply to M.S. students.

Master of Science in Industrial Engineering with Operations Research Concentration (OPRS) – Thesis

Prerequisites (foundational courses) are:

- MA 1713
- MA 1723
- MA 2733
- MA 2743
- Computer programming proficiency
- IE 4613/6613

IE 6733	Linear Programming	3
IE 6773	Systems Simulation I	3
IE 8000	Thesis Research/ Thesis in Industrial Engineering	6
At least two OR ISE courses		6
At least two non-OR ISE courses		6
At least one course from Computer Science (CSE), Mathematics (MA), or Statistics (ST)		3
Course to be selected by the student along with the academic advisor and graduate program committee		3
Total Hours		30

A thesis and an oral comprehensive examination in defense of the thesis are required.

Additional requirements are:

5. A minimum of 12 hours coursework must be at the 8000-level or higher.
6. No ISE graduate student may list ST 8114 or IE 6613 on his/her graduate program
7. No program can contain more than **15** hours of courses that are required in the bachelor's degree curriculum
8. No program can contain more than 6 hours of Directed Individual Study (IE 7000).

The thesis-option Master of Science in Industrial Engineering requires at least 24 credit hours of

Master of Science in Industrial Engineering with Operations Research Concentration (OPRS) - Non-Thesis

Prerequisites (foundational courses) are:

- MA 1713
- MA 1723
- MA 2733
- MA 2743
- Computer programming proficiency
- IE 4613/6613

IE 6733	Linear Programming	3
IE 6773	Systems Simulation I	3
At least two Operations Research ISE courses		6
At least two non-Operations Research ISE courses		6
At least one course com Computer Science (CSE), Mathematics (MA), or Statistics (ST)		3
Courses to be selected by the student along with the academic advisor and graduate program committee		9
Total Hours		30

A written and oral comprehensive final exam on the coursework. At least 15 hours for the M.S. non-thesis degree must be from 8000-level courses or above. The specific courses required depend upon the student's area of concentration. IE 8000 Research/Thesis does not apply to non-thesis students. IE 9000 does not apply to M.S. students.

Additional requirements are:

1. No ISE graduate student may list ST 8114 or IE 6613 on his/her graduate program
2. No program can contain more than *9* hours of courses that are required in the bachelor's degree curriculum
3. No program can contain more than 6 hours of Directed Individual Study (IE 7000).

The non-thesis Master of Science requires at least 30 credit hours of coursework above the baccalaureate degree. IE 9000 does not apply to M.S. students.

CURRENT CURRICULUM OUTLINE	Required Hours
See above section – Concentration Description and Curriculum Outline/hours are now combined in the Graduate Catalog; therefore, outline is not repeated	

coursework above the baccalaureate degree. IE 9000 does not apply to M.S. students.

Master of Science in Industrial Engineering with Operations Research Concentration (OPRS) - Non-Thesis

Prerequisites (foundational courses) are:

- MA 1713
- MA 1723
- MA 2733
- MA 2743
- Computer programming proficiency
- IE 4613/6613

IE 6733	Linear Programming	3
IE 6773	Systems Simulation I	3
At least two Operations Research ISE courses		6
At least two non-Operations Research ISE courses		6
At least one course com Computer Science (CSE), Mathematics (MA), or Statistics (ST)		3
Courses to be selected by the student along with the academic advisor and graduate program committee		9
Total Hours		30

A written and oral comprehensive final exam on the coursework. At least 15 hours for the M.S. non-thesis degree must be from 8000-level courses or above. The specific courses required depend upon the student's area of concentration. IE 8000 Research/Thesis does not apply to non-thesis students. IE 9000 does not apply to M.S. students.

Additional requirements are:

4. No ISE graduate student may list ST 8114 or IE 6613 on his/her graduate program
5. No program can contain more than **15** hours of courses that are required in the bachelor's degree curriculum
6. No program can contain more than 6 hours of Directed Individual Study (IE 7000).

The non-thesis Master of Science requires at least 30 credit hours of coursework above the baccalaureate degree. IE 9000 does not apply to M.S. students.

PROPOSED CURRICULUM OUTLINE	Required Hours
With the proposed degree name change, all concentration requirements and curricula will remain unchanged.	

here.	

3. Justification and Student Learning Outcome
The proposed changes will keep our program in line with our peer schools' programs and increase students' choices of coursework. This change is beneficial to distance students and allow them to choose the preferred coursework based on their schedules.

4. Support
The change was approved by Industrial and Systems Engineering as indicated in the attached letter of support. The degree modification requires no additional faculty support at current or expected enrollment letters.
The school currently has sufficient personnel and infrastructure to make this change. The support letter from CSE is attached.

5. Proposed 3-Letter Abbreviation
The abbreviation for the ISE will not change.

6. Effective Date
August 16, 2020

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: BCoE **Department:** Industrial and Systems Engineering

Contact Person: Dr. Linkan Bian **Mail Stop:** 9542 **E-mail:** bian@ise.msstate.edu

Nature of Change: Modification **Date Initiated:** 01/25/2020 **Effective Date:** 08/16/2020

New or Current Degree Program Name: Ph.D. in Industrial and Systems Engineering

Summary of Proposed Changes:

We propose to allow students to take up to 15 hours of courses that are required in the bachelor's degree curriculum. This will provide more flexibility for students, who did not receive the undergraduate ISE degree from MSU.

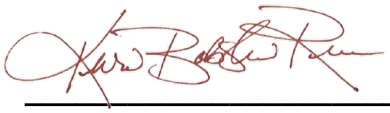
Approved: **Date:**

6/10/2020

Department Head

07/06/2020

Chair, College or School Curriculum Committee



for Jason Keith 7/7/2020

Dean of College or School

Chair, University Committee on Courses and Curricula

Chair, Graduate Council(if applicable)

Chair, Deans Council

GRADUATE DEGREE MODIFICATION OUTLINE FORM

Use the chart below to make modifications to an existing Graduate Degree. All deleted courses and information should be shown in *italics* and all new courses and information in bold. Please include the course prefix, number, and title in both columns. Expand rows as needed.

CURRENT Degree Description	PROPOSED Degree Description
Degree: Ph.D. Major: Industrial and Systems Engineering Concentrations: Human Factors and Ergonomics, Industrial Systems, Operations Research, Management Systems Engineering, Manufacturing Systems	Degree: Ph.D Major: Industrial and Systems Engineering Concentrations: Human Factors and Ergonomics, Industrial Systems, Operations Research, Management Systems Engineering, Manufacturing Systems
Old degree catalog description: Admission Criteria Typically, an entering M.S. student should have a grade point average of 3.00 out of 4.00 for the junior and senior years. Likewise, an entering Ph.D. student with an M.S. degree should have a 3.50 out of 4.00 grade point average on the M.S. work, while a Ph.D. student entering with only a B.S. degree is expected to have a 3.50 out of 4.00 on the last two years of the undergraduate program. A student with a lower GPA may still be eligible for admission based on outstanding qualifications in other areas. All entering students must submit GRE general-test scores. International students must have a minimum TOEFL score of 550 PBT (79 iBT) or IELTS score of 6.5. The department reviews completed applications four times a year: February 15, May 15, August 15, and November 15. Incomplete or not fully processed applications will be reviewed during the next cycle. Provisional Admission An applicant who has not fully met the GPA requirement stipulated by the University may be admitted on a provisional basis. The provisionally-admitted student is eligible for a change to regular status after receiving a 3.00 GPA on the first 9 hours of graduate courses at Mississippi State University (with no grade lower than a C). The first 9 hours of graduate courses must be within the student's Program of Study. Courses with an S grade, transfer credits, or credits earned while in Unclassified status cannot be used to satisfy this requirement. If a 3.00 is not attained, the provisional student shall be dismissed from the graduate program. Academic departments may set higher standards for students to fulfill provisional requirements; a student admitted with provisional status should contact the graduate coordinator for the program's specific requirements. While in the provisional status, a student is not eligible to hold a graduate assistantship. Academic Performance In addition to the criteria defined in the current Bulletin	New degree catalog description: With the proposed degree program modification, all degree catalog description will remain unchanged.

of the Graduate School, unsatisfactory performance in the graduate program in Industrial and Systems Engineering is defined as any of the following. • Failure to maintain a 3.00 average in the M.S. program or 3.30 in the Ph.D. program, • Failure of the qualifying exam (Ph.D. students only), • Failure of the preliminary exam (Ph.D. students only); • Failure of the comprehensive final exam (M.S. non-thesis option only), • Unsatisfactory evaluation of thesis or dissertation, or • A failure of the required component of the program of study. Any one of these will constitute the basis for review for possible dismissal. If the students drops six or more quality points below the required average (3.00 for M.S. or 3.30 for Ph.D.), the graduate coordinator will review the record along with the student's graduate committee and will recommend a final course of action, which will be immediate dismissal or the establishment of a probationary period in which corrective action must take place. While on probation, the student is not eligible to receive an assistantship and is required to raise his/her cumulative GPA to 3.00 for M.S. or 3.30 for Ph.D. by the end of the following semester of enrollment. During that semester, the student must enroll in 9 credit hours of coursework; Directed Individual Study courses are excluded.	
Old Concentration description: None.	New Concentration description: None.
CURRENT CURRICULUM OUTLINE 68	PROPOSED CURRICULUM OUTLINE 68
Doctor of Philosophy in Industrial & Systems Engineering Industrial Engineering courses 30 Courses in discipline other than Industrial Engineering 6 IE 6623 Engineering Statistics II (or equivalent) 3	Doctor of Philosophy in Industrial & Systems Engineering Industrial Engineering courses 30 Courses in discipline other than Industrial Engineering 6 IE 6623 Engineering Statistics II (or equivalent) 3

IE 6773	Systems Simulation I (or equivalent)	3
Additional Graduate-level coursework		6
Research		20
Total Hours		**68**

A preliminary examination, a dissertation, and an oral examination in defense of the dissertation are required.

Additional requirements are:

1. No ISE graduate student may list ST 8114 or IE 6613 on his/her graduate program
2. No program can contain more than 9 hours of courses that are required in the bachelor's degree curriculum
3. No program can contain more than 6 hours of Directed Individual Study (IE 7000).

Doctoral students must complete at least 48 hours of coursework beyond the B.S. level.

IE 6773	Systems Simulation I (or equivalent)	3
Additional Graduate-level coursework		6
Research		20
Total Hours		**68**

A preliminary examination, a dissertation, and an oral examination in defense of the dissertation are required.

Additional requirements are:

1. No ISE graduate student may list ST 8114 or IE 6613 on his/her graduate program
2. No program can contain more than **15** hours of courses that are required in the bachelor's degree curriculum
3. No program can contain more than 6 hours of Directed Individual Study (IE 7000).

Doctoral students must complete at least 48 hours of coursework beyond the B.S. level.

3. Justification and Student Learning Outcome

The proposed changes will keep our program in line with our peer schools' programs and increase students' choices of coursework. This change is beneficial to distance students and allow them to choose the preferred coursework based on their schedules.

4. Support

The change was approved by Industrial and Systems Engineering as indicated in the attached letter of support. The degree modification requires no additional faculty support at current or expected enrollment letters.
The school currently has sufficient personnel and infrastructure to make this change.

5. Proposed 3-Letter Abbreviation

The abbreviation for the ISE will not change.

6. Effective Date

August 16, 2020

MISSISSIPPI STATE UNIVERSITY
JAMES WORTH BAGLEY COLLEGE OF ENGINEERING

DEPARTMENT OF INDUSTRIAL & SYSTEMS ENGINEERING

Linkan Bian, Ph.D.
bian@ise.msstate.edu

June 3, 2020

University Committee on Courses and Curricula
Mailstop: 9702
Mississippi State, MS 39762

Dear UCCC,

The Industrial and Systems Engineering (ISE) department discussed the proposal for the following changes the Ph.D. degree program. We propose to allow students to take up to 15 hours of courses that are required in the bachelor's degree curriculum.

After some discussion we put this proposal to the entire ISE faculty for a vote. The graduate faculty are in favor of making this change.

Sincerely,

Linkan Bian

Linkan Bian, Ph.D.
Thomas B. & Terri L. Nusz Professor
Associate Professor and Graduate Coordinator
Industrial and Systems Engineering

MISSISSIPPI STATE UNIVERSITY
JAMES WORTH BAGLEY COLLEGE OF ENGINEERING

DEPARTMENT OF INDUSTRIAL & SYSTEMS ENGINEERING

Linkan Bian, Ph.D.
bian@ise.msstate.edu

Approved:	**Signature and Date:**
Linkan Bian, Ph.D.	Linkan Bian 06/03/2020
Stanley Bullington, Ph.D.	
Reuben Burch, Ph.D.	Reuben F. Burch V — Digitally signed by Reuben F. Burch V Date: 2020.06.04 08:59:42 -05'00'
Raed Jaradat, Ph.D.	Digitally signed by Raed m Jaradat DN: cn=Raed m Jaradat, o=MSU, ou=ISE, email=jaradat@ise.msstate. c=US Date: 2020.06.05 10:05:46 -05'00'
Junfeng Ma, Ph.D.	Junfeng Ma — Digitally signed by Junfeng Ma Date: 2020.06.04 11:56:07 -05'(
Mohammad Marufuzzaman, Ph.D.	Mohammad Marufuzzaman — Digitally signed by Mohammad Marufuzzaman DN: cn=Mohammad Marufuzzaman, o=061300, ou=Mississippi State University, email=maruf@ise.msstate.edu, c=US Date: 2020.06.04 12:52:58 -05'00'
Nazanin Morshedlou, Ph.D.	Nazanin Morshedlou — Digitally signed by Nazanin Morshedlou Date: 2020.06.03 14:05:32 -05'(
Brian Smith, Ph.D.	B K Smith 6/3/2020
Lesley Strawderman, Ph.D.	Lesley Strawderman — Digitally signed by Lesley Strawderman Date: 2020.06.03 13:07:07 -05
Wenmeng Tian, Ph.D.	Wenmeng Tian — Digitally signed by Wenmeng Tian Date: 2020.06.04 14:45:23 -05'(
Haifeng Wang, Ph.D.	Haifeng Wang 6/4/2020

APPROVAL FORM FOR

DEGREE PROGRAMS

MISSISSIPPI STATE UNIVERSITY

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College: Forest Resources **Department:** Sustainable Bioproducts

Contact Person: Jeanie McNeel **Mail Stop:** 9820 **E-mail:** jam52@msstate.edu
Nature of Change: Degree Modification **Date Initiated:** 06/24/2020
Effective Date: 08/01/2020

Current Degree Program Name: M.S. Sustainable Bioproducts

Major: Sustainable Bioproducts **Concentration:** n/a

New Degree Program Name: M.S. Sustainable Bioproducts

Major: Sustainable Bioproducts **Concentration:** n/a

Summary of Proposed Changes:

1. Updating program description with detail of requirements for thesis and non-thesis program options.
2. Updating list of courses to reflect course modifications approved by UCCC in 2019 and 2020, including:
    a. Renaming SBP 6113 from Adhesives and Biocomposites to Adhesives and Composites.
    b. Renaming SBP 6153 from Biological Conversion of Biomass to Biomass Products Manufacturing.
    c. Renaming SBP 6263 from Strength and Design of Furniture as Green Products to Furniture Design and Fabrication
    d. Elimination of SBP 6144 Biocomposite Application and Manufacturing
    e. Elimination of SBP 6223 Furniture Production I
    f. Elimination of SBP 6233 Furniture Production II
    g. Elimination of SBP 6333 Bioproducts and Environmental Biotechnology
    h. Addition of SBP 8013 Advanced Wood Science & Technology
    i. Addition of SBP 8143 Standards for Testing Sustainable Materials
3. Specification of other graduate-level course allowances
4. Specification of SBP 7000 allowance

Approved:	Date:
Rubin Shmulsky Digitally signed by Rubin Shmulsky Date: 2020.06.26 08:22:33 -05'00'	6/26/2020
Department Head	
Heidi J. Renninger Digitally signed by Heidi Renninger Date: 2020.06.26 09:16:24 -05'00'	6/26/2020
Chair, College or School Curriculum Committee	
Ian Munn for George Hopper Digitally signed by Ian Munn for George Hopper Date: 2020.07.01 11:52:26 -05'00'	7/1/2020
Dean of College or School	
Chair, University Committee on Courses and Curricula	
Chair, Graduate Council(if applicable)	
Chair, Deans Council	

GRADUATE DEGREE MODIFICATION OUTLINE FORM

Use the chart below to make modifications to an existing Graduate Degree. All deleted courses and information should be shown in *italics* and all new courses and information in **bold**. Please include the course prefix, number, and title in both columns. Expand rows as needed.

CURRENT Degree Description	PROPOSED Degree Description
Degree: Master of Science, Thesis Option Major: Sustainable Bioproducts, Campus 1 Concentrations: n/a	Degree: Master of Science, Thesis Option Major: Sustainable Bioproducts, Campus 1 Concentrations: n/a
The Sustainable Bioproducts field is concerned with extending our knowledge of wood as a material and applying this knowledge to the manufacture of useful products. It requires knowledge of the chemical, physical, botanical, and engineering sciences and how they impinge on wood. The M.S. thesis-option program requires 24 hours of coursework, 6 hours of thesis research/thesis, and a comprehensive examination. The M.S. non-thesis option program requires 27 hours of coursework, 3 hours of independent study, and a comprehensive examination.	The Sustainable Bioproducts field is concerned with extending our knowledge of wood as a material and applying this knowledge to the manufacture of useful products. It requires knowledge of the chemical, physical, botanical, and engineering characteristics of **wood and other biomaterials, and the application of these characteristics to production of solid and engineered wood products in related industries. The M.S. thesis-option program requires 24 hours of academic coursework, 6 hours of research/thesis credit, and a defense of the student's written thesis before his or her graduate committee. The M.S. non-thesis Campus 1 program requires 30 hours of academic coursework and a comprehensive examination. The M.S. non-thesis Campus 5 program also requires 30 hours of academic course work (24 hours of academic coursework, 3 hours of professional practices instruction, 3 hours of capstone/final project) and a comprehensive examination.**
n/a	n/a

CURRENT CURRICULUM OUTLINE	Required Hours	PROPOSED CURRICULUM OUTLINE	Required Hours
College Required Courses 8000-level coursework	 12	College Required Courses 8000-level coursework	 12
Major Required Courses Graduate-level coursework SBP 8111 Research Seminar I SBP 8121 Research Seminar II SBP 8000 Research/Thesis Graduate-level electives SBP 6013 Wood Anatomy SBP 6023 Lignocellulosic Biomass Chem. *SBP 6113 Adhesives and Biocomposites* SBP 6123 Lumber Manufacturing SBP 6133 Biorefinery Processes *SBP 6144 Biocomposite Application and Manufacturing* *SBP 6153 Biological Conversion of Biomass* SBP 6213 Deterioration and Preservation of Biomaterials *SBP 6223 Furniture Production I*	 10 1 1 6 	Major Required Courses SBP 8111 Research Seminar I SBP 8121 Research Seminar II SBP 8000 Research/Thesis Graduate-level electives SBP 6013 Wood Anatomy SBP 6023 Lignocellulosic Biomass Chem. **SBP 6113 Adhesives and Composites** SBP 6123 Lumber Manufacturing SBP 6133 Biorefinery Processes **SBP 6153 Biomass Products Manufacturing** SBP 6213 Deterioration and Preservation of Biomaterials	 1 hour 1 hour 6 hours 10 hours

SNP 6233 Furniture Production II SBP 6243 Sustainable Bioproducts SBP 6253 Quantitative Methods in SBP *SBP 6263 Strength & Design of Furniture as Green Products* SBP 6313 Bioproducts and the Environment *SBP 6333 Bioproducts and Environmental Biotechnology* SBP 6353 Forest Products Marketing SBP 8123 Advance Lignocellulosic Chem. SBP 8133 Environmental Issues in SBP SBP 8213 Advanced Wood Mechanics		SBP 6243 Sustainable Bioproducts SBP 6253 Quantitative Methods in SBP **SBP 6263 Furniture Design and Fabrication** SBP 6313 Bioproducts and the Environment SBP 6353 Forest Products Marketing **SBP 8013 Advanced Wood Science & Tech** SBP 8123 Advanced Lignocellulosic Chem. SBP 8133 Environ Issues in SBP **SBP 8143 Standards for Testing Sustainable Materials** SBP 8213 Advanced Wood Mechanics **Graduate-level courses from other MSU Departments as approved by the students graduate committee (Program of Study)** **SBP 7000 Direct Individual Study (no more than 6 hours total; may be used to meet 8000-level course requirements)**	
Concentration 1. Courses		Concentration 1. Courses	
Concentration 2. Courses		Concentration 2. Courses	
Total Hours	30	Total Hours	30

Approved:

Rubin Shmulsky Digitally signed by Rubin Shmulsky Date: 2020.06.25 15:08:02 -05'00'

Dr. Rubin Shmulsky, Department Head, Sustainable Bioproducts

Digitally signed by Heidi Renninger Date: 2020.06.26 09:26:21 -05'00'

Dr. Heidi Renninger, Chair, CFR Curriculum Committee

Ian A. Munn Digitally signed by Ian A. Munn Date: 2020.07.01 12:00:33 -05'00'

Dr. Ian Munn, Associate Dean, College of Forest Resources

MISSISSIPPI STATE UNIVERSITY

Department of Sustainable Bioproducts

Letter of Support for Modification of Existing Sustainable Bioproducts Master of Science Degree

Contact person: Jeanie McNeel, 662-325-2119, jam52@msstate.edu

Justification for request: In 2014, the Department of Forest Products became the Department of Sustainable Bioproducts. Near that same time, courses throughout the graduate program were renamed and modified to be more representative of the broad scope of the department. These changes were approved by MSU and IHL, and implemented upon approval.

This program has been in place for five years, over which time the department has gathered feedback from students and faculty. The modifications presented in this proposal represent a more detailed program description, updated course material, elimination of material overlap, and division of courses for more in-depth exploration of technical material. These course updates have been approved in previous UCCC meetings, and this program modification is a result of the accumulated approvals. No changes in support including personnel or material requirements are anticipated.

Effective Date: Fall 2020

Effect on other courses and programs: None

The undersigned Curriculum Committee members of Sustainable Bioproducts Department are supportive of the course deletion.

Mike Barnes	Digitally signed by H M Barnes Date: 2020.06.30 13:00:06 -05'00'	Date: 6/30/20
Hyungsuk "Thomas" Lim	Digitally signed by Hyungsuk Lim DN: cn=Hyungsuk Lim, o=Mississippi State University, ou=Sustainable Bioproducts, email=h.lim@msstate.edu, c=US Date: 2020.06.30 14:19:53 -05'00'	Date: 6/30/20
Frank Owens	Frank Owens Digitally signed by Frank Owens DN: cn=Frank Owens, o=Mississippi State University, ou=Dept of Sustainable Bioproducts, email=fco7@msstate.edu, c=US Date: 2020.06.30 14:27:31 -05'00'	Date: 6/30/20
Beth Stokes	Digitally signed by Beth Stokes DN: cn=Beth Stokes, o=Mississippi State University, ou=Sustainable Bioproducts, email=ces8@msstate.edu, c=US Date: 2020.06.30 15:02:21 -05'00'	Date: 6/30/20
Jason Street	Digitally signed by Jason Street DN: cn=Jason Street, o=Mississippi State University, ou=Sustainable Bioproducts/FWRC, email=jason.street@msstate.edu, c=US Date: 2020.06.30 15:05:52 -05'00'	Date: 6/30/20

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: Forest Resources **Department:** Sustainable Bioproducts

Contact Person: Jeanie McNeel **Mail Stop:** 9820 **E-mail:** jam52@msstate.edu
Nature of Change: Degree Modification **Date Initiated:** 06/24/2020
Addition of Distance Education to Non-thesis **Effective Date:** 08/01/2020

Current Degree Program Name: M.S. Sustainable Bioproducts

Major: Sustainable Bioproducts **Concentration:** n/a

New Degree Program Name: M.S. Sustainable Bioproducts

Major: Sustainable Bioproducts **Concentration:** n/a

Summary of Proposed Changes:

1. Addition of distance education to Non-thesis degree option.
2. Addition of course requirement for Campus 5 Non-thesis option majors:
    a. SBP 8023 Professional Practices in Wood Products Industry
    b. SBP 8203 Graduate Capstone Seminar

Approved:	Date:
Rubin Shmulsky Digitally signed by Rubin Shmulsky Date: 2020.06.26 08:23:43 -05'00'	6/26/2020
Department Head	
Heidi J. Renninger Digitally signed by Heidi Renninger Date: 2020.06.26 09:21:16 -05'00'	6/26/2020
Chair, College or School Curriculum Committee	
Ian Munn for George Hopper Digitally signed by Ian Munn for George Hopper Date: 2020.07.01 12:05:06 -05'00'	7/1/2020
Dean of College or School	
Chair, University Committee on Courses and Curricula	
Chair, Graduate Council(if applicable)	
Chair, Deans Council	

GRADUATE DEGREE MODIFICATION OUTLINE FORM

Use the chart below to make modifications to an existing Graduate Degree. All deleted courses and information should be shown in *italics* and all new courses and information in **bold**. Please include the course prefix, number, and title in both columns. Expand rows as needed.

CURRENT Degree Description	PROPOSED Degree Description
Degree: Master of Science, Non-thesis Option Major: Sustainable Bioproducts, Campus 1 Concentrations:	Degree: Master of Science, Non-thesis option Major: Sustainable Bioproducts, Campus 1 **& Campus 5** Concentrations:
The Sustainable Bioproducts field is concerned with extending our knowledge of wood as a material and applying this knowledge to the manufacture of useful products. It requires knowledge of the chemical, physical, botanical, and engineering sciences and how they impinge on wood. The M.S. thesis-option program requires 24 hours of coursework, 6 hours of thesis research/thesis, and a comprehensive examination. The M.S. non-thesis option program requires 27 hours of coursework, 3 hours of independent study, and a comprehensive examination.	The Sustainable Bioproducts field is concerned with extending our knowledge of wood as a material and applying this knowledge to the manufacture of useful products. It requires knowledge of the chemical, physical, botanical, and engineering characteristics of wood and other biomaterials, and the application of these characteristics to production of solid and engineered wood products in related industries. The M.S. thesis-option program requires 24 hours of academic coursework, 6 hours of research/thesis credit, and a defense of the student's written thesis before his or her graduate committee. The M.S. non-thesis Campus 1 program requires 30 hours of academic coursework and a comprehensive examination. The M.S. non-thesis Campus 5 program also requires 30 hours of academic course work (24 hours of academic coursework, 3 hours of professional practices instruction, 3 hours of capstone/final project) and a comprehensive examination.
n/a	n/a

CURRENT CURRICULUM OUTLINE	Required Hours	PROPOSED CURRICULUM OUTLINE	Required Hours
College Required Courses 8000-level coursework	 12	College Required Courses 8000-level coursework	 12
Major Required Courses Graduate-level coursework SBP 8111 Research Seminar I SBP 8121 Research Seminar II Graduate-level electives	 10 1 1 6	Major Required Courses: Campus 1 Thesis Option & Non-thesis Option SBP 8111 Research Seminar I SBP 8121 Research Seminar II Major Required Courses: Campus 5 Non-thesis Option **SBP 8023 Professional Practices in Wood Products Industry** **SBP 8203 Graduate Capstone Seminar** Graduate-level electives SBP 6013 Wood Anatomy SBP 6023 Lignocellulosic Biomass Chem. SBP 6113 Adhesives and Composites SBP 6123 Lumber Manufacturing SBP 6133 Biorefinery Processes SBP 6153 Biomass Products Manufacturing SBP 6213 Deterioration and Preservation of Biomaterials	 1 1 3 3 12 - 16

		SBP 6243 Sustainable Bioproducts SBP 6253 Quantitative Methods in SBP SBP 6263 Furniture Design and Fabrication SBP 6313 Bioproducts and the Environment SBP 6353 Forest Products Marketing SBP 8013 Advanced Wood Science & Tech SBP 8123 Advanced Lignocellulosic Chem. SBP 8133 Environ Issues in SBP SBP 8143 Standards for Testing Sustainable Materials SBP 8213 Advanced Wood Mechanics Graduate-level courses from other MSU Departments as approved by the students graduate committee (Program of Study) SBP 7000 Directed Individual Study (no more than 6 hours total; may be used to meet 8000-level course requirements)	
Concentration 1. Courses		Concentration 1. Courses	
Concentration 2. Courses		Concentration 2. Courses	
Total Hours	30	Total Hours	30

Approved:

Rubin Shmulsky Digitally signed by Rubin Shmulsky
Date: 2020.06.25 15:09:12 -05'00'

Dr. Rubin Shmulsky, Department Head, Sustainable Bioproducts

Digitally signed by Heidi Renninger
Date: 2020.06.26 09:20:20 -05'00'

Dr. Heidi Renninger, Chair, CFR Curriculum Committee

Ian A. Munn Digitally signed by Ian A. Munn
Date: 2020.07.01 12:03:29 -05'00'

Dr. Ian Munn, Associate Dean, College of Forest Resources

MISSISSIPPI STATE UNIVERSITY

Department of Sustainable Bioproducts

Letter of Support for Modification of Existing Sustainable Bioproducts Master of Science Degree – Addition of Distance Non-thesis Option

Contact person: Jeanie McNeel, 662-325-2119, jam52@msstate.edu

Justification for request: In 2014, the Department of Forest Products became the Department of Sustainable Bioproducts. Near that same time, courses throughout the graduate program were renamed and modified to be more representative of the broad scope of the department. These changes were approved by MSU and IHL, and implemented upon approval. This program has been in place for five years, over which time the department has gathered feedback from students and faculty. The graduate program has continued to successfully produce students in the traditional hands-on program. In 2019, the faculty of Sustainable Bioproducts initiated the addition of distance learning options to many graduate level courses in order to reach a previously under-served population of potential students. With UCCC approval of distance formats for these courses, the faculty now propose a new option for distance students to enter the Master of Science program under a non-thesis option. No changes in support including personnel or material requirements are anticipated.

Effective Date: Fall 2020

Effect on other courses and programs: None

The undersigned Curriculum Committee members of Sustainable Bioproducts Department are supportive of the course deletion.

Mike Barnes	Digitally signed by H M Barnes Date: 2020.06.30 13:06:36 -05'00'	Date: 6/30/20
Hyungsuk "Thomas"Lim	Digitally signed by Hyungsuk Lim DN: cn=Hyungsuk Lim, o=Mississippi State University, ou=Sustainable Bioproducts, email=h.lim@msstate.edu, c=US Date: 2020.06.30 14:18:00 -05'00'	Date: 6/30/20
Frank Owens	Frank Owens Digitally signed by Frank Owens DN: cn=Frank Owens, o=Mississippi State University, ou=Dept of Sustainable Bioproducts, email=fco7@msstate.edu, c=US Date: 2020.07.01 13:51:19 -05'00'	Date: 07/01/20
Beth Stokes	Digitally signed by Beth Stokes DN: cn=Beth Stokes, o=Mississippi State University, ou=Sustainable Bioproducts, email=cns8@msstate.edu, c=US Date: 2020.07.01 13:58:35 -05'00'	Date: 07/01/20
Jason Street	Digitally signed by Jason Street DN: cn=Jason Street, o=Mississippi State University, ou=Sustainable Bioproducts/FWRC, email=jason.street@msstate.edu, c=US Date: 2020.07.01 15:02:20 -05'00'	Date: 07/01/20

Appendix 10: Report of Intent to Offer an Existing Degree Program by Distance Learning
(Submit Appendix 10 in both PDF and Word Document Formats)

Institution:

Date of Initial Program Approval:	Date of Implementation:	Cost to Offer by Distance Learning:
February 2003	August 2003	$150,033

Program Title as It Appears on Academic Program Inventory, Diploma, and Transcript:	Six-Digit CIP Code(s) & Four-Digit Sequence Code(s):
Sustainable Bioproducts	30509

CIP & Sequence codes: IHL Active Program Inventory

Degree(s) to be Awarded:	Credit Hour Requirements:
Master of Science, non-thesis	30

Can this program be completed entirely online? ☒ Yes ☐ No

Will this program require separate admission from those offered on-campus? ☐ Yes ☒ No

Responsible Academic Unit(s):	Institutional Contact: Dept. of Sustainable Bioproducts, Dr. Rub
Department of Sustainable Bioproducts	Phone: 662-325-2116
Center for Distance Education	Email: rs26@msstate.edu

Number of Students Expected to Enroll in First Six Years:		Number of Graduates Expected in First Six Years:	
Year One	5	Year One	0
Year Two	5	Year Two	0
Year Three	10	Year Three	2
Year Four	10	Year Four	4
Year Five	15	Year Five	6
Year Six	25	Year Six	8
Total	70	Total	20

Program Summary:

The Sustainable Bioproducts field is concerned with extending our knowledge of wood as a material and applying this knowledge to the manufacture of useful products. It requires knowledge of the chemical, physical, botanical, and engineering characteristics of wood and other biomaterials, and the application of these characteristics to production of solid and engineered wood products in related industries. The M.S. thesis-option program requires 24 hours of academic coursework, 6 hours of research/thesis credit, and a defense of the student's written thesis before his or her graduate committee. The M.S. non-thesis Campus 1 program requires 30 hours of academic coursework and a comprehensive examination. The M.S. non-thesis Campus 5 program also requires 30 hours of academic course work (24 hours of academic coursework, 3 hours of professional practices instruction, 3 hours of capstone/final project) and a comprehensive examination.

Chief Academic Officer Signature _____ **Date** _____

Institutional Executive Officer Signature _____ **Date** _____

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: College of Veterinary Medicine
Department: Veterinary Medical Technology Program
Contact Person: Allison Gardner **Mail Stop:** 9825 **E-mail:** agardner@cvm.msstate.edu
Nature of Change: Degree Modification
Date Initiated: June 16, 2020 **Effective Date:** August 18, 2020
Current Degree Program Name:

Major: Veterinary Medical Technology **Concentration:**

New Degree Program Name: No Change

Major: No Change **Concentration:**

Summary of Proposed Changes:

Addition of one credit hour to CVM 4213 Veterinary Technical Small Animal Surgical & Anesthesia Clinical Experience. Adding an extra week to CVM 4213 Veterinary Technical Small Animal Surgical & Anesthesia Clinical would allow Veterinary Medical Technology students to participate in additional topic rounds. It would allow additional case exposure and the ability to practice newly learned technical skills. Anesthesia is an area of veterinary medicine in which veterinary technicians/technologists are heavily relied on. Additional practice would help students to gain confidence and to increase in the proficiency of their clinical skills. This change would also allow the rotation schedules of veterinary technician students and DVM students to be synchronized decreasing the teaching demands on clinical staff. The change would allow students to learn together and foster the veterinary team approach.

Proposed New Course Code and Title

CVM 4214 Small Animal Surgery & Anesthesia Clinical Experience (4) (Prerequisite: Admission into the Senior year of the Veterinary Medical Technology Program). Four Hour Practicum. Students will manage anesthetic cases at MSU -CVM. The practicum includes all technical aspects of patient care including but not limited to OR preparations, induction and monitoring anesthesia, pre/post-operative care.

Approved: **Date:**

Allyson Gardner — 6/23/20

~~Department Head~~
Director, Veterinary Medical Technology Program

Kari Walters — 6/24/2020

Chair, College or School Curriculum Committee

RM Jarrett for Dr. Hollis — 6/29/2020

Dean of College or School

Chair, University Committee on Courses and Curricula

Chair, Graduate Council(if applicable)

Chair, Deans Council

DEGREE MODIFICATION OUTLINE FORM

Use the chart below to make modifications to an existing undergraduate degree outline. If any General Education (Core) course is acceptable in the category, please indicate by saying "any Gen Ed course". There is no need to type in the whole list. All deleted courses and information should be shown in *italics* and all new courses and information in **bold**. Include the course prefix, number, and title in both columns. Expand this table as needed.

CURRENT Degree Description	PROPOSED Degree Description
Degree: Bachelor of Science Major: Veterinary Medical Technology Concentration: N/A	Degree: Bachelor of Science Major: Veterinary Medical Technology Concentration: N/A
Veterinary Medical Technology The Veterinary Medical Technology Program (VMTP) prepares students for multiple career opportunities. Upon completion of this program, graduates will positively contribute to the veterinary health care team regardless of the area/specialty graduates wish to pursue. Potential work environments for VMTP graduates include but are not limited to private veterinary practice, biomedical research, pharmaceutical industry, zoological parks, humane societies, nutrition companies, United States Department of Agriculture, U.S. military and academic institutions. *Students interested in the Veterinary Medical Technology Program will have the option of selecting Pre-VMT as their major at the time of their admission to Mississippi State University.* Once students are admitted into the third year of the program, they will be classified as VMT (Veterinary Medical Technology) majors. During the first two years of the curriculum students are enrolled as Undeclared with a Vet Tech Concentration. The first two years of the curriculum are mainly composed of general education courses. Students can apply as early as the spring semester of their sophomore year for entry into the junior year of the VMTP if not already accepted under the Pre-Admission policy. The third of the curriculum is competitive and enrollment is limited to 30 students. Entry into the third year of the program requires successful completion of either the Pre-Admission or Regular Admission application process. Students will be allowed a maximum of two times to apply to the VMTP. At that point, if they are not successful, they will be required to seek another route. Accepted students will begin classes in the fall semester following acceptance. The fourth year mainly consists of clinical experiences and begins the fall semester following successful completion of the third year. Students will be evaluated by exams throughout the curriculum for successful program advancement.	Veterinary Medical Technology The Veterinary Medical Technology Program (VMTP) prepares students for multiple career opportunities. Upon completion of this program, graduates will positively contribute to the veterinary health care team regardless of the area/specialty graduates wish to pursue. Potential work environments for VMTP graduates include but are not limited to private veterinary practice, biomedical research, pharmaceutical industry, zoological parks, humane societies, nutrition companies, United States Department of Agriculture, U.S. military and academic institutions. **Students interested in the Veterinary Medical Technology Program will have the option of selecting Undeclared with a Vet Tech concentration as their major at the time of their admission to Mississippi State University or another major of their choice**. Once students are admitted into the third year of the program, they will be classified as VMT (Veterinary Medical Technology) majors. During the first two years of the curriculum students are enrolled as Undeclared with a Vet Tech Concentration **or another major of their choosing.** The first two years of the curriculum are mainly composed of general education courses. Students can apply as early as the spring semester of their sophomore year for entry into the junior year of the VMTP if not already accepted under the Pre-Admission policy. The third year of the curriculum is competitive and enrollment is limited to **40** students. Entry into the third year of the program requires successful completion of either the Pre-Admission or Regular Admission application process. Students will be allowed a maximum of two times to apply to the VMTP. At that point, if they are not successful, they will be required to seek another route. Accepted students will begin classes in the fall semester following acceptance. The fourth year mainly consists of clinical experiences and begins the fall semester following successful completion of the third year. Students will be evaluated by exams throughout the curriculum for successful program

		advancement.	
"[Click here and type old concentration description]"		"[Click here and type new concentration description]"	
CURRENT CURRICULUM OUTLINE	Required Hours	**PROPOSED CURRICULUM OUTLINE**	Required Hours
English (Ex: EN 1103 English Comp I): EN 1103 English Composition I EN 1113 English Composition II	6	English (Ex: EN 1103 English Comp I): EN 1103 English Composition I EN 1113 English Composition II	6
Fine Arts (General Education): Any Gen Ed Course	3	Fine Arts (General Education): Any Gen Ed Course	3
Natural Sciences (2 labs required from Gen Ed): BIO 1134 Principles of Biology I BIO 1144 Principles of Biology II	8	Natural Sciences (2 labs required from Gen Ed): BIO 1134 Principles of Biology I BIO 1144 Principles of Biology II	8
Extra Science (if appropriate) BIO 3304 Microbiology CH 1043 Survey of Chemistry I CH 1053 Survey of Chemistry II CH 1051 Investigations in Chemistry	11	Extra Science (if appropriate) BIO 3304 Microbiology CH 1043 Survey of Chemistry I CH 1053 Survey of Chemistry II CH 1051 Investigations in Chemistry	11
Math (General Education): MA 1313 College Algebra MA 1323 Trigonometry OR MA 2213 Introduction to Statistics	6	Math (General Education): MA 1313 College Algebra MA 1323 Trigonometry OR MA 2213 Introduction to Statistics	6
Humanities (General Education):	6	Humanities (General Education):	6
Social/Behavioral Sciences (Gen Ed):	6	Social/Behavioral Sciences (Gen Ed):	6
Other Courses: CO 1003 Fundamentals of Speaking, or CO 1013 Introduction to Communication	3	CO 1003 Fundamentals of Speaking, or CO 1013 Introduction to Communication	3
Major Core Courses ADS 1113 & ADS 1121 Animal Science and Animal Science Laboratory or VS 3014 Animal Anatomy and Physiology VS 1012 Careers in Veterinary Medicine CVM 3112 Animal Handling, Husbandry, & Nutrition CVM 3243 Basics of Practice Procedures & Management CVM 3101 Veterinary Medical Terminology		Major Core Courses ADS 1113 &ADS 1121Animal Science and Animal Science Laboratory or VS 3014 Animal Anatomy and Physiology VS 1012 Careers in Veterinary Medicine CVM 3112 Animal Handling, Husbandry, & Nutrition CVM 3243 Basics of Practice Procedures & Management CVM 3101 Veterinary Medical Terminology	

CVM 3014 Anatomy & Physiology for Veterinary Technologists CVM 3013 Small Animal Diseases & Management CVM 3022 Small Animal Technical Skills & Nursing Care CVM 3032 Food Animal Diseases & Management CVM 3031 Food Animal Technical Skills & Nursing Care CVM 3042 Equine Diseases & Management CVM 3041 Equine Technical Skills & Nursing Care CVM 3232 Pharmacology & Toxicology for Veterinary Technologists CVM 3111 Parasitology for Veterinary Technologists CVM 3121 Hematology & Immunology for Veterinary Technologists CVM 3132 Clinical Pathology Laboratory Techniques CVM 3212 Anesthesiology for Veterinary Technologists CVM 3051 Laboratory Animal Health Management CVM 3061 Laboratory Animal Technical Skills CVM 3201 Dental Principles for Veterinary Technologists CVM 3202 Diagnostic Imaging for Veterinary Technologists CVM 3222 Surgical Skills & Nursing Care for Veterinary Technologists CVM 3221 Surgical Nursing & Anesthetic Management Lab CVM 3141 Anatomical Pathology Laboratory Techniques CVM 4103 Large Animal Clinical Experience I CVM 4113 Large Animal Clinical Experience II OR CVM 4223 Small Animal Primary Care Experience CVM 4333 Small Animal Emergency/Critical Care Clinical Experience CVM 4213 Small Animal Anesthesia/ Surgery Experience CVM 4102 Professional Development CVM 4701 Application & Process for VTNE CVM 4206 Small Animal Clinical		CVM 3014 Anatomy & Physiology for Veterinary Technologists CVM 3013 Small Animal Diseases & Management CVM 3022 Small Animal Technical Skills & Nursing Care CVM 3032 Food Animal Diseases & Management CVM 3031 Food Animal Technical Skills & Nursing Care CVM 3042 Equine Diseases & Management CVM 3041 Equine Technical Skills & Nursing Care CVM 3232 Pharmacology & Toxicology for Veterinary Technologists CVM 3111 Parasitology for Veterinary Technologists CVM 3121 Hematology & Immunology for Veterinary Technologists CVM 3132 Clinical Pathology Laboratory Techniques CVM 3212 Anesthesiology for Veterinary Technologists CVM 3051 Laboratory Animal Health Management CVM 3061 Laboratory Animal Technical Skills CVM 3201 Dental Principles for Veterinary Technologists CVM 3202 Diagnostic Imaging for Veterinary Technologists CVM 3222 Surgical Skills & Nursing Care for Veterinary Technologists CVM 3221 Surgical Nursing & Anesthetic Management Lab CVM 3141 Anatomical Pathology Laboratory Techniques CVM 4103 Large Animal Clinical Experience I CVM 4113 Large Animal Clinical Experience II OR CVM 4223 Small Animal Primary Care Experience CVM 4333 Small Animal Emergency/Critical Care Clinical Experience **CVM 4214** Small Animal Anesthesia/ Surgery Experience CVM 4102 Professional Development CVM 4701 Application & Process for VTNE CVM 4206 Small Animal Clinical Experience I	

Experience I CVM 4003 Internship Experience CVM 4601 Animal Emergency & Referral Center Elective, Flowood, MS Elective Experiences: Must choose 2 of the following: *CVM 4511 University medical Center Biomedical Research Unit Elective, Jackson, MS* CVM 4501 Diagnostic and Research Laboratory Elective, Pearl, MS CVM 4101 Veterinary Technology Academic Elective CVM 4201 Clinical Experience Elective		CVM 4003 Internship Experience CVM 4601 Animal Emergency & Referral Center Elective, Flowood, MS Elective Experiences: Must choose 2 of the following: CVM 4501 Diagnostic and Research Laboratory Elective, Pearl, MS CVM 4101 Veterinary Technology Academic Elective CVM 4201 Clinical Experience Elective	
Concentration Courses		Concentration Courses	
Total Hours	120	Total Hours	120

June 8, 2020

University Committee on Courses and Curricula

Mississippi State University

Dear UCCC,

The College of Veterinary Medicine Curriculum Committee was presented the course CVM 4213 of the Veterinary Medical Technology Program for modification. The proposed modification will allow students to have additional clinical exposure and participate in more topic rounds in this course. This modification would also allow a more synchronized teaching effort with the VMT and DVM students in this clinical experience.

Please accept this letter of support for the modification of course CVM 4213 Small Animal Surgery and Anesthesia Clinical Experience in the Veterinary Medical Technology Program to CVM 4214.

The College of Veterinary Medicine Curriculum Committee voted unanimously for this course modification, and it has complete support of the CVM Curriculum Committee.

If you have any questions, feel free to contact me at 662-312-2866 or walters@cvm.msstate.edu.

Sincerely,

CC Chair Lisa Walters

CC Vice Chair

CC Secretary

CC Member

CC Member

CC Member

6/24/2020

Dear UCCC Mississippi State University,

The Veterinary Medical Technology program requests a course modification to CVM 4511. This rotation will be discontinued at University of Mississippi Medical Center Biomedical Research Unit due to new regulations at the facility.

The CVM Curriculum Committee unanimously supports the discontinuation of CVM 4511 of the Veterinary Medical Technology program.

If I may be of further assistance, I can be reached at walters@cvm.msstate.edu or 662-312-2866.

Kevin Walters

Kevin Walters D.V.M.

Curriculum Committee Chair

Howell, Trey <trey.howell@msstate.edu>
Thu 6/25/2020 10:43 AM
To: Walters, Kevin <Walters@cvm.msstate.edu>

Hi Kevin,

I support the modifications to the VMT program and to Professional Development II.

Best,

Trey

George E. Howell III, Ph.D
Associate Professor
Department of Basic Sciences
College of Veterinary Medicine
Mississippi State University
240 Wise Center Drive
Mississippi State, MS 39762
Office phone: 601-420-4707

Bryan, Christine <Bryan@cvm.msstate.edu>
Thu 6/25/2020 10:47 AM
To: Walters, Kevin <Walters@cvm.msstate.edu>;Jack, Skip <jack@cvm.msstate.edu>; Beasley, Michaela <Beasley@cvm.msstate.edu
<Smith@cvm.msstate.edu>; Seo, Keun Seok <Seo@cvm.msstate.edu>; Howell, Trey <trey.howell@msstate.edu>; Brosseau, Ermelir
<emh515@msstate.edu>; Eidson, Anika <ahe27@msstate.edu>; Dunnam, Gunnar <grd63@msstate.edu>

Hi Kevin,

I support the modifications to the courses as proposed to the CVM Curriculum Committee. Please allow this email to the proposal submissions in place of my signature.

Thanks,
Christine

Christine E. Bryan, DVM
Associate Clinical Professor
Community Veterinary Services
Co-Coordinator for Clinical Education
College of Veterinary Medicine
Mississippi State University
christine.bryan@msstate.edu
(662) 325-1351 (work)

Re: Support letters for CVM course mods

Beasley, Michaela <Beasley@cvm.msstate.edu>

Thu 6/25/2020 1:55 PM

To: Walters, Kevin <Walters@cvm.msstate.edu>

I support the letter for the Professional Development II and for the Veterinary Medical Technology progran

Michaela Beasley, DVM, MS, CCRP
DACVIM (Neurology)
Associate Clinical Professor,
Neurology/ Neurosurgery
Mississippi State University,
College of Veterinary Medicine

Veterinary Specialty Center
1207 Highway 182W
Suite D
Starkville MS 39759

662.325.7339

Re: curriculum committee letter of support

Seo, Keun Seok <Seo@cvm.msstate.edu>

Thu 6/25/2020 8:10 PM

To: Walters, Kevin <Walters@cvm.msstate.edu>

Dear Kevin
I am sorry thought I replied this
Inam in favor to this support letter
Thank you