A MEMORANDUM

DATE: April 22, 2022

TO: UCCC Members

FROM: Dr. Andy Perkins, Chair

SUBJECT: UCCC Meeting on Wednesday, May 4, 2022 at 9:00 a.m.

The agenda and proposals for the meeting on **Wednesday, May 4, 2022 at 9:00 a.m. in the Trotter Room (Room 2200) of the Center for Advanced Vehicular Systems in the Research Park** are enclosed**.** The minutes will be forwarded by a separate email. Please contact the UCCC Office if you are unable to attend the meeting.

Thank you.

Enclosures: Course/Curriculum Proposals

Summary of Recommended Changes:

Change 1: Amend the Non-Voting Members to accurately reflect the current names of the various offices and centers.

Change 2: Add Center for Distance Education, Center for Teaching and Learning, University Academic Advising Center, and Office of Research and Economic Development (as pertains to curriculum related issues with Centers and faculty research) and correct the name of Office of Institutional Research and Effectiveness (one entity).

Change 3: Stipulate that Officers shall include a Vice-Chair to be elected by membership.

Current By-Law:

ARTICLE III COMPOSITION

The UCCC membership shall include voting faculty members, three voting student members and additional non-voting representatives as listed below.

Section 3 The non-voting members shall be:

A. A representative of the Registrar's Office.
B. A representative of the Library.
C. The Secretary employed for the UCCC.
D. A representative of the Office of Research and Institutional Effectiveness.
E. A representative of the Information Technology Services.
F. A representative of the Graduate School.
G. A representative of the Office of Institutional Research.

Recommended Revision:

Section 3 The non-voting members shall be:

A. A representative of the Registrar's Office.
B. A representative of the Library.
C. The Secretary employed for the UCCC.
D. A representative of the Office of Institutional Research and Effectiveness.
E. A representative of the Information Technology Services.
F. A representative of the Graduate School.
G. ~~A representative of the Office of Institutional Research.~~
G. A representative of the Center for Distance Education.
H. A representative of the Center for Teaching and Learning.
I. A representative of the University Academic and Advising Center.
J. A representative of the Office of Research and Economic Development

Current By-Law:

ARTICLE VI OFFICERS

Section 1 The officers of the UCCC shall be a Chair and a Secretary.
Chair- to preside at all meetings of the UCCC and represent the UCCC to the University. The Chair shall be elected annually at the January meeting by the members of the UCCC. The Chair shall be a current, elected member of the UCCC with a minimum of one year's experience on the UCCC. The Chair's term shall be from July 1 to June 30 of the school year of election. The Chair shall receive 25% released time to perform the duties of the Chair in reviewing proposals, advising colleges and departments concerning proposals and establishing meeting times and agendas. In the event that the Chair cannot preside at a called meeting, the Secretary will serve as the presiding officer.

Secretary- the Secretary shall be a paid employee of the University with responsibility for managing the UCCC office and assisting the UCCC Chair.

Recommended Revision:

ARTICLE VI OFFICERS

Section 1 The officers of the UCCC shall be a Chair, Vice-Chair and a Secretary.

Chair- to preside at all meetings of the UCCC and represent the UCCC to the University. The Chair shall be elected annually at the January meeting by the members of the UCCC. The Chair shall be a current, elected member of the UCCC with a minimum of one year's experience on the UCCC. The Chair's term shall be from July 1 to June 30 of the school year of election. The Chair shall receive 25% released time to perform the duties of the Chair in reviewing proposals, advising colleges and departments concerning proposals, ~~and~~ establishing meeting times and agendas and attending Associate Deans Council. In the event that the Chair cannot preside at a called meeting, the ~~Secretary~~ Vice-Chair will serve as the presiding officer.

Vice-Chair- to assist the Chair in the execution of duties related to UCCC. The Vice-Chair shall be elected annually at the January meeting by the members of the UCCC. The Vice-Chair shall be a current, elected member of the UCCC with a minimum of one year's experience on the UCCC. The Vice Chair's term shall be from July 1 to June 30 of the school year of election. In the event that the Chair cannot preside at a called meeting, the Vice-Chair will serve as the presiding officer.

Secretary- the Secretary shall be a paid employee of the University with responsibility for managing the UCCC office and assisting the UCCC Chair.

AGENDA
UNIVERSITY COMMITTEE ON COURSES AND CURRICULA
May 4, 2022

1. **Welcome**
2. **Approval of minutes**
3. **Proposed modification of By-Laws**
4. **Proposed revisions to curriculum policies – Dana Franz**
5. **Course proposals by college/school**

AGRICULTURE AND LIFE SCIENCES

Modification +Online/Distance	EPP 3124	Forest Pest Management (tabled at 2/18/2022 meeting)
+Online/Distance	PSS 3133	Introduction to Weed Science
+Online/Distance	PSS 4113/6113	Agricultural Crop Physiology
Modification +Online/Distance	PSS 4153/6153	Sustainable Agroecology
+Online/Distance	PSS 8163	Environmental Plant Physiology

ARCHITECTURE, ART AND DESIGN

+Online/Distance	ID 6403 (split level with 4403)	Introduction to Historic Preservation
+Online/Distance	ID 8153	History of American Architecture and Landscape Architecture
+Online/Distance	ID 8163	Historic Preservation Law
+Online/Distance	ID 8263	Interior Details, Furniture, Materials, and Finishes
+Online/Distance	ID 8463	Historic Preservation Planning
+Online/Distance	ID 8483	Preservation Economics/Advocacy

ARTS AND SCIENCES

+Online/Distance	BIO 2313	Ecosystems of Mississippi
Addition	CO 2711	Speaking Center Consultant Course
Modification +Online/Distance	CO 3313	News Writing for the Electronic Media (tabled at 1/14/2022 meeting)
Modification	CO 4713	Multimedia Journalism
Modification	CRM 4153	Mentoring Youths (was tabled at 9/3/2021 meeting)
Addition	EN 4363/6363	Studies in Global Anglophone Literatures
Modification	GG 4414/6414	Structural Geology
+Online/Distance	PPA 8183	Local Government Finance
Modification	PSY 4413/6413	Cognitive Neuroscience
+Online/Distance	REL 4143	Classical Mythology (tabled at 2/18/2022 meeting)

EDUCATION

Modification +Online/Distance	COE 6373	Vocational Assessment of Special Needs Persons
+Online/Distance	COE 8353	Vocational Rehabilitation Counseling

+Online/Distance	COE 8363	Psychological Aspects of Disability
+Online/Distance	COE 8373	Medical Aspects of Disability
Addition +Meridian +Online/Distance	EDX 4243	Planning for the Diversity of Learners in Special Education
Addition +Online/Distance	INDT 3873	Introduction to Power to E-Coatings (was tabled at 3/25/2022 meeting)
Modification	INDT 4223/6223	Quality Assurance (was tabled at 3/25/2022 meeting)

ENGINEERING

Addition +Online/Distance +Gulf Coast	CSE 4293/6293	AI for Cybersecurity
Addition +Online/Distance +Gulf Coast	CSE 4353/6353	Applications of Literate Programming in Software Development
Addition +Online/Distance +Gulf Coast	CSE 4423	Data Visualization
Addition +Online/Distance +Gulf Coast	CSE 4693/6693	Introduction to Machine Learning
Modification	ECE 1013	Foundations in ECE
Modification	ECE 1022	Foundations in Design
+Online/Distance	ECE 3614	Fundamentals of Energy Systems (tabled at 1/14/2022 meeting)
Modification	ECE 4512	Capstone Design I
Modification	ECE 4522	Capstone Design II
Addition +Online/Distance +Gulf Coast	ECE 4683/6683	Power Electronics Applications
Modification +Online/Distance	ECE 4724/6724	Embedded Systems (tabled at 1/14/2022 meeting)
Reactivation Modification +Online/Distance +Gulf Coast	ECE 4753/6753	Introduction to Robotics
Addition +Online/Distance +Gulf Coast	ECE 4793/6793	Applications of Literate Programming in Software Development
Addition +Online/Distance	ECE 8343	Microwave Remote Sensing
Addition +Online/Distance	GE 8313	Intro to Military Hydrology
Modification +Online/Distance	IE 3323	Manufacturing Processes
+Online/Distance	IE 4914	Industrial Systems Design

5. **Degree proposals by college/school**

AGRICULTURE AND LIFE SCIENCES

Modification	BS	Agricultural Engineering Technology and Business

ARTS AND SCIENCES

Modification	BA	Communication
Modification	BA	English
Addition	Minor (undergraduate)	Data Analytics and Society
Addition	Certificate (graduate)	Public Procurement

BUSINESS

Addition	Minor (undergraduate)	Supply Chain Logistics

EDUCATION

Modification	BME	Music Education/Guitar, Instrumental, Keyboard, Vocal
Modification Campus 1	BS	Industrial Technology
Modification Campus 5	BS	Industrial Technology
Modification	BS	Special Education
Modification	MATS	Secondary Education
+Distance	MS	Counselor Education

ENGINEERING

Addition	Certificate (Graduate)	Athlete Engineering
Modification	BS	Computer Engineering
Modification	BS	Cybersecurity
Modification	BS	Computer Science
Modification +Distance	BS	Industrial Engineering
Modification	BS	Software Engineering
Modification	BS	Electrical Engineering

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: Agricultural and Life Sciences **Department: Agricultural and Biological Engineering**

Contact Person: Joel O. Paz **Mail Stop: 9632** **E-mail: jpaz@abe.msstate.edu**
Nature of Change: Modification **Date Initiated: 02/21/22** **Effective Date: Fall 2022**
Current Degree Program Name: Agricultural Engineering Technology and Business

Major: Agricultural Engineering Technology and Business Concentrations: Precision Agriculture, Natural Resources and Environmental Management, Enterprise Management, Surveying and Geomatics

New Degree Program Name: Same

Major: Same **Concentration: Same**

Summary of Proposed Changes:
The faculty of Agricultural and Biological Engineering Department has made the following revisions to the Agricultural Engineering Technology and Business (AETB) program to better align the curriculum with current and emerging technologies and standards as well as the needs of the industry.

1) **Removed MA 1313 (Algebra) requirement for three AETB concentrations: Precision Agriculture (PRAG), Natural Resources and Environmental Management (NREM), and Enterprise Management (EMGT).**
2) **Retained MA 1313 in the Surveying/Geomatics concentration because the MS Board of Professional Licensed Surveyors requires that surveying graduates must have this course on their transcripts to take the State's Fundamentals of Surveying exam.**
3) **Moved GR 2313 (Maps Remote) from a required concentration course to an elective.**
4) **Updated the list of required concentration courses and electives to address industry needs.**
5) **Added CH 1211, CH 1213, CH 1221, CH 1223, PH 2213, and PH 2223 to the list of acceptable chemistry and physics courses.**

Approved:	Date:
J. Alex Thomasson — Digitally signed by J. Alex Thomasson Date: 2022.04.12 16:06:27 -05'00'	April 12, 2022
Department Head	
Will Davis — Digitally signed by Will Davis Date: 2022.04.18 09:39:43 -05'00'	4/18/22
Chair, College or School Curriculum Committee	
Darrell Sparks — Digitally signed by Darrell Sparks Date: 2022.04.21 10:59:38 -05'00'	4/21/22
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: Agricultural Engineering Technology and Business Concentrations: 1) Precision Agriculture, 2) Natural Resources & Environmental Management, 3) Enterprise Management, 4) Surveying & Geomatics	Degree: Bachelor of Science Major: Agricultural Engineering Technology and Business Concentrations: 1) Precision Agriculture, 2) Natural Resources & Environmental Management, 3) Enterprise Management, 4) Surveying & Geomatics
Agricultural Engineering Technology and Business (AETB) graduates can find rewarding careers in a variety of agricultural, environmental, and industrial businesses. Technologists focus on managing, operating and troubleshooting technology systems (rather than engineering design) by applying their knowledge of technology and business applications. This hands-on curriculum teaches students to manage equipment and machinery, biological processes, computers and other technologies to create and maintain current and new production systems. A Bachelor of Science degree is offered by the Agricultural and Biological Engineering Department through the College of Agriculture and Life Sciences. Students may pursue one of four concentrations within AETB: 1) Natural Resources & Environmental Management, 2) Precision Agriculture, 3) Enterprise Management and, 4) Surveying & Geomatics. The concentrations are achieved by completing 30-32 hours of specific technical electives as approved by an AETB advisor. Concentration descriptions and employment opportunities are discussed below. Students who plan to attend a community college before transferring to Mississippi State University are strongly encouraged to contact the AETB Undergraduate Coordinator regarding their proposed community college schedule and transfer requirements. Transfer credits with a grade of C or higher will be considered toward fulfillment of the degree requirements in the AETB curriculum. A maximum of 12 transfer hours of technical credit can be applied toward degree requirements. Students are required to earn a "C" or better in all ABE core courses. Internships or coop experiences are highly encouraged and help students translate their classroom and laboratory experiences into the reality of the business setting.	**The curriculum in Agricultural Engineering Technology and Business (AETB) is designed to provide students the academic and technical background on the operation and management of current and emerging agricultural production systems, technologies, and businesses. Students gain real-world experience by participating in community-based immersive learning projects or field studies.** AETB graduates can find rewarding careers in a variety of agricultural, environmental, and industrial businesses. Technologists focus on managing, operating, and troubleshooting technology systems (rather than engineering design) by applying their knowledge of technology and business applications. This hands-on curriculum teaches students to manage equipment and machinery, biological processes, computers, and other technologies to create and maintain current and new production systems. A Bachelor of Science degree is offered by the Agricultural and Biological Engineering Department through the College of Agriculture and Life Sciences. Students may pursue one of four concentrations within AETB: **1) Precision Agriculture (PRAG), 2) Natural Resources and Environmental Management (NREM), 3) Enterprise Management (EMGT) and, 4) Surveying and Geomatics (SGEO).** The concentrations are achieved by **completing 36-38 hours of restricted and free electives. PRAG, NREM, and SGEO concentrations provide students a pathway to complete the requirements of the Geospatial and Remote Sensing Minor.** **Students are required to earn a "C" or better in all AETB major core courses.** Students who plan to attend a community college before transferring to Mississippi State University are strongly encouraged to contact the AETB Undergraduate Coordinator regarding their proposed community college schedule and transfer requirements. **A maximum of 12 transfer hours of technical credit from a community college can be**

		applied toward degree requirements. Concentration descriptions and employment opportunities are discussed below.	
CURRENT CURRICULUM OUTLINE	Required Hours	**PROPOSED CURRICULUM OUTLINE**	Required Hours
English (Ex: EN 1103 English Comp I): EN 1103 En Composition I OR EN 1163 Accelerated Comp I EN 1113 En Composition II OR EN 1173 Accelerated Comp II	6	English (Ex: EN 1103 English Comp I): EN 1103 En Composition I OR EN 1163 Accelerated Comp I EN 1113 En Composition II OR EN 1173 Accelerated Comp 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): PH 1113 Gen Physics I PH 1123 Gen Physics II	6	Natural Sciences (2 labs required from Gen Ed): PH 1113 Gen Physics I PH 1123 GenPhysics II **OR** **PH 2213 Physics I** **PH 2223 Physics II**	6
Extra Science (if appropriate) See major/concentration		Extra Science (if appropriate)	
Math (General Education): MA 1713 Calculus I *BQA 2113 Bus Stat Methods I OR* *MA 2113 Intro to Stats OR* *ST 2113 Intro to Stats*	6	Math (General Education): **MA 1323 Trigonometry (Min grade = C)** **MA 1613 Cal Bus & Life Sc I** **OR** MA 1713 Calculus I	6
Humanities (General Education): Any Gen Ed course	6	Humanities (General Education): Any Gen Ed course	6
Social/Behavioral Sciences (Gen Ed): AEC 2713 Intro to Food & Resource Econ OR EC 2123 Prin Of Microecon Any Gen Ed course	6	Social/Behavioral Sciences (Gen Ed): AEC 2713 Intro to Food & Resource Econ OR EC 2123 Prin Of Microecon Any Gen Ed course	3 3
General Education Core	33	General Education Core	33
Major Core Courses ABE 1073 Technology Design I *ABE 1083 Technology Design II* ABE 1863 Eng Tech In Ag ABE 2873 Land Surveying ABE 3513 GPS/GIS - AG. & ENG ABE 4263 Soil and Water Management ABE 4383 Bldg Const ABE 4473 Electrical Application	25	**AETB-Major Core Courses** **Minimum Grade: C** ABE 1073 Technology Design I ABE 1863 Eng Tech In Ag ABE 2873 Land Surveying ABE 3513 GPS/GIS - AG. & ENG ABE 4263 Soil and Water Management ABE 4383 Bldg Const ABE 4473 Electrical Application	22

ABE 4961 Seminar		ABE 4961 Seminar	
Science Courses CH 1043 Survey of Chemistry I CH 1051 Experimental Chem CH 1053 Survey of Chemistry II	7	**AETB-Science Courses** CH 1043 Survey of Chemistry I CH 1051 Experimental Chem CH 1053 Survey of Chemistry II **OR** **CH 1213 Chemistry I** **CH 1211 Invst Chemistry I** **CH 1223 Chemistry II** **CH 1221 Invst Chemistry II**	7
Mathematics or Restricted Electives ** *MA 1313 College Algebra* *MA 1323 Trigonometry*	6		
		AETB-Statistics Requirement: **BQA 2113 Bus Stat Methods I OR** **MA 2113 Intro to Stats OR** **ST 2113 Intro to Stats**	3
Business Courses ACC 2013 Prin Financial Acct ACC 2023 Prin Managerial Acct AEC 3133 Introductory Agribus Mgt BL 2413 Legal Envt Bus MGT 3513 Intro Human Res Mgt	15	**AETB-Business Courses** ACC 2013 Prin Financial Acct ACC 2023 Prin Managerial Acct AEC 3133 Introductory Agribus Mgt BL 2413 Legal Envt Bus MGT 3513 Intro Human Res Mgt	15
Oral Communication Requirement CO 1003 Fund Of Public Speak Or CO 1013 Intro to Communication	3	**AETB-Oral Communication Requirement** CO 1003 Fund Of Public Speak OR CO 1013 Intro to Communication	3
Writing Requirement *AIS 3203 Intro to Tech Writing* *Computer Literacy Requirement* *Satisfied by successful completion of ABE 1073, ABE 1083, ABE 1863, and ABE 3513*	3	**AETB-Writing Requirement** **AELC 3203 Prof Writing ANR Human Sci**	3
AETB Core	59	**AETB Core**	**53**
The Precision Agriculture (PRAG) concentration is appropriate for students interested in developing skills in global positioning systems (GPS), geographical information systems (GIS), remote sensing, and digital mapping technologies. A few career paths for PRAG Technologists		**The Precision Agriculture (PRAG) concentration provides students the background and technical skills in current and emerging technologies in decision-based agricultural planning and implementation. Technologies include communication networks, Unmanned Aircraft Systems (UAS), Artificial Intelligence (AI), sensors, robotics and other advanced**	

include: Food/Fiber Production (Farming), Precision Agriculture Specialist, Mapping/GIS Specialist, Crop Consulting, and Equipment Test Engineer.		**machinery and often draws on the principles of the Internet of Things.**	
Precision Agriculture (PRAG) ADS 1113 Animal Science and ADS 1121 Animal Science Laboratory Or BIO 1134 Biology I PSS 1313 Plant Science Or BIO 1023 Plants and Humans GR 2313 Maps Remote GR 4303 Principles of GIS PSS 3303 Soils PSS 3301 Soils Lab PSS 4373 Geospatial Agn Mgt PRAG Electives: Choose 12 hours ** ABE 2173 Agri Off-Road Machines ABE 4163 Machinery Mgt Agro-Ecosystems AEC 4413 Public Problems of Ag *FO 4451 Remote Sensing Lab* *FO 4452 Remote Sensing Appl* GR 4313 Advanced GIS GR 4323 Cartographic Sciences GR 4333 Remote Sensing Phys Env PSS 4123 Grain Crops PSS 4133 Fiber&Oilseed Crops	32	Precision Agriculture (PRAG) **Required Concentration Courses** ADS 1113 Animal Science and ADS 1121 Animal Science Laboratory Or BIO 1134 Biology I PSS 1313 Plant Science Or BIO 1023 Plants and Humans GR 4303 Principles of GIS PSS 3303 Soils PSS 3301 Soils Lab **PRAG Restricted Electives:** **Choose 9 hours** **ABE 1083 Technology Design II** ABE 2173 Agri Off-Road Machines ABE 4163 Machinery Mgt Agro-Ecosystems **ABE/PSS 2543 Precision Agriculture I** PSS 4373 Geospatial Agn Mgt PRAG Electives: Choose 15 hours **ABE 4483 Intro to Remote Sensing** **ABE 4800 Undergraduate Research** **ABE/PSS 4543 Precision Agriculture II** AEC 4413 Public Problems of Ag **FO 4313 Spatial Tech Nat Res Mgt** **FO 4453 Remote Sensing Appl** GR 2313 Maps Remote **GR 3303 Survey Geospatial Tech** GR 4313 Advanced GIS GR 4323 Cartographic Sciences GR 4333 Remote Sensing Phys Env GR 4333 Adv Remote Sensing/Geosci **PSS 3133 Intro Weed Science** **PSS 4103 Forage Pasture** PSS 4123 Grain Crops PSS 4133 Fiber&Oilseed Crops **PSS 4383 Agriculture Remote Sensing I** **PSS 4393 Agriculture Remote Sensing II** **PSS 4483 Intro to Remote Sensing** **PSS 4733 Ag Flight Technologies I** **PSS 4743 Ag Flight Technologies II** **PSS 4813 Herbicide Technology**	14 9 15
Concentration Hours	32	Concentration Hours	38
Total Hours	124	Total Hours	124

The Natural Resource & Environmental Management (NREM) concentration is appropriate for students interested in developing skills to manage and solve problems in systems that impact our natural resources and the environment. Skill sets include knowledge in geology, hydrogeology, GIS, water quality, watershed management, and natural resource conservation. A few career paths for NREM Technologists include: Firm Environmental Manager, Conservation District Manager, Mapping/GIS Specialist, Nonpoint Source Pollution Specialist, and Watershed Planner. Employment opportunities include private and public firms with environmental issues, soil and water conservation districts, as well as national, state, county, or city highway and urban planning departments. National government agencies include the USDA NRCS, US EPA, US Army Corps of Engineers, US Geological Survey, US Forest Service, and US Bureau of Land Management to name a few.		**The primary emphases of the Natural Resources and Environmental Management concentration are on resource conservation, best management practices, and environmental impacts of human activities on urban and agricultural landscapes.**	
Natural Resources and Environmental Management (NREM) ADS 1113 Animal Science and ADS 1121 Animal Science Laboratory Or BIO 1134 Biology I PSS 1313 Plant Science Or BIO 1023 Plants and Humans GR 2313 Maps Remote GR 4303 Principles of GIS PSS 3303 Soils PSS 3301 Soils Lab NREM Electives: Choose 15 hours ** AEC 3233 Intro to Env Econ & Policy *AEC 4223 Applied Quant Anal in Ag* AEC 4233 Environmental Economics BIO 2503 Environmental Qual BL 4263 Environmental Law FO 4313 Spatial Tech Nat Res Mgt FO 4353 Natural Resource Law FO 4463 Forest Hydro & Water Mgt	32	Natural Resources and Environmental Management (NREM) **Required Concentration Courses** ADS 1113 Animal Science and ADS 1121 Animal Science Laboratory Or BIO 1134 Biology I PSS 1313 Plant Science Or BIO 1023 Plants and Humans GR 4303 Principles of GIS PSS 3303 Soils PSS 3301 Soils Lab **NREM Restricted Electives:** **Choose 9 hours** **ABE 1083 Technology Design II** **ABE 4313 Bio Trtmnt of NPS Poll** **ABE 4803 Biosyst Simulation** GG 3613 Water Resources GR 3113 Conserv Of Nat Res PSS 4333 Soil Conservation PSS 4373 Geospatial Agn Mgt NREM Electives: Choose 15 hours **ABE 4483 Intro to Remote Sensing** **ABE 4800 Undergraduate Research** **AEC 3233 Intro to Env Econ & Policy** AEC 4233 Environmental Economics AEC 4243 Natural Resource Econ BIO 2503 Environmental Qual BL 4263 Environmental Law FO 4313 Spatial Tech Nat Res Mgt	14 9 15

GG 3133 Intro Environ Geol GG 3613 Water Resources GG 4613 Phys Hydrogeology GR 3113 Conserv Of Nat Res PSS 4333 Soil Conservation PSS 4373 Geospatial Agn Mgt		FO 4353 Natural Resource Law FO 4463 Forest Hydro & Water Mgt **FO 4483 Forest Soils** **FO 4513 Forestry Conservation Educ** GG 3133 Intro Environ Geology GG 4613 Phys Hydrogeology GR 2313 Maps Remote GR 3113 Conserv Of Nat Res GR 4313 Advanced GIS GR 4333 Remote Sensing Phys Env **PSS 4383 Agriculture Remote Sensing I** **PSS 4393 Agriculture Remote Sensing II** **PSS 4483 Intro to Remote Sensing** **PSS 4733 Ag Flight Technologies I** **PSS 4743 Ag Flight Technologies II**	
Concentration Hours	32	Concentration Hours	38
Total Hours	124	Total Hours	124
The Enterprise Management (EMGT) concentration is appropriate for students interested in acquiring the skills to manage and solve problems for a wide variety of systems. Students will get a broad foundation in the management of machine systems, electricity, soil and water conservation, grain, precision agriculture, biorenewables, and animal production systems. A few career paths for EMGT Technologists include: Banking & Ag Lending, Crop Consulting, and Agricultural Technical Sales. Employment opportunities include small and large agricultural production operations, banking and farm credit lenders, Agri-chemical and machinery sales and consulting to name a few.		**The Enterprise Management (EMGT) concentration is designed to provide the students the academic and technical training to apply engineering technology in an agricultural enterprise setting.**	
Enterprise Management (EMGT) ADS 1113 Animal Science and ADS 1121 Animal Science Laboratory Or BIO 1134 Biology I PSS 1313 Plant Science Or BIO 1023 Plants and Humans PSS 3303 Soils PSS 3301 Soils Lab	32	Enterprise Management (EMGT) **Required Concentration Courses** ADS 1113 Animal Science and ADS 1121 Animal Science Laboratory Or BIO 1134 Biology I PSS 1313 Plant Science Or BIO 1023 Plants and Humans **GR 4303 Principles of GIS** PSS 3303 Soils PSS 3301 Soils Lab **EMGT Restricted Electives** **Choose 9 hours** **ABE 1083 Technology Design II** ABE 2173 Agri Off-Road Machines ABE 4163 Machinery Mgt Agro-Ecosystems **AEC 3113 Intro To Quant Econ** **EC 2113 Prin Of Macroecon**	14 9

EMGT Electives: Choose 21 hours ** ABE 2173 Agri Off-Road Machines ABE 4163 Machinery Mgt Agro-Ecosystems ADS 4323 Beef Cattle Science *AEC 3213 International Trade in Ag* AEC 3233 Intro to Env Econ & Policy AEC 4113 Agribusiness Firm Mgt AEC 4413 Public Problems of Ag *AEC 4523 Farm Financial Mgt* PO 4333 Broiler Production PSS 4103 Forage Pasture PSS 4123 Grain Crops PSS 4133 Fiber&Oilseed Crops		**MGT 3323 Entrepreneurship** EMGT Electives: Choose 15 hours **ABE 4483 Intro to Remote Sensing** **ABE 4800 Undergraduate Research** ADS 4323 Beef Cattle Science **AEC 2223 Sustainability Economics** AEC 3233 Intro to Env Econ & Policy AEC 4113 Agribusiness Firm Mgt **AEC 4213 Ag Finance I** **AEC 4343 Adv Farm Management** AEC 4413 Public Problems of Ag **AEC 4623 Gbl Mkg of Ag Prod** **BL 4243 Entrepreneur Law** **MGT 3113 Principles of Management** **MGT 3823 Responsible Leadership** PO 4334 Broiler Production PSS 4103 Forage Pasture PSS 4123 Grain Crops PSS 4133 Fiber&Oilseed Crops	15
Concentration Hours	32	Concentration Hours	38
Total Hours	124	Total Hours	124
The Surveying & Geomatics (SGEO) concentration provides students with the necessary prerequisites to begin a three-step process (academic training, supervised surveying experience, testing) to become a registered Land Surveyor in Mississippi. A few career paths for SGEO Technologists include: Boundary/Construction Surveyor, Hydrographic Surveyor, Mining Surveyor, Mapping/GIS Specialist, and Image Analyst. Employment opportunities include large and small engineering, architectural, and surveying firms as well as national, state, county, or city highway and urban planning departments. National government agencies include the U.S. Army Corp of Engineers, U.S. Geological Survey, U.S. Forest Service, and U.S. Bureau of Land Management to name a few.		**The Surveying and Geomatics (SGEO) concentration provides the students the knowledge and training in property/boundary survey, topographic and construction survey, and control survey. This concentration is designed to provide the necessary prerequisites to begin a three-step process (academic training, supervised surveying experience, testing) to become a registered land surveyor.**	
Surveying/Geomatics (SGEO) CE 2213 Surveying CE 4233 Control Surveys CE 4243 Land Surveys	30	Surveying/Geomatics (SGEO) **Required Concentration Courses** **MA 1313 Algebra** CE 2213 Surveying CE 4233 Control Surveys CE 4243 Land Surveys GR 4303 Principles of GIS	15

SGEO Electives: Choose 21 hours ** BL 4243 Entrepreneur Law BL 4333 Real Estate Law FO 4313 Spatial Tech Nat Res Mgt *FO 4451 Remote Sensing Lab* *FO 4452 Remote Sensing Appl* GR 2313 Maps Remote GR 3303 Survey Geospatial Tech GR 4303 Principles of GIS GR 4313 Advanced GIS GR 4323 Cartographic Sciences GR 4333 Remote Sensing Phys Env MGT 3323 Entrepreneurship		**SGEO Restricted Elective:** **ABE 1083 Technology Design II** **OR** **EG 1143 Graphic Comm** SGEO Electives: Choose 18 hours **ABE 4483 Intro to Remote Sensing** **ABE 4800 Undergraduate Research** BL 4243 Entrepreneur Law BL 4333 Real Estate Law FO 4313 Spatial Tech Nat Res Mgt **FO 4453 Remote Sensing Appl** GR 2313 Maps Remote GR 3303 Survey Geospatial Tech GR 4303 Principles of GIS GR 4313 Advanced GIS GR 4323 Cartographic Sciences GR 4333 Remote Sensing Phys Env **GR 4363 GIS Programming** MGT 3323 Entrepreneurship **REF 3333 Principles of Real Estate** **PSS 4383 Agriculture Remote Sensing I** **PSS 4393 Agriculture Remote Sensing II** **PSS 4483 Intro to Remote Sensing** **PSS 4733 Ag Flight Technologies I** **PSS 4743 Ag Flight Technologies II**	3 18
Concentration Hours	30	Concentration Hours	36
Total Hours	122	Total Hours	122

MISSISSIPPI STATE UNIVERSITY.

DEPARTMENT OF AGRICULTURAL AND BIOLOGICAL ENGINEERING
P. O. Box 9632
Mississippi State, MS 39762
P. 662.325.3282
abe.msstate.edu

April 12, 2022

Dr. Andy Perkins
Chair
University Committee on Courses and Curricula
Mailstop: 9702
Mississippi State, MS 39762

Dear Dr. Perkins,

The Department of Agricultural and Biological Engineering would like to submit the curriculum revisions for the Agricultural Engineering Technology and Business (AETB) undergraduate program. We are proposing the following modifications to better align the curriculum with current and emerging technologies and standards as well as the needs of the industry:

1. Removed MA 1313 (Algebra) requirement for three AETB concentrations: Precision Agriculture (PRAG), Natural Resources and Environmental Management (NREM), and Enterprise Management (EMGT).
2. Listed MA 1313 as a required course in the Surveying/Geomatics concentration. The MS Board of Professional Licensed Surveyors requires that surveying graduates must have this course on their transcripts to take the State's Fundamentals of Surveying exam.
3. Moved GR 2313 (Maps Remote) from a required concentration course to an elective.
4. Updated the list of required concentration courses and electives to address industry needs.
5. Added CH 1211, CH 1213, CH 1221, CH 1223, PH 2213, and PH 2223 to the list of acceptable chemistry and physics courses.

The following members of the ABE faculty have supported to approve the curriculum modifications.

Sincerely,

J. Alex Thomasson

Digitally signed by J. Alex Thomasson
Date: 2022.04.15 07:45:21 -05'00'

J. Alex Thomasson, Ph.D.
Professor, Department Head, and
William B. and Sherry Berry Endowed Chair

MISSISSIPPI STATE UNIVERSITY.

DEPARTMENT OF AGRICULTURAL AND BIOLOGICAL ENGINEERING
P. O. Box 9632
Mississippi State, MS 39762
P. 662.325.3282
abe.msstate.edu

Joel O. Paz, Ph.D. AETB Undergraduate Coordinator	Digitally signed by Joel O. Paz Date: 2022.04.12 16:26:10 -05'00'
Daniel Chesser, Ph.D.	Gary D. Chesser, Jr. Digitally signed by Gary D. Chesser, Jr. Date: 2022.04.12 16:47:16 -05'00'
Steven H. Elder, Ph.D.	Steve Elder Digitally signed by Steve Elder Date: 2022.04.12 17:17:48 -05'00'
John Wes Lowe, Ph.D.	John Wesley Lowe Digitally signed by John Wesley Lowe Date: 2022.04.13 13:19:47 -05'00'
Yuzhen Lu, Ph.D.	Yuzhen Lu Digitally signed by Yuzhen Lu Date: 2022.04.13 16:44:01 -05'00'
Vitor Souza Martins, Ph.D.	Vitor Martins Digitally signed by Vitor Souza Martins Date: 2022-04-13 19:22:19
Prem Parajuli, Ph.D.	Prem Parajuli Digitally signed by Prem Parajuli Date: 2022.04.13 20:34:42 -05'00'
Lauren B. Priddy, Ph.D.	Lauren Priddy Digitally signed by Lauren Priddy Date: 2022.04.13 21:36:57 -05'00'
C. LaShan Simpson, Ph.D.	Chartrisa LaShan Simpson Digitally signed by Chartrisa LaShan Simpson Date: 2022.04.13 23:00:44 -05'00'
Amirtahà Taebi, Ph.D.	Digitally signed by Amirtaha Taebi Date: 2022.04.14 09:12:49 -05'00'
Mary Love M. Tagert, Ph.D.	Mary Love Tagert Digitally signed by Mary Love Tagert DN: cn=Mary Love Tagert, o, ou=ABE, email=mtagert@abe.msstate.edu, c=US Date: 2022.04.14 14:01:39 -05'00'
S.D. Filip To, Ph.D.	FilpTo Digitally signed by FilpTo Date: 2022.04.14 14:09:11 -05'00'
David Van Den Heever, Ph.D.	Digitally signed by David Vandenheever Date: 2022.04.14 15:27:02 -05'00'
Nuwan Wijewardane, Ph.D.	Nuwan K Wijewardane Digitally signed by Nuwan K Wijewardane Date: 2022.04.14 15:30:43 -05'00'
Fei Yu, Ph.D.	Fei Yu Digitally signed by Fei Yu Date: 2022.04.14 20:11:57 -05'00'
Xin Zhang, Ph.D.	Xin Zhang Digitally signed by Xin Zhang Date: 2022.04.14 20:16:37 -05'00'

MISSISSIPPI STATE UNIVERSITY

COLLEGE OF AGRICULTURE & LIFE SCIENCES
Department of Plant and Soil Sciences

117 Dorman Hall, Box 9555
32 Creelman Street
Mississippi State, MS 39762

P. 662.325.2311
F. 662.325.8742
www.pss.msstate.edu

12 April 2022

Joel O. Paz, Ph.D.
Department of Agricultural and Biological Engineering
Box 9632
Mississippi State, MS 39762

Dear Dr. Paz:

The PSS Courses and Curriculum Committee discussed the proposed AETB curriculum modification which may affect enrollment in several PSS courses. The committee voiced no objections to the following proposed use of PSS courses:

AETB has four concentrations: Precision Agriculture (PRAG), Enterprise Management (EMGT), Natural Resources & Environmental Management (NREM), and Surveying/Geomatics (SGEO). The plan as it relates to PSS courses:

Included in the current AETB curriculum and will be retained in the proposed curriculum modifications:

PSS 4103 Forage Pasture
PSS 4123 Grain Crops
PSS 4133 Fiber & Oilseed Crops

To be added as a required AETB-PRAG concentration course:
ABE/PSS Precision Agriculture I

To be added as electives to the proposed AETB curriculum modifications:
ABE/PSS Precision Agriculture II – for PRAG
PSS 3133 Intro Weed Science – for PRAG
PSS 4383 Agriculture Remote Sensing I – for PRAG, NREM, SGEO
PSS 4393 Agriculture Remote Sensing II – for PRAG, NREM, SGEO
PSS 4483 Intro to Remote Sensing (same as ECE 4424 and ABE 4483) – for PRAG, NREM, SGEO
PSS 4733 Ag Flight Technologies I – for PRAG, NREM, SGEO
PSS 4743 Ag Flight Technologies II – for PRAG, NREM, SGEO
PSS 4813 Herbicide Technology – for PRAG

The PSS Courses and Curriculum Committee fully supports the inclusion of these courses in the AETB curricula.

Sincerely,

Richard L Harkess

Richard L. Harkess, Professor
PSS Courses and Curriculum Committee, chair

Darrin Dodds

Darrin Dodds,
Department Head

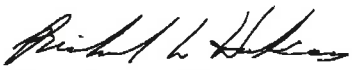
PSS Courses and Curriculum Committee

Michael Cox | William Kingery | Fred Musser

Michael Cox | William Kingery | Fred Musser

Cole Etheredge | Jagman Dhillon | Barry Stewart

Cole Etheredge | Jagman Dhillon | Barry Stewart

Signature: 

Email: rlh18@msstate.edu

Signature: Darrin Dodds
Darrin Dodds (Apr 11, 2022 16:13 CDT)

Email: dmd76@msstate.edu

Signature: Michael Cox
Michael Cox (Apr 11, 2022 16:54 CDT)

Email: msc15@msstate.edu

Signature: William Kingery
William Kingery (Apr 11, 2022 17:28 CDT)

Email: wlk2@msstate.edu

Signature: Fred Musser
Fred Musser (Apr 12, 2022 09:14 CDT)

Email: fm61@msstate.edu

Signature: Coleman Etheredge
Coleman Etheredge (Apr 12, 2022 09:15 CDT)

Email: cle248@msstate.edu

Signature: Jagman Dhillon
Jagman Dhillon (Apr 12, 2022 09:16 CDT)

Email: jsd369@msstate.edu

Signature: Barry Stewart
Barry Stewart (Apr 12, 2022 11:02 CDT)

Email: brs40@msstate.edu

Support Letter for AETB curriculum modification spring 2022

Final Audit Report 2022-04-12

Created:	2022-04-11
By:	Richard Harkess (rharkess@pss.msstate.edu)
Status:	Signed
Transaction ID:	CBJCHBCAABAAvXGhACPFobjBGjUOS2Xt7A97O74grE6p

"Support Letter for AETB curriculum modification spring 2022" History

Document created by Richard Harkess (rharkess@pss.msstate.edu)
2022-04-11 - 9:04:05 PM GMT- IP address: 130.18.201.102

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Document e-signed by Jagman Dhillon (jsd369@msstate.edu)
Signature Date: 2022-04-12 - 2:16:04 PM GMT - Time Source: server- IP address: 130.18.200.222

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2022-04-12 - 2:27:18 PM GMT- IP address: 107.77.199.33

Document e-signed by Barry Stewart (brs40@msstate.edu)
Signature Date: 2022-04-12 - 4:02:49 PM GMT - Time Source: server- IP address: 130.18.201.49

Agreement completed.
2022-04-12 - 4:02:49 PM GMT

MISSISSIPPI STATE UNIVERSITY

Management & Information Systems Department
College of Business

P.O. Box 9581
Mississippi State, MS 39762
P. 662.325.3928

To: University Committee on Courses and Curricula

From: Head, Management & Information Systems Department
Starkville Campus

Date: April 14, 2022

This letter is to express the support of the Department of Management & Information Systems (MIS) for the inclusion of MGT 3113: Principles of management and MGT 3823: Responsible Leadership as options in the curriculum for Industrial Technology students subject to the approval of their advisor.

Thank you,

Laura E. Marler

MISSISSIPPI STATE UNIVERSITY

COLLEGE OF BUSINESS
Department of Finance and Economics

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40 Old Main-312 McCool Hall
Mississippi State, MS 39762

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April 13, 2022

Dr. Joel Paz
Professor and AETB Undergraduate Coordinator
Engineering Technology Graduate Coordinator
Department of Agricultural and Biological Engineering
Mississippi State University
Box 9632
Mississippi State, MS 39762

Dear Dr. Paz:

I am writing to express my support of the proposed Agricultural Engineering Technology and Business (AETB) program adding EC 2113 Principles of Macroeconomics to the list of AETB Enterprise Management concentration restricted electives. Our current capacity can absorb the predicted number of students who might choose EC 2113 as an elective.

If there are any questions or if I can be of any additional support, please let me know.

Sincerely,

M. Kathleen Thomas

M. Kathleen Thomas
Department Head of Finance and Economics
Professor of Economics and Drew Allen Fellow
Mississippi State University
662-325-2561

MISSISSIPPI STATE UNIVERSITY

Department of Agricultural Economics
P.O. Box 5187
Lloyd-Ricks-Watson Building
Mississippi State, MS 39762
P. 662.325.2750
F. 662.325.8777

http://www.agecon.msstate.edu

TO: Joel Paz

FROM: Ardian Harri, Professor and Interim Department Head

DATE: April 11, 2022

RE: Department of Agricultural Economics support for proposed AETB program of study changes

The Department of Agricultural Economics supports the proposed modification to the AETB program of study to add AEC 2223 and AEC 3113 to the list of approved AEC electives. Please be aware that AEC 2223 will be offered every other year, beginning with its offering in Fall 2022.

Please make sure students are aware that they must satisfy necessary prerequisites prior to enrolling in AEC 3113 (and other upper-level AEC courses listed).

Also, the list of AEC courses is dated; we suggest some updates:

Add AEC 4623; AEC 4213; AEC 4343.

Delete AEC 3213; AEC 4523.

Sincerely,

Ardian Harri

Ardian Harri

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: A&S **Department:** Communication

Contact Person: Wendy Roussin **Mail Stop:** 9574 **E-mail:** wkr1@msstate.edu
Nature of Change: Modification **Date Initiated:** 01/14/2022 **Effective Date:** Fall 2022

Current Degree Program Name:

Major:	Concentrations:
Communication	Print and Digital Journalism
	Broadcast and Digital Journalism

New Degree Program Name:

Major:	Concentrations:
No Change	No Change

Summary of Proposed Changes:

- Changing the Name of CO 4713 from Digital Communication II to CO 4713 Multimedia Journalism and updating the pre-requisites
- Changing CO 4423 Advanced Photographic Communication from an elective to a required course for the Print and Digital Journalism concentration
- Adding a camera requirement for the Broadcast and Digital Journalism concentration, starting with the CO 3333 Advanced TV production class (similar to the existing camera requirement for CO 3403 Photographic Communication).

Approved:	Date:
Department Head	2/18/22
Chair, College or School Curriculum Committee	4/4/22
Dean of College or School	4/5/22
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 Arts Major: Communication Concentrations: Print and Digital Journalism, Broadcast and Digital Journalism	Degree: Bachelor of Arts Major: Communication Concentrations: Print and Digital Journalism, Broadcast and Digital Journalism
Computer and Camera Requirements The Department of Communication requires incoming B.A. Communication majors to purchase certain technology and equipment necessary for production and presentation of projects within departmental courses. All incoming students are required to purchase a personal laptop computer and software. Each concentration in the Department provides specific guidelines for hardware and software and a suggested timetable for purchases. The required computer and software must be selected from an approved departmental list of minimum hardware and software requirements available on the Department of Communication web site. Financial aid that includes this requirement may be available by contacting the MSU Student Financial Aid and Scholarship office. Additionally, upon enrollment in *CO 3403 Photographic Communication*, students will be required to purchase a digital single-lens reflex (dSLR) camera. The required camera must be selected from an approved departmental list of minimum specifications. The approved list is available on the Department of Communication web site.	**Computer and Camera Requirements** The Department of Communication requires incoming B.A. Communication majors to purchase certain technology and equipment necessary for production and presentation of projects within departmental courses. All incoming students are required to purchase a personal laptop computer and software. Each concentration in the Department provides specific guidelines for hardware and software and a suggested timetable for purchases. The required computer and software must be selected from an approved departmental list of minimum hardware and software requirements available on the Department of Communication web site. Financial aid that includes this requirement may be available by contacting the MSU Student Financial Aid and Scholarship office. Additionally, upon enrollment in **CO 3403 Photographic Communication or CO 3333 Advanced TV Production** students will be required to purchase a digital single-lens reflex (dSLR) camera. The required camera must be selected from an approved departmental list of minimum specifications. The approved list is available on the Department of Communication web site.

CURRENT CURRICULUM OUTLINE	Required Hours	PROPOSED CURRICULUM OUTLINE	Required Hours
English Composition		English Composition	
EN 1103 or EN 1163 English Composition I or Accelerated Composition I	3	EN 1103 or EN 1163 English Composition I or Accelerated Composition I	3
EN 1113 or EN 1173 English Composition II or Accelerated Composition II	3	EN 1113 or EN 1173 English Composition II or Accelerated Composition II	3
Fine Arts		Fine Arts	
CO 1503 Introduction to the Theatre (required unless student has completed acceptable Fine Arts other than Theatre course prior to declaring CO major)	3	CO 1503 Introduction to the Theatre (required unless student has completed acceptable Fine Arts other than Theatre course prior to declaring CO major)	3
Foreign Languages		Foreign Languages	
3 semesters - one Foreign Language (see advisor)	9	3 semesters - one Foreign Language (see advisor)	9
Natural Sciences	3-4	Natural Sciences	3-4
Physical Science w/Lab [2]	3-4	Physical Science w/Lab [2]	3-4
Life Science w/Lab [3]		Life Science w/Lab [3]	
Natural Science Elective	3-4	Natural Science Elective	3-4
Math		Math	
MA 1313 College Algebra	3	MA 1313 College Algebra	3
See General Education courses	3	See General Education courses	3
Humanities		Humanities	
English Literature - see General Education courses	3	English Literature - see General Education courses	3
History - see General Education courses	3	History - see General Education courses	3
Philosophy - see General Education courses	3	Philosophy - see General Education courses	3
Humanities Elective [1]	9	Humanities Elective [1]	9
Social Sciences [4]		Social Sciences [4]	
PSY 1013 General Psychology	3	PSY 1013 General Psychology	3
SO 1003 Introduction to Sociology	3	SO 1003 Introduction to Sociology	3
GR 1123 Introduction to World Geography	3	GR 1123 Introduction to World Geography	3
CO 1403 Introduction to the Mass Media [5] or CO 1223 Introduction to Communication Theory	3	CO 1403 Introduction to the Mass Media [5] or CO 1223 Introduction to Communication Theory	3
Electives	6	Electives	6

Major Core Student should check for prerequisites for all courses. Consult advisor or course descriptions in catalog.		Major Core Student should check for prerequisites for all courses. Consult advisor or course descriptions in catalog.	
CO 1003 Fundamentals of Public Speaking [6]	3	CO 1003 Fundamentals of Public Speaking [6]	3
CO 1223 Introduction to Communication Theory [5] or CO 1403 Introduction to the Mass Media	3	CO 1223 Introduction to Communication Theory [5] or CO 1403 Introduction to the Mass Media	3
Concentration Courses		Concentration Courses	
Print and Digital Journalism Concentration (JOUR)		Print and Digital Journalism Concentration (JOUR)	
CO 2333 Television Production	3	CO 2333 Television Production	3
CO 2413 Introduction to News Writing and Reporting	3	CO 2413 Introduction to News Writing and Reporting	3
CO 3403 Photographic Communication	3	CO 3403 Photographic Communication	3
CO 3423 Feature Writing	3	CO 3423 Feature Writing	3
CO 3433 Editing and Design	3	CO 3433 Editing and Design	3
CO 3443 Advanced News Writing and Reporting	3	CO 3443 Advanced News Writing and Reporting	3
CO 3713 Digital Communication	3	CO 3713 Digital Communication	3
CO 4313 Mass Media Law	3	CO 4313 Mass Media Law	3
CO 4403 Journalism Ethics	3	CO 4403 Journalism Ethics	3
CO 4494 Bulldog Online Newsroom	3	**CO 4423 Advanced Photographic Communication**	**3**
CO 4713 Digital Communication II	*3*	CO 4494 Bulldog Online Newsroom	3
Upper Division CO Electives - see advisor	*3*	**CO 4713 Multimedia Journalism**	**3**
General Electives [1]	9-12	General Electives [1]	9-12
Broadcast and Digital Journalism Concentration (BCST)		Broadcast and Digital Journalism Concentration (BCST)	
CO 2333 Television Production	3	CO 2333 Television Production	3
CO 2413 Introduction to News Writing and Reporting	3	CO 2413 Introduction to News Writing and Reporting	3
CO 3313 News Writing for the Electronic Media	3	CO 3313 News Writing for the Electronic Media	3
	3		3

CO 3333 Advanced Television Production	3	CO 3333 Advanced Television Production	3
CO 3403 Photographic Communication	3	CO 3403 Photographic Communication	3
CO 3713 Digital Communication	3	CO 3713 Digital Communication	3
CO 4313 Mass Media Law	3	CO 4313 Mass Media Law	3
CO 4343 Backpack Video Journalism	3	CO 4343 Backpack Video Journalism	3
CO 4394 Broadcast Capstone	3	CO 4394 Broadcast Capstone	3
CO 4403 Journalism Ethics	*3*	CO 4403 Journalism Ethics	**3**
CO 4713 Digital Communication II	3	**CO 4713 Multimedia Journalism**	3
Upper Division CO elective - see advisor	9-12	Upper Division CO elective - see advisor	9-12
General Electives [1]		General Electives [1]	
Total Hours	124	Total Hours	124

[1] Must be selected from 2 different areas. Not required to be selected from core listing; may have to be taken at Upper Division level to meet 31 hours A&S UD requirement.

[2] CH, GG, GR, or PH; see General Education courses.

[3] BIO, EPP, or PO; see General Education courses.

[4] Must be from 2 different areas and must cross 4 disciplines over the 18 hours. Not required to be selected from core listing; may have to be taken at Upper Division level to meet 31 hours A&S UD requirement. Only one Economics allowed.

[5] CO 1223 or CO 1403 will count as 3 additional Social Science hours to reach 9 hour elective total. The course not counted as a Social Science will be required additionally in the major.

[6] CO 1003 is required unless student has completed CO 1013 prior to declaring CO major. This course satisfies the Oral Communication Requirement. Students are not allowed to receive credit for both CO 1003 and CO 1013.

3. JUSTIFICATION AND LEARNING OUTCOMES

Questions to Address:

1. Will this program change meet local, state, regional, and national educational and cultural needs?

   See paragraph below

2. Will this program change result in duplication in the system?

   No

3. Will this program change/advance student diversity within the discipline?

   See paragraph below

4. Will this program change result in an increase in the potential placement of graduates in Mississippi, the Southeast, and the U.S.?

   See paragraph below

5. Will this program change result in an increase in the potential salaries of graduates in

Mississippi, the Southeast, and the U.S.?
See paragraph below

The changes in this proposal: updating the name of a course and its prerequisites to better reflect the content, adding an advanced photography class for Print and Digital Journalism students to improve visual communication skills, and requiring a camera for students in broadcasting courses starting with CO 3333 Advanced TV Production, are all designed to improve students' success and outcomes in the journalism and broadcasting fields. Student diversity will be advanced within the discipline due to the new camera requirement (which compliments the existing one for print and digital journalism students) because it guarantees 24/7 access to needed equipment for the discipline. All of these changes should enhance student success, thus making them more marketable in their respective fields and eligible for higher salaries.

4. SUPPORT
See the attached letter of support from the Department of Communication Curriculum Committee.

5. PROPOSED 4-LETTER ABBREVIATION
N/A

6. EFFECTIVE DATE
Fall 2022

MISSISSIPPI STATE UNIVERSITY

College of Arts & Sciences
Department of Communication

P.O. Box PF
216 President's Circle
Mississippi State, MS 39762

P. 662.325.3320
F. 662.325.3210
www.comm.msstate.edu

February 18, 2022

Dear Curriculum Committees:

The curriculum committee of the Department of Communication has met and approved the Degree Modification Proposal for the Print and Digital Journalism and Broadcast and Digital Journalism concentrations. The changes are : changing the name of CO 4713 from Digital Communication II to CO 4713 Multimedia Journalism and updating the pre-requisites, changing CO 4423 Advanced Photographic Communication from an elective to a required course for the Print and Digital Journalism concentration, and adding a camera requirement for the Broadcast and Digital Journalism concentration, starting with the CO 3333 Advanced TV production class (similar to the existing camera requirement for CO 3403 Photographic Communication).

Faculty Member	Approve	Faculty Member	Approve
Wendy Roussin, MFA *Associate Professor & Chair*	X	Matthew Webb, MFA *Assistant Clinical Professor*	X
Kevin William, PhD *Associate Professor*	X	Cheryl Chambers, MA *Instructor*	X
Melody Fisher, PhD *Associate Professor*	X	Chris Misun, MS *Instructor*	X
Holli Seitz, PhD *Assistant Professor*	X		

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: Arts & Sciences Department: English

Contact Person: Kelly Marsh Mail Stop: 9518 E-mail: kmarsh@english.msstate.edu

Nature of Change: program change Date Initiated: 11/23/21 Effective Date: Fall 2022

Current and New Degree Program Name: BA in English

Major: English Concentration: not applicable

Summary of Proposed Changes:

A. The structure of the requirements for the five 4000-level literature courses will change to create more flexibility for students and to allow for greater diversity and inclusion in course development.

B. The "English Vocational Elective" is being re-named "Fields of English Studies," and the requirement is being modified to allow students simply to take one of the department's upper-division courses in a discipline other than literature and literary theory.

C. Students may use EN 2203 as their English elective.

Approved: _____ Department Head	Date: 1/28/22
_____ Chair, College or School Curriculum Committee	2/10/22
_____ Dean of College or School	3/21/22
_____ 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 Arts Major: English	Degree: Bachelor of Arts Major: English
Major Advisors: Professor Daniel Punday (Head) Associate Professor Shalyn Claggett (M.A. program) Associate Professor Ginger Pizer (B.A. program) Office: 2000 Lee Hall The study of English not only gives students knowledge of language and literature but also helps to develop their ability to read perceptively, think critically, analyze problems, and write correctly and persuasively. For this reason, a major in English has traditionally been viewed as good training for careers in law, government, business, and publishing, as well as for careers in teaching and writing. The department offers an undergraduate major (B.A.); undergraduate minors in English, creative writing, film studies, and linguistics; a certificate in TESOL; and an M.A. The department also edits and publishes two distinguished journals. *Mississippi Quarterly* is a refereed scholarly journal dedicated to the life and culture of the American South, past and present. *Jabberwock Review* is a literary journal publishing stories, poems, and essays by writers across the country. Additionally, the department operates the university Writing Center to assist all MSU students with their writing. The Department of English awards several scholarships annually: the Howell H. and Elizabeth S. Gwin Scholarships to outstanding	Major Advisors: Professor Daniel Punday (Head) Associate Professor Shalyn Claggett (M.A. program) Associate Professor Ginger Pizer (B.A. program) Office: 2000 Lee Hall The study of English not only gives students knowledge of language and literature but also helps to develop their ability to read perceptively, think critically, analyze problems, and write correctly and persuasively. For this reason, a major in English has traditionally been viewed as good training for careers in law, government, business, and publishing, as well as for careers in teaching and writing. The department offers an undergraduate major (B.A.); undergraduate minors in English, creative writing, film studies, and linguistics; a certificate in TESOL; and an M.A. The department also edits and publishes two distinguished journals. *Mississippi Quarterly* is a refereed scholarly journal dedicated to the life and culture of the American South, past and present. *Jabberwock Review* is a literary journal publishing stories, poems, and essays by writers across the country. Additionally, the department operates the university Writing Center to assist all MSU students with their writing. The Department of English awards several scholarships annually: the Howell H. and Elizabeth S. Gwin Scholarships to outstanding

juniors or seniors majoring in English and to graduate students in English; the Helen W. Skelton Annual Scholarship and the Ann Pittman Andrews Memorial Scholarship to full-time English majors maintaining at least a 3.0 GPA and demonstrating good character, leadership and financial need; the William H. Magruder Scholarship to an upper-division or graduate English major; the Roger LeMoyne Dabbs Memorial Scholarship to an English or Communication major; and the Eugene Butler Creative Writing Scholarship to an undergraduate or graduate student. The Department of English sponsors the Xi Kappa Chapter of Sigma Tau Delta National English Honor Society; memberships are offered by invitation to scholastically qualified junior and senior undergraduate students and to second-year graduate students who are English majors. The Department of English also offers the Nolan Book Award competition for junior and senior English majors and sponsors several writing contests and awards.	juniors or seniors majoring in English and to graduate students in English; the Helen W. Skelton Annual Scholarship and the Ann Pittman Andrews Memorial Scholarship to full-time English majors maintaining at least a 3.0 GPA and demonstrating good character, leadership and financial need; the William H. Magruder Scholarship to an upper-division or graduate English major; the Roger LeMoyne Dabbs Memorial Scholarship to an English or Communication major; and the Eugene Butler Creative Writing Scholarship to an undergraduate or graduate student. The Department of English sponsors the Xi Kappa Chapter of Sigma Tau Delta National English Honor Society; memberships are offered by invitation to scholastically qualified junior and senior undergraduate students and to second-year graduate students who are English majors. The Department of English also offers the Nolan Book Award competition for junior and senior English majors and sponsors several writing contests and awards.
In addition to two semesters of freshman composition, which the department recommends be taken at the Accelerated or Honors level, English majors take four 2000-level literature surveys, EN 3414, and at least 21 additional hours of English electives, of which 15 hours must be 4000 level and taken in residence, distributed among *English, American, and World literature. EN 2203 does not count toward the requirements for the major.*	In addition to two semesters of freshman composition, which the department recommends be taken at the Accelerated or Honors level, English majors take four 2000-level literature surveys, EN 3414, and at least 21 additional hours of English electives, of which 15 hours must be 4000 level and taken in residence, distributed among **three categories: Literature and Culture: Periods and Figures; Literature and Culture: Cultural Geographies; and Theory, Genre, and Methods.**
English majors must attain a C or better in all English courses at the 2000 level or above in order for those courses to count toward the requirements of the major.	English majors must attain a C or better in all English courses at the 2000 level or above in order for those courses to count toward the requirements of the major.
Students seeking secondary-school teaching certification should consult with an English Education advisor.	Students seeking secondary-school teaching certification should consult with an English Education advisor.

English minors take at least 18 hours of English electives with a grade of C or better beyond completion of the freshman composition requirement of their major. Of these hours, at least six must be at the 4000 level; these must be completed in residence. No more than six hours may be linguistics classes, i.e., classes which count toward the linguistics minor. No more than two classes may be classes which count toward the minor in Film Studies. Students who are earning the Creative Writing minor must complete 12 hours of English classes in addition to the requirements for that minor in order to earn the English minor as well. Students pursuing the English minor should consult the English major advisor to plan a minor program which will complement their major studies and career interests.	English minors take at least 18 hours of English electives with a grade of C or better beyond completion of the freshman composition requirement of their major. Of these hours, at least six must be at the 4000 level; these must be completed in residence. No more than six hours may be linguistics classes, i.e., classes which count toward the linguistics minor. No more than two classes may be classes which count toward the minor in Film Studies. Students who are earning the Creative Writing minor must complete 12 hours of English classes in addition to the requirements for that minor in order to earn the English minor as well. Students pursuing the English minor should consult the English major advisor to plan a minor program which will complement their major studies and career interests.

CURRENT CURRICULUM OUTLINE	Required Hours
English Composition EN1103 English Composition I EN1113 English Composition II OR EN1173 Accelerated Composition II	6
Foreign Language 3 semesters in one foreign language	9
Fine Arts See A&S requirements	3
Natural Sciences 3-4 hours Physical Science w/Lab* 3-4 hours Biological Science w/Lab** 3-4 hours Natural Science Elective***	9-12
Math MA 1313 College Algebra 3 hours above College Algebra	6
Humanities 3 hours Philosophy Elective 6 hours History – see A&S requirements	9
Social Sciences**** 6 hours See A&S requirements 12 hours Social Science Electives	18

PROPOSED CURRICULUM OUTLINE	Required Hours
English Composition EN1103 English Composition I EN1113 English Composition II OR EN1173 Accelerated Composition II	6
Foreign Language 3 semesters in one foreign language	9
Fine Arts See A&S requirements	3
Natural Sciences 3-4 hours Physical Science w/Lab* 3-4 hours Biological Science w/Lab** 3-4 hours Natural Science Elective***	9-12
Math MA 1313 College Algebra 3 hours above College Algebra	6
Humanities 3 hours Philosophy Elective 6 hours History – see A&S requirements	9
Social Sciences**** 6 hours See A&S requirements 12 hours Social Science Electives	18

Major Core Courses		Major Core Courses	
Fourth semester in chosen Foreign Language	3	Fourth semester in chosen Foreign Language	3
Upper Division Arts and Sciences Humanities (HI, FL, PHI) or Study Abroad Elective	3	Upper Division Arts and Sciences Humanities (HI, FL, PHI) or Study Abroad Elective	3
EN 1111 English Studies	1	EN 1111 English Studies	1
Four of the literature surveys below, including at least one focused on each of the following: English literature, American literature, pre-1800 literature, post-1800 literature. (A single course may satisfy multiple criteria simultaneously.) EN 2213 English Literature Before 1800 EN 2223 English Literature After 1800 EN 2243 American Literature Before 1865 EN 2253 American Literature After 1865 EN 2363 Introduction to African American Literature	12	Four of the literature surveys below, including at least one focused on each of the following: English literature, American literature, pre-1800 literature, post-1800 literature. (A single course may satisfy multiple criteria simultaneously.) EN 2213 English Literature Before 1800 EN 2223 English Literature After 1800 EN 2243 American Literature Before 1865 EN 2253 American Literature After 1865 EN 2363 Introduction to African American Literature	12
EN 3414 Critical Writing and Research	4	EN 3414 Critical Writing and Research **in Literary Studies**	4
EN 4111 Portfolios and Reflective Writing	1	EN 4111 Portfolios and Reflective Writing	1
Upper Division Requirements		**Upper Division Requirements**	
Pre-1660 English Lit Elective (Group I) (one course) *EN 4503 Shakespeare* *EN 4513 Shakespeare* *EN 4523 Chaucer* *EN 4533 Milton* *EN 4703 English Lit of the 16th Century* *EN 4713 English Lit of the 17th Century*	3	**Literature and Culture: Periods and Figures (two courses)** **EN 4503 Shakespeare** **EN 4513 Shakespeare** **EN 4523 Chaucer** **EN 4533 Milton** **EN 4643 The Eighteenth-Century British Novel** **EN 4653 The Nineteenth-Century British Novel** **EN 4663 British and Irish Novel Since 1900** **EN 4703 English Literature of the Sixteenth Century** **EN 4713 English Literature of the Seventeenth Century** **EN 4723 British Literature and Culture from 1660-1700** **EN 4733 British Literature and Culture of the Eighteenth Century** **EN 4743 British Literature and Culture of the Romantic Period** **EN 4863 Romantic Poetry** **EN 4883 Victorian Poets and Prose Writers**	6
Post-1660 English Lit Elective (Group II) (one course) *EN 4643 The 18th Century British Novel* *EN 4653 The 19th Century British Novel* *EN 4663 British and Irish Novel Since 1900* *EN 4723 British Literature and Culture from 1660-1700* *EN 4733 British Literature and Culture of the 18th Century* *EN 4863 The Romantic Poets and Prose Writers* *EN 4883 Victorian Poets and Prose Writers*	3		
Postcolonial or World Lit Elective (Group III), or one more course from Group I or Group II (one course)	3		

EN 4393 Postcolonial Literature and Theory *EN 4813 The World Novel Since 1900* *American or Contemporary Lit Elective (Group IV) (2 courses)* *EN 4333 Southern Literature* *EN 4343 Studies in African American Literature* *EN 4833 The American Short Story* *EN 4893 American Literature to 1800* *EN 4903 American Literature: 1800-1860* *EN 4913 American Literature: 1860-1900* *EN 4923 American Novel Since 1900* *EN 4933 Survey of Contemporary Lit*	6	**EN 4893 American Literature to 1800** **EN 4903 Nineteenth-Century American Literature** **EN 4913 American Literature: 1860-1900** **EN 4933 Survey of Contemporary Literature** **Literature and Culture: Cultural Geographies (one course)** **EN 4333 Southern Literature** **EN 4343 Studies in African American Literature** **EN 4393 Postcolonial Literature and Theory** **EN 4813 The World Novel Since 1900** **Theory, Genre, and Methods (one course)** **EN 4323 Literary Criticism from Plato-Present** **EN 4353 Critical Theory Since 1900** **EN 4803 Types of Drama Since 1900** **EN 4823 Poetry since 1900** **EN 4833 The American Short Story** **EN 4923 American Novel Since 1900** **EN 4924 Film Theory** **EN 4943 Form and Theory of Fiction** **EN 4953 Form and Theory of Poetry** **4000-Level Literature Elective (one course)** **Any course listed above under Periods and Figures, Cultural Geographies, and Theory, Genre, and Methods.**	3 3 3
English Vocational Elective (one course) EN 3303 Creative Writing EN 3313 Writing for the Workplace EN 4223 Principles of Legal Writing EN 4233 Composition Pedagogy EN 4243 Writing Center Tutor Training *EN 4323 Lit Criticism from Plato-Present* *EN 4353 Critical Theory Since 1900* EN 4403 Introduction to Linguistics EN 4413 History of the English Language	3	**Fields of English Studies** (one course) **Any Upper-division course except for courses in literature and literary theory** EN 3303 Creative Writing EN 3313 Writing for the Workplace EN 4243 Writing Center Tutor Training EN 4223 Principles of Legal Writing EN 4233 Composition Pedagogy EN 4403 Introduction to Linguistics EN 4413 History of the English Language **EN 3333 Internship in English** **EN 3423 Descriptive English Grammar** **EN 3803 Intermediate Poetry Writing** **EN 3903 Intermediate Fiction Writing** **EN 4124 Topics in Film** **EN 4303 Craft of Poetry** **EN 4313 Craft of Fiction** **EN 4433 Approaches to TESOL** **EN 4443 English Syntax** **EN 4453 Methods in TESOL**	3

		EN 4463 Studies in Second Language Acquisition **EN 4473 Phonetics** **EN 4493 TESOL Practicum** **EN 4623 Language and Culture** **EN 4633 Language and Society**	
English Elective *any EN course except EN 2203*	3	English Elective **Any EN course**	3
Oral Communication Requirement CO 1003 Fundamentals of Public Speaking OR CO 1013 Introduction to Communication	3	Oral Communication Requirement CO 1003 Fundamentals of Public Speaking OR CO 1013 Introduction to Communication	3
General Electives Consult advisor	15-16	General Electives Consult advisor	15-16
Total Hours	124	Total Hours	124
Must make a grade of C or higher in all English courses at the 2000 level or above. Must complete 31 upper division A&S hours. Must take 15 hours at the 4000 level in residence. 1 *CH, GG, GR, or PH; see General Education courses. 2 **AN or BIO; see General Education courses. 3 ***Consult advisor. 4 ****No more than two courses per discipline (no more than one CO and EC) and must include 4 disciplines over the 18 hours.		Must make a grade of C or higher in all English courses at the 2000 level or above. Must complete 31 upper division A&S hours. Must take 15 hours at the 4000 level in residence. 1 *CH, GG, GR, or PH; see General Education courses. 2 **AN or BIO; see General Education courses. 3 ***Consult advisor. 4 ****No more than two courses per discipline (no more than one CO and EC) and must include 4 disciplines over the 18 hours.	

3. JUSTIFICATION AND STUDENT LEARNING OUTCOMES

The flexibility of the program is being increased by modifications to the upper-division English requirements and by allowing the gateway literature course to count toward the major.

A. As in the previous program, students are required to take five 4000-level literature courses. The distribution of those courses has been reconceived in such a way as to take a step toward de-emphasizing the traditional disciplinary framework of time period and nationality. The proposed distribution follows current developments in the field and is hospitable to new courses that are diverse in subject matter and approach; this step will ensure that students take advanced courses that are inclusive of diverse literatures.

The maintenance in the total number of 4000-level literature classes will ensure that students continue to meet the major's learning outcomes of mastering generic conventions, plot structures, historical contexts, and critical theories, and will enable the department to address more fully the major's learning outcomes of exploring diverse literatures and critical approaches. New courses supporting the latter learning outcomes, which will be included in the new category "Literature and Culture: Cultural Geographies," are already in formation. "English Literature and the World Before 1800" has been approved as a special topics course for Spring 2022 and is being proposed as a permanent course, and "Global Anglophone Literatures" is a course in development. We are

able to use the rotation to ensure that every English major can fulfill the "Cultural Geographies" requirement until the new courses are approved.

The inclusion of EN 4943 Form and Theory of Fiction and EN 4953 Form and Theory of Poetry as options in the new category Theory, Genre, and Methods would increase duplication with the Minor in Creative Writing as currently designed. A program modification for the Minor in Creative Writing is being submitted to allow English majors who are pursuing that minor to count no more than two courses for both English major requirements and Creative Writing minor requirements. These modifications will not change the job placement or potential salaries of graduates.

B. The "English Vocational Elective" is being re-named "Fields of English Studies," and the requirement is being modified to allow students simply to take any one of the department's upper-division courses in a discipline other than literature and literary theory. Students' professional goals are still likely to influence their choice of this elective, e.g., those planning to apply to law school will still take EN 4223 Principles in Legal Writing, and only future teachers are likely to take EN 4233 Composition Pedagogy. This modification recognizes the value of students expanding the ways they analyze and use language through such fields as creative writing, linguistics, TESOL, rhetoric and composition, and film studies, whether or not the courses are explicitly pre-professional.

C. The English Elective is being modified to allow EN 2203: Introduction to Literature to fulfill this requirement. In the past, students who switch to the English major having already taken EN 2203 have were unable to use the course to make progress toward their major. However, allowing gateway courses to count toward the major has been identified as a best practice in diversity and inclusion for English Departments, and this change will be welcoming and beneficial to many of the students who switch to English from another major.

4. SUPPORT
Please see the attached letter of support from the English curriculum committee.

5. PROPOSED 4-LETTER ABBREVIATION
The modification will not require a new abbreviation for identification in official university reports.

6. EFFECTIVE DATE
Fall 2022

MISSISSIPPI STATE UNIVERSITY™
DEPARTMENT OF ENGLISH

TO: Andy Perkins
Chair, University Committee on Courses and Curricula

FROM: Ted Atkinson
DocuSigned by: Ted Atkinson
Chair, Department of English Curriculum Committee

RE: Approval of Degree Program Change Proposal

DATE: January 27, 2022

On December 2, 2021, the Department of English Curriculum Committee voted unanimously to approve the proposed degree modification that would restructure the 4000-level literature requirements for majors, revise the current vocational elective, and allow EN 2203 Introduction to Literature to count as a free elective. The Department of English faculty approved the proposed modification by a unanimous vote on January 26, 2022.

Members of the Curriculum Committee:

DocuSigned by: Shalyn Claggett
Shalyn Claggett

DocuSigned by:
Taylor Garner

DocuSigned by:
Ginger Pizer

DocuSigned by: Andrea Spain
Andrea Spain

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: Arts & Sciences **Department:** n/a

Contact Person: Shane Miller **Mail Stop:** 9570 **E-mail:** miller@anthro.msstate.edu

Nature of Change: New Minor **Date Initiated:** 10/12/21 **Effective Date:** Summer 2022

Current Degree Program Name: n/a
Major: n/a **Concentration:** n/a

New Degree Program Name: Minor in Data Analytics & Society
Major: n/a **Concentration:** n/a

Summary of Proposed Changes: Offer new minor in Data Analytics & Society

Approved:

	Date:
Department Head	3/30/22
Chair, College or School Curriculum Committee	4/16/22
Dean of College or School	4/19/22
Chair, University Committee on Courses and Curricula	
Chair, Graduate Council(if applicable)	
Chair, Deans Council	

1. Catalog Description

The minor in Data Analytics & Society equips students to understand how to collect, manage, analyze, and visualize data. It teaches basic coding, data management, data visualization/communication, mapping/GIS, ethics, and policy implications/applications. The minor will help students understand how data analytics is applicable to their areas of interest in social science and humanities fields. The minor is intentionally oriented to introductory data analytics coursework paired with social and political research applications.

The Data Analytics & Society minor is open to all majors across the university. Students wishing to obtain the minor must complete the requirements below. It is strongly recommended that students take MA/ST 2113 Introduction to Statistics in preparation for the minor. Only nine credits from any one department may count toward the minor. At least 6 hours must be at the upper-division level. Additionally, at least half of the required hours must be taken at MSU and students must achieve a minimum 2.0 grade point average in all courses taken as part of the minor. Reasonable course substitutions may be approved; students must consult with the minor advisor prior to course registration.

ADMINISTRATION: The minor will be housed and administered in the College of Arts & Sciences and advised by the Department of Anthropology and Middle Eastern Cultures.

2. Proposed Curriculum Outline

Proposed Curriculum Outline	Required Hours
CSE 1284 Intro to Computer Programming	4
Applied Data Analytics course Choose from: AN 3563 Data Analytics for Anthropology AN 4143 Ethnographic Methods CO 3221 Applied Communication & Media Studies CO 3223 Communication & Media Research Methods CO 4293 Communication & Media Studies Capstone CO 4803 Research in Public Relations and Advertising EN 3414 Critical Writing and Research in Literary Studies GR 2313 Maps and Remote Sensing GR 3303 Survey of Geospatial Technologies GR 4303 Principles of GIS PS/GE 2713 Introduction to Engineering and Public Policy PS 4464 Political Analysis PSY 3104 Introductory Psychological Statistics PSY 3314 Experimental Psychology PSY/CSE 4653 Cognitive Science PSY 4733 Memory PSY 4743/IE 4123 Psychology of Human-Computer Interaction PSY 4753 Applied Cognitive Psychology REL 3033 Theory and Method in the Study of Religion SO 3213 Introduction to Social Research SO 4123 Poverty, Analysis: People, Org and Program SO 4703 Population Problems and Processes SO 4804 Social Research Practice	6-8
PHI 4163 Research Ethics	3
Electives Choose from: AN 3523 North American Archaeology AN 4133 Medical Anthropology AN 4163 Anthropology of International Development AN 4303 Human Variation and Origins AN 4313 Human Osteology AN 4523 Public Archaeology	6-7

BQA 3123 Business Statistical Methods II BQA 4413 Business Forecasting and Predictive Analytics BQA 4423 Business Decision Analysis CO 3713 Digital Communication CSE 1384 Intermediate Computer Programming CSE 2383 Data Structures and Analysis of Algorithms CSE 4763 Ethical and Legal Issues in Computing EN 4463 Studies in Second Language Acquisition GG 4543 Community Engagement in Environmental Geosciences GR 4123 Urban Geography HI 1013 History of Technology in Six Objects PHI 3323 Medical Ethics PHI 4143 Philosophy of Science PHI 4223 Philosophy of Cognitive Science PSY 3343 Psychology of Learning PSY 3503 Health Psychology PSY 3623 Social Psychology PSY 3713 Cognitive Psychology PSY 4423 Sensation and Perception PSY 4713 Language and Thought SW 3003 Social Work with At-Risk Populations SW 3013 Human Behavior and the Social Environment I SW 3023 Human Behavior and the Social Environment II SW 4533 Substance Abuse and Addictions in Social Work Services SW 4543 Gender and Food SW 4613 Child Welfare Services SW 4633 Social Work in Health Care SW 4643 Social Work Services in Schools	
Total Hours	19-22

3. Student Learning Outcomes and Assessment

Student learning is measured through the outcomes and methods of assessment already established in each course. Students who complete the minor will understand how to effectively collect, manage, analyze, and visualize data. More specifically, students will:

- Analyze data to recognize trends and draw conclusions.
- Connect results and conclusions to policy implications.
- Understand and perform basic computer coding.
- Implement effective data management practices.
- Interpret and communicate data through visual messaging.
- Become ethical researchers, users, and communicators of data.

4. Support

The proposal has the support of the departments of Anthropology and Middle Eastern Cultures; Management and Information Systems; Marketing, Quantitative Analysis and Business Law; Communication, Computer Science and Engineering; English; Geosciences; History; Mathematics and Statistics, Philosophy and Religion; History; Political Science and Public Administration; Psychology; Sociology; and Instructional Systems and Workforce Development.

5. Proposed 4-Letter Abbreviation

DSOC

5. Effective Date

Summer 2022

MISSISSIPPI STATE UNIVERSITY

College of Arts & Sciences
Dean's Office

P.O. Drawer AS
175 President Circle, 208 Allen Hall
Mississippi State, MS 39762

P. 662.325.1665
F. 662.325.8740
www.cas.msstate.edu

February 8, 2022

Dear Members of the UCCC:

The Department of Anthropology and Middle Eastern Cultures supports the new minor in Data Analytics & Society.

Members of the Department of Anthropology and Middle Eastern Cultures Curriculum Committee and I have reviewed the proposal and support the utilization of our courses in this project. We understand that the minor in Data Analytics & Society may include the following courses, which are part of our department's typical rotation.

- AN 3523 North American Archaeology
- AN 3563 Data Analytics for Anthropology
- AN 4133 Medical Anthropology
- AN 4143 Ethnographic Methods
- AN 4163 Anthropology of International Development
- AN 4303 Human Variation and Origins
- AN 4313 Human Osteology
- AN 4523 Public Archaeology

Sincerely,

Hsain Ilahiane

Dr. Hsain Ilahiane
Professor and Head
Department of Anthropology and Middle Eastern Cultures

To: University Committee on Courses and Curricula

From: BQA Faculty, Marketing, Quantitative Analysis and Business Law Department

Date: January 10, 2021

The Department of Marketing, Quantitative Analysis and Business Law supports the new minor in Data Analytics & Society.

Members of the departmental curriculum committee have reviewed the proposal and support the utilization of our courses in this project. We understand that the minor in Data Analytics & Society may include the following courses, which are part of our department's typical rotation.

- BQA 3123 Business Statistical Methods II
- BQA 4413 Business Forecasting and Predictive Analytics
- BQA 4423 Business Decision Analysis

We support these proposed modification. If you have any questions, or need any additional information, please contact Dr. Stephen L. France at sfrance@business.msstate.edu.

Dr. Melissa Moore, Department Head

Dr. Stephen L. France, Associate Professor

See attached
Dr. Yueran Zhuo, Assistant Professor

See attached
Dr. Iva Ballard, Lecturer

See attached
Dr. Sheida Riahi, Lecturer

See attached
Ms. Shelby Dudgeon, Lecturer

To: University Committee on Courses and Curricula

From: BQA Faculty, Marketing, Quantitative Analysis and Business Law Department

Date: January 10, 2021

The Department of Marketing, Quantitative Analysis and Business Law supports the new minor in Data Analytics & Society.

Members of the departmental curriculum committee have reviewed the proposal and support the utilization of our courses in this project. We understand that the minor in Data Analytics & Society may include the following courses, which are part of our department's typical rotation.

- BQA 3123 Business Statistical Methods II
- BQA 4413 Business Forecasting and Predictive Analytics
- BQA 4423 Business Decision Analysis

We support these proposed modification. If you have any questions, or need any additional information, please contact Dr. Stephen L. France at sfrance@business.msstate.edu.

Dr. Melissa Moore, Department Head

Dr. Stephen L. France, Associate Professor

Dr. Yueran Zhuo, Assistant Professor

Dr. Iva Ballard, Lecturer

Dr. Sheida Riahi, Lecturer

Sheida Riahi Digitally signed by Sheida Riahi Date: 2022.01.12 07:23:11 -06'00'

Ms. Shelby Dudgeon, Lecturer

From: Dudgeon, Shelby srh535@msstate.edu
Sent: Wednesday, January 12, 2022 9:22 AM
To: France, Stephen sfrance@business.msstate.edu
Subject: RE:

Hi Dr. France,

I am emailing as my approval for my classes to be used in the Arts and Sciences data analytic initiative. Please let me know if there is anything else I need to do.

Best,
Shelby Dudgeon

From: France, Stephen
Sent: Tuesday, January 11, 2022 1:09 PM
To: Riahi, Sheida; Ballard, Iva; Zhuo, Yueran; Moore, Melissa; Dudgeon, Shelby
Cc: Moore, Robert
Subject: RE:

Dear all,

Happy New Year!

Please would it be possible to sign a letter of support/email support to allow our classes to be used in the Arts and Sciences data analytic initiative.

I've placed the hard copy in the usual place in the mail room. Please could you sign this copy or email me approval?

Kindest Regards,
Stephen

From: Ballard, Iva lBallard@business.msstate.edu
Sent: Tuesday, January 11, 2022 1:36 PM
To: France, Stephen sfrance@business.msstate.edu
Subject: Re:

Stephen,

I support the proposed modifications.

All the best,
Iva B. Ballard

From: France, Stephen <sfrance@business.msstate.edu>
Sent: Tuesday, January 11, 2022 1:09:47 PM
To: Riahi, Sheida <sr1315@msstate.edu>; Ballard, Iva <lBallard@business.msstate.edu>; Zhuo, Yueran <yzhuo@business.msstate.edu>; Moore, Melissa <mmoore@business.msstate.edu>; Dudgeon, Shelby <srh535@msstate.edu>
Cc: Moore, Robert <RMoore@business.msstate.edu>
Subject: RE:

Dear all,

Happy New Year!

Please would it be possible to sign a letter of support/email support to allow our classes to be used in the Arts and Sciences data analytic initiative.

I've placed the hard copy in the usual place in the mail room. Please could you sign this copy or email me approval?

Kindest Regards,
Stephen

France, Stephen

From: Zhuo, Yueran
Sent: Wednesday, January 12, 2022 10:43 AM
To: France, Stephen
Subject: Re: BS in the Arts and Sciences data analytics and society minor modifications

Dear Stephen,

I am sending you this email as my approval to the said program modification regarding BS in the Arts and Sciences data analytics and society minor. Thank you for the hard work!

Best regards,

Yueran Zhuo

MISSISSIPPI STATE UNIVERSITY

College of Arts & Sciences
Department of Communication

P.O. Box PF
216 President's Circle
Mississippi State, MS 39762

P. 662.325.3320
F. 662.325.3210
www.comm.msstate.edu

December 10, 2021

Dear Curriculum Committees:

The curriculum committee of the Department of Communication has met and is pleased to write a support letter in favor of the proposed minor in Data Analytics & Society housed and administered in the College of Arts & Sciences and advised by the Department of Anthropology and Middle Eastern Cultures. We feel the Communication classes listed in the proposal are a good fit for this minor and we are happy to be involved with it.

Faculty Member	Approve	Disapprove	Abstain
Wendy Roussin, MFA *Associate Professor & Chair*	X		
Kevin William, PhD *Associate Professor*	X		
Melody Fisher, PhD *Associate Professor*	X		
Holli Seitz, PhD *Assistant Professor*	X		
Matthew Webb, MFA *Assistant Clinical Professor*	X		
Cheryl Chambers, MA *Instructor*	X		
Chris Misun, MS *Instructor*	X		

MISSISSIPPI STATE UNIVERSITY
JAMES WORTH BAGLEY COLLEGE OF ENGINEERING

DEPARTMENT OF
COMPUTER SCIENCE & ENGINEERING

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

December 10, 2021

Dr. Miller:

The Department of Computer Science and Engineering supports the new minor in Data Analytics & Society.

Members of the departmental undergraduate studies committee and I have reviewed the proposal and support the utilization of our courses in this project. We understand that the minor in Data Analytics & Society may include the following courses, which are part of our department's typical rotation.

- CSE 1284 Intro to Computer Programming
- CSE 1384 Intermediate Computer Programming
- CSE 2383 Data Structures and Analysis of Algorithms
- CSE 4653 Cognitive Science **cross-list PSY 4653*
- CSE 4763 Ethical and Legal Issues in Computing

Sincerely,

Andy D. Perkins, PhD
Professor and Associate Department Head

MISSISSIPPI STATE UNIVERSITY™
DEPARTMENT OF ENGLISH

TO: Andy Perkins
Chair, University Committee on Courses and Curricula

FROM: Ted Atkinson
Chair, Department of English Curriculum Committee

RE: Proposed Data Analytics & Society Minor

DATE: December 3, 2021

On December 2, the Department of English Curriculum Committee voted unanimously to approve the inclusion of the following courses among the options for the proposed Data Analytics & Society minor:

EN 3414 Critical Writing and Research in Literary Studies
EN 4463 Studies in Second Language Acquisition

The committee understands that non-majors may enroll in these courses as part of the Data Analytics & Society minor and confirms that they are offered as part of the department's regular rotation.

Members of the Curriculum Committee:

Shalyn Claggett

Taylor Garner

Ginger Pizer

Andrea Spain

MISSISSIPPI STATE UNIVERSITY
BAGLEY
COLLEGE OF ENGINEERING

OFFICE OF THE
DEAN OF ENGINEERING

Dr. Kari Babski-Reeves, CPE
Larry G Brown Professor and Head, Associate Dean
kari@bagley.msstate.edu

December 8, 2021

Members of the UCCC:

The College of Engineering and the Department of Department of Industrial and Systems Engineering support the new minor in Data Analytics & Society.

The chair of General Engineering curriculum committee and I have reviewed the proposal and support the utilization of both GE 2713 Introduction to Engineering and Public Policy (cross-listed with PS 2713) and IE 4123 Psychology of Human-Computer Interaction (cross-listed with PSY 4743) in this project. We understand that non-majors may enroll in these courses as part of the Data Analytics & Society minor and confirm that the courses are part of our department's typical rotation.

Kindest Regards

Kari Reeves, PhD
Larry G Brown Professor and Head, ISE
Associate Dean for Research
Bagley College of Engineering
Mississippi State University

Robert Green, PhD
Assistant Dean
Bagley College of Engineering
Mississippi State University

MISSISSIPPI STATE UNIVERSITY

Department of Geosciences
108 Hilburn Hall
355 Lee Blvd.
PO Box 5448
Mississippi State, MS 39762
Phone (662) 325-3915
FAX (662) 325-9423

December 3, 2021

Dear Curriculum Committee Chair,

The Department of Geosciences Curriculum Committee has reviewed the newly proposed Minor in Data Analytics and Society, and we fully support the minor's development and inclusion our courses. Specifically, we support the inclusion of GR 2313 Maps & Remote Sensing, GR 3303 Survey of Geospatial Technologies, GR 4303 Principles of GIS, GG 4543 Community Engagement in Environmental Geoscience, and GR 4123 Urban Geography within the proposed minor. We are excited about the future interactions among departments that will result from this minor and the opportunities it will create for our students. If you have any questions or need additional information, please let us know.

Respectfully,

Andrew Mercer — Digitally signed by Andrew Mercer Date: 2021.12.03 11:51:44 -06'00'

Andrew Mercer (Committee Chair)

Christopher Fuhrmann — Digitally signed by Christopher Fuhrmann Date: 2021.12.03 12:32:13 -06'00'

Chris Fuhrmann (Committee Member)

Christa R. Haney — Digitally signed by Christa R. Haney Date: 2021.12.03 15:51:12 -06'00'

Christa Haney (Committee Member)

Brian S. Williams — Digitally signed by Brian S. Williams Date: 2021.12.03 20:15:57 -06'00'

Brian Williams (Committee Member)

Padmanava Dash — Digitally signed by Padmanava Dash Date: 2021.12.03 11:53:27 -06'00'

Padmanava Dash (Committee Member)

Rinat Gabitov — Digitally signed by Rinat Gabitov Date: 2021.12.03 14:37:01 -07'00'

Rinat Gabitov (Committee Member)

Sarah Lalk — Digitally signed by Sarah Lalk DN: cn=Sarah Lalk, o, ou, email=spl67@msstate.edu, c=US Date: 2021.12.03 16:17:05 -06'00'

Sarah Lalk (Committee Member)

Cc: Dr. John C. Rodgers, Head, Department of Geosciences

MISSISSIPPI STATE UNIVERSITY

College of Arts & Sciences
Dean's Office

P.O. Drawer AS
175 President Circle, 208 Allen Hall
Mississippi State, MS 39762

P. 662.325.1665
F. 662.325.8740
www.cas.msstate.edu

January 5, 2022

Members of the UCCC:

The Department of History supports the new minor in Data Analytics & Society.

Members of the Department of History Curriculum Committee and I have reviewed the proposal and support the utilization of our HI 1013 History of Technology in Six Objects course in this project. We understand that students may enroll in this course as part of the Data Analytics & Society minor and confirm that the course is part of our department's typical rotation.

Sincerely,

alan marcus
Digitally signed by alan marcus
Date: 2022.01.06 09:15:29 -06'00'

Dr. Alan Marcus
Professor and Head
Department of History

MISSISSIPPI STATE UNIVERSITY

COLLEGE OF ARTS & SCIENCES
Department of Philosophy & Religion

J. Robert Thompson, Head
George Hall 1010
233 Lee Blvd
P.O. Box JS
Mississippi State, MS 39762

P. 662.325.2161
F. 662.325.3340
www.philosophyandreligion.msstate.edu

January 13, 2022

Members of the UCCC:

The Department of Philosophy and Religion supports the new minor in Data Analytics & Society.

Members of the departmental curriculum committee and I have reviewed the proposal and support the utilization of our courses in this project. We understand that the minor in Data Analytics & Society may include the following courses, which will be included in our department's typical rotation.

- PHI 3323 Medical Ethics
- PHI 4143 Philosophy of Science
- PHI 4163 Research Ethics
- PHI 4223 Philosophy of Cognitive Science
- REL 3033 Theory and Method in the Study of Religion

Sincerely,

J. Robert Thompson, Ph.D.
Head
Department of Philosophy and Religion

MISSISSIPPI STATE UNIVERSITY

COLLEGE OF ARTS & SCIENCES
Department of Political Science and
Public Administration

P.O. Box PC
456 Hardy Rd.,
105 Bowen Hall
Mississippi State, MS 39762

P. 662.325.2711
F. 662.325.2716
www.pspa.msstate.edu

November 15, 2021

Members of the UCCC:

The Department of Political Science and Public Administration supports the new minor in Data Analytics & Society.

Members of the departmental curriculum committee and I have reviewed the proposal and support the utilization of our courses in this project. We understand that the minor in Data Analytics & Society may include the following courses, which are part of our department's typical rotation.

- PS 2713 Introduction to Engineering and Public Policy **cross-listed GE 2713*
- PS 4464 Political Analysis

Sincerely,

Brian Shoup

Dr. Brian Shoup
Associate Professor and Interim Dept. Head
Department of Political Science and Public Administration

MISSISSIPPI STATE UNIVERSITY

COLLEGE OF ARTS AND SCIENCES
Department of Psychology

P.O. Box 6161
110 Magruder Hall
Mississippi State, MS 39762

P. 662.325.3202
F. 662.325.7212
www.psychology.msstate.edu

January 11, 2022

Dear Members of the UCCC:

I am writing to support the new minor in Data Analytics and Society.

Members of the Department of Psychology Curriculum Committee and I have reviewed the proposal and fully support this important educational opportunity. We understand that the minor in Data Analytics and Society may include the following courses, which are part of our department's catalog.

- PSY 3104 Introductory Psychological Statistics
- PSY 3314 Experimental Psychology
- PSY 4653 Cognitive Science **cross-listed with CSE 4653*
- PSY 4733 Memory
- PSY 4743 Psychology of Human-Computer Interaction **cross-listed with IE 4123*
- PSY 4753 Applied Cognitive Psychology
- PSY 3343 Psychology of Learning
- PSY 3503 Health Psychology
- PSY 3623 Social Psychology
- PSY 3713 Cognitive Psychology
- PSY 4423 Sensation and Perception
- PSY 4713 Language and Thought

Feel free to contact me if the committee has any questions or requires additional information.

Sincerely,

Mitchell E. Berman, Ph.D.
Professor and Department Head

Email: mberman@psychology.msstate.edu
Telephone: 662.325.3666

MISSISSIPPI STATE UNIVERSITY

COLLEGE OF ARTS & SCIENCES

Department of Sociology
P.O. Box C
456 Hardy Road/207 Bowen Hall
Mississippi State, MS 39762
P. 662.325.2495
F. 662.325.4564
www.sociology.msstate.edu

December 14, 2021

Dear Chair, University Committee on Courses and Curriculum,

The Department of Sociology supports the new minor in Data Analytics & Society. Members of the Department of Sociology Undergraduate Curriculum and Policies Committee and the faculty have reviewed the proposal and support the utilization of our courses in this project. We understand that the minor in Data Analytics & Society may include the following courses, which are part of our department's typical rotation.

- SO 3213 Introduction to Social Research
- SO 4123 Poverty, Analysis: People, Org and Program
- SO 4703 Population Problems and Processes
- SO 4804 Social Research Practice
- SW 3003 Social Work with At-Risk Populations
- SW 3013 Human Behavior and the Social Environment
- SW 3023 Human Behavior and the Social Environment II
- SW 4533 Substance Abuse and Addictions in Social Work Services
- SW 4613 Child Welfare Services
- SW 4633 Social Work in Health Care
- SW 4643 Social Work Services in Schools
- SW 4543 Gender and Food

Sincerely,

Department of Sociology, Criminology and Social Work
Undergraduate Curriculum and Policy Committee

Ashley Vancil-Leap (Committee Chair)

Robert Boyd

Kenya Cistrunk

Ashley Perry

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 Arts and Sciences **Department:** PSPA

Contact Person: Sawsan Abutabenjeh **Mail Stop: E-mail:**Sawsan.abutabenjeh@msstate.edu
Nature of Change: N/A **Date Initiated:** August 2021 **Effective Date:** August 2022
Current Degree Program Name: N/A

Major: N/A **Concentration:** N/A

New Degree Program Name: Public Procurement Graduate Certificate

Major: N/A **Concentration:** N/A

Summary of Proposed Changes:

The proposal seeks to create a Public Procurement Certificate at the graduate level for campus 1 and campus 5 non-degree seeking students.

Approved:	Date:
Brian Thorp Department Head	2/11/2022
Leather Jordan Chair, College or School Curriculum Committee	2/25/22
Melinda Ruiz Dean of College or School	3/29/22
Chair, University Committee on Courses and Curricula	
Chair, Graduate Council(if applicable)	
Chair, Deans Council	

Appendix 16: Intent to Offer, Modify, or Delete a Certificate* Program

(Submit Appendix 16 in PDF format with signatures)

Institution:

Date of Implementation: August 2022

Six-Digit CIP Code (& Four-Digit Sequence Code if modification/deletion):
440401

Total Credit Hours: 12

CIP & Sequence codes: IHL Active Program Inventory

Program Title as will Appear on Academic Program Inventory:
Public Procurement Graduate Certificate Program

☒ **Offer** ☐ **Modify** ☐ **Delete**

Responsible Academic Unit(s):PSPA

Institutional Contact: Dr. Sawsan Abutabenjeh
Phone:
Email: sa1622@msstate.edu

Vocational Certificate:
Yes x
No

Credit Bearing Program:
Yes x
No

Title IV Financial Aid Eligible:
Yes X
No

Which of the following best describes the certificate program:

Pre-Baccalaureate (Less than 1 Year)	Undergraduate program with duration less than one academic year; designed for completion in less than 30 credit hours
Pre-Baccalaureate (At Least 1 Year)	Undergraduate program with duration at least 1 year; designed for completion in at least 30 hours; does not meet requirements for Associate's or Bachelor's degrees
Post-Baccalaureate	Program designed beyond the baccalaureate degree but does not meet the requirements for a master's degree
Post-Master's	Program designed beyond the master's degree but does not meet the requirements for a doctoral degree
Other	Other certificate program not meeting one of the four criteria above.

Program Summary:
The Public Procurement Certificate is offered by the Department of Political Science and Public Administration in the College of Arts and Sciences. This program comprises four three-credit courses, each of which will position the student be a competent and knowledgeable participant and stakeholder in their entity's procurement and contract management function. These four courses are:

1. PPA 8843: Introduction to Public Procurement
2. PPA 8853: Contract Formation in Public Procurement
3. PPA 8863: Contract Administration in Public Procurement
4. PPA 8873: Legal, Ethical, and Socially Responsible Aspects of Public Procurement

Institutional Contact Signature _____ **Date** _____

Chief Academic Officer Signature _____ **Date** _____

*Certificate programs added to the Academic Program Inventory must be credit-bearing and be vocational in nature with some professional benefit to program completers. Undergraduate certificates are eligible for Title IV financial aid programs. Certificate programs that are not credit-bearing or are lifelong learning in nature (i.e. photography, travel, etc.) with no professional component should not be included in the Academic Program Inventory.

Proposal for New Certificate Program

1. Catalog Description

Strategic procurement and contract management involves much more than issuing purchase orders for needed goods, services, and construction. If viewed and used as a strategic function, procurement and contract management can not only assure best value for every dollar spent; it also can support the delivery of services that are timely, efficient, and of the highest quality. This function, working in tandem with customer departments, planners, and other business units within a government can also help manage risk.

The Public Procurement Certificate is offered by the Department of Political Science and Public Administration in the College of Arts and Sciences. The certificate program is usually one year. This program comprises four three-credit courses, each of which will position the student be a competent and knowledgeable participant and stakeholder in their entity's procurement and contract management function. These four courses are:

1. PPA 8843: Introduction to Public Procurement
2. PPA 8853: Contract Formation in Public Procurement
3. PPA 8863: Contract Administration in Public Procurement
4. PPA 8873: Legal, Ethical, and Socially Responsible Aspects of Public Procurement

To get admitted to the certificate program, students should have bachelor's degree.

2. Curriculum Outline

The certificate program will be administered through the Department of Political Science and Public Administration. A PSPA faculty member will be assigned as the coordinator and will oversee the program's administration.

3. Course Descriptions for the Certificate

PPA 8843: Introduction to Public Procurement

Three hours lecture. This course provides a bridge between the theory and practice associated with public sector procurement in this ever-evolving field.

PPA 8853: Contract Formation in Public Procurement

Three hours lecture. This course provides insight into how public sector contracts should be planned and formed.

PPA 8863: Contract Administration in Public Procurement

Three hours lecture. This course addresses the actions that must be taken following the award of a contract.

PPA 8873: Legal, Ethical, and Socially Responsible Aspects of Public Procurement

Three hours lecture. This course surveys the law and ethics that apply to public sector procurement in the United States

4. Student Learning Outcomes and Assessment

Following the completion of the certificate coursework, students will be able to:

- Demonstrate a fundamental understanding of the scope and elements of public sector contract planning and formation.
- Apply knowledge gained in the certificate program to properly, adequately, and strategically plan procurements and form and administer contracts.
- Assure that all participants in the administration of a contract understand their specific roles and responsibilities and how their specific roles and responsibilities relate to those of other participants and the attainment of contract, program, and organizational goals.
- Provide a mutual understanding of contract requirements and for good-faith cooperation and communication among all parties to a contract.

5. Justification and Target Audience

The certificate program is designed for individuals who work in or intend to work in government in a role related to the procurement and contract management function. In addition to procurement and contract management, such functions include, but are not limited to senior general management, budget, finance, accounting, construction, information technology, communications, public works, law enforcement, fire and rescue, strategic planning, and risk management. In this region, we are expecting a demand from the Navy Air Station in Meridian, Keesler AFB in Biloxi, the Stennis Space center in Hancock County, Columbus Air Force Base, and the Mississippi Association of Government Purchasing and Property Agents.

6. **Effective Date:** August 2022
7. **Proposed Four-Letter abbreviation:** PPGC
8. **Letter of Support:** See the attached letters of support
9. **Appendix 16:** See the attached form

MISSISSIPPI STATE UNIVERSITY

COLLEGE OF ARTS & SCIENCES
Department of Political Science and
Public Administration

P.O. Box PC
456 Hardy Rd.,
105 Bowen Hall
Mississippi State, MS 39762

P. 662.325.2711
F. 662.325.2716
www.pspa.msstate.edu

January 19th, 2022

The Public Administration Graduate Curriculum Committee writes this letter in support of the offering of the Public Procurement Graduate Certificate Program. The program will position the student to be a competent and knowledgeable participant and stakeholder in their entity's procurement and contract management function.

To complete the certificate program, the students are required to take the following four courses:

1. Introduction to Public Procurement (PPA 8843)
2. Contract Formation in Public Procurement (PPA 8853)
2. Contract Administration in Public Procurement (PPA 8863)
3. Legal, Ethical, and Socially Responsible Aspects of Public Procurement (PPA 8873)

Dragan Stanisevski: 

P. Edward French: P. Edward French

Christine Rush: Christine L. Rush

Mike Potter: 

Sawsan Abutabenjeh: Sawsan Abutabenjeh

Julius Nukpezah: Julius Nukpezah

Tamara Markoski: Tamara Dimitrijevska-Markoski

MISSISSIPPI STATE UNIVERSITY

COLLEGE OF ARTS & SCIENCES
Department of Political Science and
Public Administration

P.O. Box PC
456 Hardy Rd.,
105 Bowen Hall
Mississippi State, MS 39762

P. 662.325.2711
F. 662.325.2716
www.pspa.msstate.edu

January 20, 2022

To Whom it May Concern:

On behalf of the Political Science and Public Administration Department, I write this to express our support for the establishment of the Public Procurement Certificate. The certificate will provide students with valuable training in public procurement and contract management. The department support the inclusion of the courses listed below within the proposed certificate. The certificate consists of the following courses:

1. Introduction to Public Procurement (PPA 8843)
2. Contract Formation in Public Procurement (PPA 8853)
2. Contract Administration in Public Procurement (PPA 8863)
3. Legal, Ethical, and Socially Responsible Aspects of Public Procurement (PPA 8873)

Sincerely,

Brian Shoup

Dr. Brian Shoup
Associate Professor and Interim Head
Department of Political Science and Public Administration

NEW GRADUATE DEGREE OUTLINE FORM

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

PROPOSED New Degree

Degree: Public Procurement Graduate Certificate

Strategic procurement and contract management involves much more than issuing purchase orders for needed goods, services, and construction. If viewed and used as a strategic function, procurement and contract management can not only assure best value for every dollar spent; it also can support the delivery of services that are timely, efficient, and of the highest quality. This function, working in tandem with customer departments, planners, and other business units within a government can also help manage risk.

The Public Procurement Certificate is offered by the Department of Political Science and Public Administration in the College of Arts and Sciences. The certificate program is usually one year. This program comprises four three-credit courses, each of which will position the student be a competent and knowledgeable participant and stakeholder in their entity's procurement and contract management function. These four courses are:

1. PPA 8843: Introduction to Public Procurement
2. PPA 8853: Contract Formation in Public Procurement
3. PPA 8863: Contract Administration in Public Procurement
4. PPA 8873: Legal, Ethical, and Socially Responsible Aspects of Public Procurement

To get admitted to the certificate program, students should have bachelor's degree.

Proposed Curriculum Outline	Required Hours
Required Courses: 1. PPA 8843: Introduction to Public Procurement 2. PPA 8853: Contract Formation in Public Procurement 3. PPA 8863: Contract Administration in Public Procurement 4. PPA 8873: Legal, Ethical, and Socially Responsible Aspects of Public Procurement	 3 3 3 3
Total Hours	12 hours

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: Business **Department: Marketing, Quantitative Analysis & Business Law**
Contact Person: Jason Lueg **Mail Stop: 9582** **E-mail: jlueg@business.msstate.edu**
Nature of Change: Addition of Minor **Date Initiated: 4/4/2022** **Effective Date: Fall 2022**
Current Degree Program Name:

Major: **Concentration:**

New Degree Program Name: Minor in Supply Chain Logistics

Major: Supply Chain Logistics **Concentration:**

Summary of Proposed Changes:

The Department of Marketing, Quantitative Analysis & Business Law is seeking the addition of a Minor in Supply Chain Logistics. Currently, students from other majors take a range of individual courses that the department offers, and the faculty believe that interest provides opportunity to establish a minor. The addition of the minor would not change the SCL degree program for the department's majors.

Approved:	Date:
Department Head	4-11-22
Chair, College or School Curriculum Committee	4-12-22
Dean of College or School	4/14/22
Chair, University Committee on Courses and Curricula	
Chair, Graduate Council(if applicable)	
Chair, Deans Council	

NEW DEGREE OUTLINE FORM

Use the chart below to indicate your new 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. Expand rows as needed.

PROPOSED New Degree	
Degree: Minor in Supply Chain Logistics Major: Supply Chain Logistics Concentration: NA	
Since every organization is dependent on logistics and supply chain systems, students in areas as diverse as engineering, agribusiness, human sciences, or business may benefit from this minor. Students improve understanding of core supply chain management functions such as operations, transportation, and distribution.	
Proposed Curriculum Outline	Required Hours
Major/Minor Required Courses	
MKT 3013 Principles of Marketing	3
MKT 3323 International Logistics	3
MKT 4333 International Supply Chain Management	3
Optional Courses	
MKT 3213 Retailing	3
MKT 4113 Personal Selling	3
MKT 4143 Sales Management	3
MKT 4313 Physical Distribution Management	3
BQA 4413 Business Forecasting and Predictive Analytics	3
BQA 4423 Business Decision Analysis	3
Other electives approved by department	
Concentration Courses	
Total Hours	15

1. Curriculum Outline

   See above. No new courses are proposed for this minor.

2. Student learning outcomes and assessments

   Each course maintains learning outcomes and uses appropriate assessments to ensure student learning. A student who completes the combination of required courses and optional courses will achieve a basic understanding of supply chain logistics knowledge, practices, and applications.

   Upon satisfactory completion of the Minor, students will:

   Develop an awareness of the career opportunities in supply chain logistics.
   Students will apply analytical, critical, and logical reasoning skills to solve logistics and supply chain related issues.
   Students will analyze logistics & supply chain related processes to improve operational performance and enhance decision making.
   Demonstrate an understanding of key logistics & supply chain related trade-offs.

Students will utilize business application software tools to assist decision making in a logistics & supply chain setting.

3. Support

Support letters from the appropriate entities are included.

4. Proposed 4-letter abbreviation

SCLM

5. Effective Date

Fall 2022

MEMO:

College of Business
Dr. Campbell
Chair, College Committee on Courses & Curriculum
McCool Hall

MISSISSIPPI STATE UNIVERSITY
MARKETING, QUANTITATIVE ANALYSIS AND BUSINESS LAW

From: Robert Moore, Chair, Departmental Curriculum Committee

Date: April 6, 2022
Re: Letter of Support for the addition of a Minor in Supply Chain Logistics

The MQABL faculty have reviewed the proposed addition of a **Minor in Supply Chain Logistics** and support the addition. Furthermore, the faculty approve the **Minor in Supply Chain Logistics** curriculum. In lieu of signing, an email statement of support/non-support is acceptable.

Faculty	Support	Do Not Support	Signature	Date
Dr. Frank Adams fadams@business.msstate.edu	☒	☐		6 Apr 22
Dr. Chris Boone cboonee@business.msstate.edu	☒	☐		4/6/22
Dr. Mike Breazeale mbreazeale@business.msstate.edu	☒	☐		4/6/22
Dr. Joel Collier jcollier@business.msstate.edu	☒	☐		4-7-22
Dr. Stephen France sfrance@business.msstate.edu	☒	☐		4/6/22
Dr. Bingyan Hu bh1998@business.msstate.edu	☒	☐		4/7/22
Dr. Myles Landers vml51@business.msstate.edu	☒	☐		4/7/22
Dr. Jason Lueg jlueg@business.msstate.edu	☒	☐		4/7/22
Dr. Melissa Moore mmoore@business.msstate.edu	☒	☐		4-6-22
Dr. Robert Moore rmoore@business.msstate.edu	☒	☐		4/6/22
Dr. Nicole Ponder nponder@business.msstate.edu	☒	☐		4/7/22
Dr. Kevin Shanahan kshanahan@business.msstate.edu	☐	☐		
Dr. Yueran Zhuo yz469@business.msstate.edu	☒	☐		4/6/22

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: EDUCATION **Department:** MUSIC
Contact Person: RICHARD HUMAN **Mail Stop:** 9734 **E-mail:** richard.human@gmail.com

Nature of Change: Degree Modification **Date Initiated:** 3/24/2022 **Effective Date:** Fall 2022

Current Degree Program Name: Bachelor of Music Education
Major: Music Education **Concentration:** Guitar, Instrumental, Keyboard, Vocal

New Degree Program Name: Bachelor of Music Education
Major: Music Education **Concentration:** Guitar, Instrumental, Keyboard, Vocal

Summary of Proposed Changes: After a thorough review of the EDF 3333 Social Foundations of Education and MUE 2153 Foundations of Music Education, the Department of Music faculty have found that MUE 2153 Foundations of Music Education more than sufficiently addresses the historical, philosophical, legal and educational psychology concepts of EDF 3333 Social Foundations of Education.

Approved: Barry E. Kopetz Department Head	**Date:** March 24, 2022
Richard Human Chair, College or School Curriculum Committee	March 24, 2022
Kimberly R. Hall Dean of College or School	04.11.2022
Chair, University Committee on Courses and Curricula	
Chair, Graduate Council(if applicable)	
Chair, Deans Council	

1. Catalog Description

The catalog description for the Bachelor of Music Education will not be changed from its current version.

2. Curriculum Outline

The curriculum outline follows

3. Justification and Student learning Outcomes

At 130 credit hours, the Bachelor of Music degree is one of the most significant in terms of total required credit hours in the College of Education and the University as a whole. To address this issue, the Department has consistently explored options to reduce the credit hours of the degree without lowering the standards of our program and remaining within the standards published by the National Association of Schools of Music.

After a thorough review of the EDF 3333 Social Foundations of Education and MUE 2153 Foundations of Music Education, the Department of Music faculty have found that MUE 2153 Foundations of Music Education more than sufficiently addresses the historical, philosophical, legal and educational psychology concepts of EDF 3333 Social Foundations of Education.

4. Learning Outcomes

The learning outcomes for the Bachelor of Music Education degree program are the standards set forth by the National Association of Schools of Music as described in the NASM Handbook (2013-2014, page 117):

- Demonstrate a personal commitment to the art of music, to teaching music as an element of civilization, and to encouraging the artistic and intellectual development of students, plus the ability to fulfill these commitments as an independent professional.

- Demonstrate the ability to lead students to an understanding of music as an art form, as a means of communication, and as part of their intellectual and cultural heritage.

- Demonstrate the capability to inspire others and to excite the imagination of students, engendering a respect for music and a desire for musical knowledge and experiences.

- Demonstrate the ability to articulate logical rationales for music as a basic component of general education, and to present the goals and objectives of a music program effectively to parents, professional colleagues and administrators.

- Demonstrate the ability to work productively within specific education systems, promote scheduling patterns that optimize music instruction, maintain positive relationships with individuals of various social and ethnic groups, and be empathetic with students and colleagues of different backgrounds.

- Demonstrate the ability to evaluate ideas, methods and policies in the arts, the humanities and in arts education for their impact on the musical and cultural development of students.

- Demonstrate the ability and desire to remain current with developments in the art of music and in teaching, to make independent, in-depth evaluations of their relevance, and to use the results to improve musicianship and teaching skills.

UCCC Questions

a. Will this program change meet local, state, regional, and national educational and cultural needs? If so, please describe.

The requested modification will have no effect on our graduates' ability to plan, manage, and assess a pedagogically sound and diverse curriculum in the classroom.

b. **Will this program change result in duplication in the system?**

This proposed degree modification does not reduce or increase duplication in the Mississippi higher education system.

c. Will this program change/advance student diversity within the discipline? If so, please describe.

This degree modification will not directly influence in the discipline of music education. However, a point may made that a more reasonable amount of required credit hours required for the BME degree may have a positive

effect on students choosing to attend MSU for this degree (recruiting), and a positive effect on those completing this degree at MSU (retention).

d. Will this program change result in an increase in the potential placement of graduates in MS, the Southeast and the U.S.?

Only in so much as fewer credit hours may result in an increased number of students able to complete the degree program given a more reasonable number of credit hours required.

e. Will this program change result in the potential salaries of graduates in MS, the Southeast and the U.S.?

No.

5. Proposed 4-Letter Abbreviations.
The existing degree and concentration abbreviations are not modified in this proposal.

6. Effective Date.
Fall 2022.

CURRENT Degree Description: BME	PROPOSED Degree Description: BME
Department Head: Barry E. Kopetz Department Office: Music Building A Telephone: (662) 325-3070 Fax: (662) 325-0250 http://music.msstate.edu/ Mailing Address: Department of Music PO Box 6240 Mississippi State, MS 39762 University Bands Ms. Elva Kaye Lance, Director of Bands Telephone: (662) 325-2713 http://msuband.msstate.edu University Choirs Dr. Gary Packwood, Director of Choral Activities Telephone: (662) 325-7801 http://www.statesings.com/ University Philharmonia Orchestra Dr. Barry E. Kopetz, Coordinator Telephone: (662) 325-3070 Mission The mission of the Department of Music at Mississippi State University is to contribute to the development of broadly acculturated citizens in our state and region through enhanced musical understanding and enriching musical experiences, providing access and opportunity to our diverse population through programs of teaching, research, and service. Bachelor of Music Education The Bachelor of Music Education is a 130-hour professional degree program that leads to licensure to teach music in the State of Mississippi. The Department of Music offers four concentrations of the BME: Guitar, Instrumental, Keyboard and Vocal.	Department Head: Barry E. Kopetz Department Office: Music Building A Telephone: (662) 325-3070 Fax: (662) 325-0250 http://music.msstate.edu/ Mailing Address: Department of Music PO Box 6240 Mississippi State, MS 39762 University Bands Ms. Elva Kaye Lance, Director of Bands Telephone: (662) 325-2713 http://msuband.msstate.edu University Choirs Dr. Gary Packwood, Director of Choral Activities Telephone: (662) 325-7801 http://www.statesings.com/ University Philharmonia Orchestra Dr. Barry E. Kopetz, Coordinator Telephone: (662) 325-3070 Mission The mission of the Department of Music at Mississippi State University is to contribute to the development of broadly acculturated citizens in our state and region through enhanced musical understanding and enriching musical experiences, providing access and opportunity to our diverse population through programs of teaching, research, and service. Bachelor of Music Education The Bachelor of Music Education is a 130-hour professional degree program that leads to licensure to teach music in the State of Mississippi. The Department of Music offers four concentrations of the BME: Guitar, Instrumental, Keyboard and Vocal.

CURRENT Degree Description: BME		PROPOSED Degree Description: BME	
The Instrumental concentration qualifies the student for a Music Instrumental (K-12) teaching license. The Vocal, Keyboard, and Guitar concentrations qualifies the student for a Music Choral (K-12) teaching license. The Vocal concentration qualifies the student for a K-12 Choral Music teaching license, allowing graduates to teach General, Instrumental, and Choral music in all grades in the state of Mississippi. For suggested course sequence for all concentrations, visit the Department of Music website: http://www.music.msstate.edu/academics/bme/. Students are required to earn a "C" or better in all required (non-elective) Applied Music (MUA), Music (MU), and Music Education (MUE) courses. Auditions All potential music majors and minors are required to audition for appropriate faculty in order to determine their preparedness to enter the program, participate in ensembles, and determine eligibility for a scholarship or service award. Although alternate dates are available, the preferred audition date for music majors and minors in all areas is the third Saturday in February. Other audition dates are available by contacting the applied faculty of your area of concentration, the department office (662) 325-3070, or the major ensemble offices. (Choir (662) 325-3490; Band (662) 325-2713; Orchestra (662) 325-3070). Transfer Information After successful admission to the University, and in addition to the music major audition, transfer students are required to complete a music theory and aural skills entrance exam to determine preparedness for upper division study. For more information see the Department of Music website at http://www.music.msstate.edu/students/transfers/ or call 662-325-3070.		The Instrumental concentration qualifies the student for a Music Instrumental (K-12) teaching license. The Vocal, Keyboard, and Guitar concentrations qualifies the student for a Music Choral (K-12) teaching license. The Vocal concentration qualifies the student for a K-12 Choral Music teaching license, allowing graduates to teach General, Instrumental, and Choral music in all grades in the state of Mississippi. For suggested course sequence for all concentrations, visit the Department of Music website: http://www.music.msstate.edu/academics/bme/. Students are required to earn a "C" or better in all required (non-elective) Applied Music (MUA), Music (MU), and Music Education (MUE) courses. Auditions All potential music majors and minors are required to audition for appropriate faculty in order to determine their preparedness to enter the program, participate in ensembles, and determine eligibility for a scholarship or service award. Although alternate dates are available, the preferred audition date for music majors and minors in all areas is the third Saturday in February. Other audition dates are available by contacting the applied faculty of your area of concentration, the department office (662) 325-3070, or the major ensemble offices. (Choir (662) 325-3490; Band (662) 325-2713; Orchestra (662) 325-3070). Transfer Information After successful admission to the University, and in addition to the music major audition, transfer students are required to complete a music theory and aural skills entrance exam to determine preparedness for upper division study. For more information see the Department of Music website at http://www.music.msstate.edu/students/transfers/ or call 662-325-3070.	

CURRENT Degree Description: BME		PROPOSED Degree Description: BME	
Music Minor Mississippi State University offers MSU students the opportunity to complete a minor in music. The Music Minor is a comprehensive set of courses designed to increase student musicianship and knowledge. Students must audition and be accepted as a music minor before the minor may be declared. Acceptance in any given studio area is on a space available basis. The requirements for the music minor cannot be completed after graduating from MSU. For information and required courses, visit the Department of Music website: http://www.music.msstate.edu/academics/minorinmusic/		Music Minor Mississippi State University offers MSU students the opportunity to complete a minor in music. The Music Minor is a comprehensive set of courses designed to increase student musicianship and knowledge. Students must audition and be accepted as a music minor before the minor may be declared. Acceptance in any given studio area is on a space available basis. The requirements for the music minor cannot be completed after graduating from MSU. For information and required courses, visit the Department of Music website: http://www.music.msstate.edu/academics/minorinmusic/	
CURRENT CURRICULUM OUTLINE for all concentrations		**PROPOSED CURRICULUM OUTLINE for all concentrations**	
General Core		**General Core**	
English (Ex. EN 1103 English Comp I)	6	English (Ex. EN 1103 English Comp I)	6
Fine Arts (General Education): MU 3023 Survey of Western Music History II	3	Fine Arts (General Education): MU 3023 Survey of Western Music History II	3
Natural Science (2 labs required from Gen Ed)	9	Natural Science (2 labs required from Gen Ed)	9
Extra Science (if appropriate)		Extra Science (if appropriate)	
Math (General Education)	6	Math (General Education)	6
Humanities (General Education)	6	Humanities (General Education)	6
Social/Behavioral Science (General Educaiton)	6	Social/Behavioral Science (General Educaiton)	6

CURRENT Degree Description: BME		PROPOSED Degree Description: BME	
		TOTAL GENERAL CORE	**36**
COLLEGE CORE		**COLLEGE CORE**	
EDF 3333 Social Foundations of Education	*3*		
MUE 1151 Technology for Music Education	1	MUE 1151 Technology for Music Education	1
MUE 2153 Foundations in Music Education	3	MUE 2153 Foundations in Music Education	3
MUE 2163 Elementary Music Methods	3	MUE 2163 Elementary Music Methods	3
EPY 3143 Human Development and Learning Strategies in Education	3	EPY 3143 Human Development and Learning Strategies in Education	3
EDX 3213 Individualizing Instruction for Exceptional Children	3	EDX 3213 Individualizing Instruction for Exceptional Children	3
MUE 4152 Secondary Music Methods	2	MUE 4152 Secondary Music Methods	2
MUE 4873 Professional Seminar in Music Education	3	MUE 4873 Professional Seminar in Music Education	3
MUE 4886 Teaching Internship in Music Education	6	MUE 4886 Teaching Internship in Music Education	6
MUE 4896 Teaching Internship in Music Education	6	MUE 4896 Teaching Internship in Music Education	6
		TOTAL COLLEGE CORE	**30**
MAJOR CORE		**MAJOR CORE**	
Public Speaking: Satisfied through music history courses, upper division proficiency exam, music education courses and student teaching.		Public Speaking: Satisfied through music history courses, upper division proficiency exam, music education courses and student teaching.	
Upper Level Writing Requirement: Satisfied through music theory, music history, music education courses and the upper division proficiency exam.		Upper Level Writing Requirement: Satisfied through music theory, music history, music education courses and the upper division proficiency exam.	

CURRENT Degree Description: BME		PROPOSED Degree Description: BME	
Computer Literacy Requirement: Satisfied through MUE 1115 Technology for Music Education and the Music Theory sequence.		Computer Literacy Requirement: Satisfied through MUE 1115 Technology for Music Education and the Music Theory sequence.	
MU 1213 Music Theory I	3	MU 1213 Music Theory I	3
MU 1321 Ear Training I	1	MU 1321 Ear Training I	1
MU 1413 Music Theory II	3	MU 1413 Music Theory II	3
MU 1521 Ear Training II	1	MU 1521 Ear Training II	1
MU 2613 Music Theory III	3	MU 2613 Music Theory III	3
MU 2721 Ear Training III	1	MU 2721 Ear Training III	1
MU 2813 Music Theory IV	3	MU 2813 Music Theory IV	3
MU 2921 Ear Training IV	1	MU 2921 Ear Training IV	1
MU 2012 World Music	2	MU 2012 World Music	2
MU 3013 Survey of Western Music History I	3	MU 3013 Survey of Western Music History I	3
MU 3412 Conducting	2	MU 3412 Conducting	2
MU 3442 Advanced Conducting	2	MU 3442 Advanced Conducting	2
MU 4313 Form and Analysis	3	MU 4313 Form and Analysis	3
Major Ensemble (7 semesters of study)	7	Major Ensemble (7 semesters of study)	7
MU 1010 Recital Hour (7 semesters of C or better)	0	MU 1010 Recital Hour (7 semesters of C or better)	0
Piano Proficiency Exam	0	Piano Proficiency Exam	0
Music Theory & Aural Skills Proficiency Exam	0	Music Theory & Aural Skills Proficiency Exam	0

CURRENT Degree Description: BME		PROPOSED Degree Description: BME	
Upper Division Performance Exam	0	Upper Division Performance Exam	0
Degree Recital	0	Degree Recital	0
		TOTAL MAJOR CORE	**35**

GUITAR CONCENTRATION: Current		GUITAR CONCENTRATION: Proposed	
Piano: Piano Class or Functional Skills (4 hours required). Either		Piano: Piano Class or Functional Skills (4 hours required). Either	
MU 2111 Piano Class	1	MU 2111 Piano Class	1
MU 2121 Piano Class	1	MU 2121 Piano Class	1
MU 3111 Piano Class	1	MU 3111 Piano Class	1
MU 3121 Piano Class	1	MU 3121 Piano Class	1
Or:		Or:	
MU 3112 Functional Skills of Piano I	2	MU 3112 Functional Skills of Piano I	2
MU 3122 Functional Skills of Piano II	2	MU 3122 Functional Skills of Piano II	2
MUE 1141 Voice methods	1	MUE 1141 Voice methods	1
MUE 3231 String Methods	1	MUE 3231 String Methods	1
Applied Voice (2 semesters of study)	2	Applied Voice (2 semesters of study)	2
Applied Guitar (6 semesters of study)	12	Applied Guitar (6 semesters of study)	12
MUE 3233 Guitar Pedagogy	3	MUE 3233 Guitar Pedagogy	3
Directed Electives	3	Directed Electives	3
		TOTAL GUITAR CONCENTRATION	**26**
INSTRUMENTAL CONCENTRATION: Current		**INSTRUMENTAL CONCENTRATION: Proposed**	
Piano: Piano Class or Functional Skills (4 hours required). Either		Piano: Piano Class or Functional Skills (4 hours required). Either	
MU 2111 Piano Class	1	MU 2111 Piano Class	1
MU 2121 Piano Class	1	MU 2121 Piano Class	1
MU 3111 Piano Class	1	MU 3111 Piano Class	1

MU 3121 Piano Class	1	MU 3121 Piano Class	1
Or:		Or:	
MU 3112 Functional Skills of Piano I	2	MU 3112 Functional Skills of Piano I	2
MU 3122 Functional Skills of Piano II	2	MU 3122 Functional Skills of Piano II	2
MUE 1141 Voice Methods	1	MUE 1141 Voice Methods	1
MUE 3212 Brass Methods	2	MUE 3212 Brass Methods	2
MUE 3222 Woodwind Methods	2	MUE 3222 Woodwind Methods	2
MUE 3231 String Methods	1	MUE 3231 String Methods	1
MUE 3242 Percussion Methods	2	MUE 3242 Percussion Methods	2
MU 4322 Band Arranging	2	MU 4322 Band Arranging	2
Applied Lessons (6 semesters of study)	12	Applied Lessons (6 semesters of study)	12
		TOTAL INSTRUMENTAL CONCENTRATION	**26**
KEYBOARD CONCENTRATION: Current		**KEYBOARD CONCENTRATION: Proposed**	
MU 3112 Functional Skills of Piano I	2	MU 3112 Functional Skills of Piano I	2
MI 3122 Functional Skills of Piano II	2	MI 3122 Functional Skills of Piano II	2
MUE 3262 Instrumental Methods	2	MUE 3262 Instrumental Methods	2
MUE 3333 Introduction to Piano Pedagogy	3	MUE 3333 Introduction to Piano Pedagogy	3
MUE 1141 Voice Methods	1	MUE 1141 Voice Methods	1
Applied Voice (2 semesters of study)	2	Applied Voice (2 semesters of study)	2

Applied Piano (6 semesters of study)	12	Applied Piano (6 semesters of study)	12
Directed Electives	2	Directed Electives	2
		TOTAL KEYBOARD CONCENTRATION	**26**

VOCAL CONCENTRATION: Current		VOCAL CONCENTRATION: Proposed	
Piano: Piano Class or Functional Skills (4 hours required). Either		Piano: Piano Class or Functional Skills (4 hours required). Either	
MU 2111 Piano Class	1	MU 2111 Piano Class	1
MU 2121 Piano Class	1	MU 2121 Piano Class	1
MU 3111 Piano Class	1	MU 3111 Piano Class	1
MU 3121 Piano Class	1	MU 3121 Piano Class	1
Or:		Or:	
MU 3112 Functional Skills of Piano I	2	MU 3112 Functional Skills of Piano I	2
MI 3122 Functional Skills of Piano II	2	MI 3122 Functional Skills of Piano II	2
Applied Piano (2 semesters of study)	2	Applied Piano (2 semesters of study)	2
MUE 3262 Instrumental Methods	2	MUE 3262 Instrumental Methods	2
Applied Voice (6 semesters of study)	12	Applied Voice (6 semesters of study)	12
MU 1141 Song Literature	1	MU 1141 Song Literature	1
MU 1151 Vocal Pedagogy	1	MU 1151 Vocal Pedagogy	1
MU 1241 Diction I	1	MU 1241 Diction I	1
MU 1251 Diction II	1	MU 1251 Diction II	1
Directed Electives	2	Directed Electives	2
		TOTAL VOCAL CONCENTRATION	**26**

MISSISSIPPI STATE UNIVERSITY

DEPARTMENT OF MUSIC
P.O. Box 6240
Mississippi State, MS 39762
P. 662.325.3070
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Band (662)325.2713
Choral (662)325.3490
www.music.msstate.edu

March 21, 2022

To: College of Education Box Council
University Committee on Courses and Curricula

Fr: Department of Music Curriculum Committee

Re: Approval for BME Reduction from 130 to 127 Hours

The Department of Music is proposing that the course EDF 3333 Social Foundations of Education be removed from the Bachelor of Music Education degree, all concentrations.

Dr. Jennifer Campbell (Instructor of MUE 2153 Foundations of Music Education) met with the department curriculum committee and reported that after review, MUE 2153 Foundation of Music Education more than sufficiently addressed the historical, philosophical, legal and educational psychology concepts of EDF 3333.

This proposal has the unanimous support of the Department of Music faculty and Curriculum Committee.

Sincerely,

Department of Music Curriculum Committee

Dr. Craig Aarhus

Dr. Jeanette Fontaine

Dr. Jackie Edwards-Henry

Dr. Richard Human, chair

Dr. Gary Packwood

Dr. Ryan Ross

Dr. James Sobaskie

Dr. Sophie Wang

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, along with all required copies, to UCCC, Garner Hall, Room 279, Mail Stop 9702.

College: Education **Department:** ISWD

Contact Person: Lara Threet **Mail Stop:** 9730 **E-mail:** lthreet@colled.msstate.edu

Nature of Change: Modification **Date Initiated:** 02/01/2022 **Effective Date:** Fall 2022

Degree to be offered at: Campus 1

Current Degree Program Name: BS Industrial Technology

Major: Industrial Technology **Concentration:** Industrial Automation, Industrial Coatings, Industrial Packaging, Manufacturing & Maintenance Management, Process Technology

New Degree Program Name:

Major: **Concentration: Industrial Coatings, Industrial Packaging, Process Technology**

Summary of Proposed Changes: Please see attached sheet

Approved:	***Date:***
Department Head	***Date:*** 2/4/2022
Chair, College or School Curriculum Committee	4/13/2022
Dean of College or School	04/14/2022
Chair, University Committee on Courses and Curricula	
Chair, Graduate Council (if applicable)	
Chair, Deans Council	

☐ IHL Action Required

☐ SACS Letter Sent

A summary of the proposed changes for the Industrial Technology degree are as follows:

General Education:
Addition of MA 1313 College Algebra or MA 1323 Trigonometry from only MA 1323 Trigonometry

Industrial Technology Changes:

- We will remove the Industrial Distribution Concentration.
- We will add the following concentrations:
    - Industrial Coatings
    - Industrial Packaging
    - Process Technology

Industrial Technology Core Changes:

- Removal of INDT 1203 Industrial Drafting and Print Reading from the degree program
- Modification of credit hours for the following:
    - INDT 1814 Basic Industrial Electricity and Electronics to INDT 1813 Industrial Electricity and Electronics
    - INDT 3044 Industrial Safety to INDT 3043 Industrial Safety
    - INDT 3104 Advanced Industrial Electricity and Electronics to INDT 3103 Advanced Industrial Electricity and Electronics
    - INDT 4224 Quality Assurance to INDT 4223 Quality Assurance
- Modification in course number for the following:
    - INDT 1814 Basic Industrial Electricity and Electronics to INDT 1813 Industrial Electricity and Electronics
    - INDT 3044 Industrial Safety to INDT 3043 Industrial Safety
    - INDT 3104 Advanced Industrial Electricity and Electronics to INDT 3103 Advanced Industrial Electricity and Electronics
    - INDT 4224 Quality Assurance to INDT 4223 Quality Assurance
    - INDT 3343 3D Modeling for Manufacturing to INDT 2343 Parametric Modeling for 3D Design
    - INDT 4343 Computer Aided Drafting & Design to INDT 2353 Industrial Computer Aided Drafting & Design
- Modification of course name for the following:
    - INDT 3343 3D Modeling for Manufacturing to INDT 2343 Parametric Modeling for 3D Design
    - INDT 3813 Writing for Industry to INDT 3813 Technical Writing & Presentation for Industry
    - INDT 4343 Computer Aided Drafting & Design to INDT 2353 Industrial Computer Aided Drafting Design
- Removal of the following from the Industrial Technology Core Course requirements
    - INDT 2323 Welding Technology
    - INDT 2613 Industrial Fluid Power
    - INDT 3104 Advanced Industrial Electricity and Electronics
    - INDT 3343 3D Modeling for Manufacturing
    - INDT 3373 Forecast and Cost Modeling
    - INDT 3683 CNC Machine Metal Processes

    - INDT 4213 Energy Sources and Power Technology
- Addition of the following courses:
    - INDT 1001 Introduction to Industrial Technology
    - INDT 1003 Technical Drafting and Print Reading
    - INDT 3101 Junior Seminar
    - INDT 3323 Welding Technology II
    - INDT 3533 Intro to Process Technology
    - INDT 3543 Process Equipment & Instrumentation
    - INDT 3703 Principles of Packaging
    - INDT 3713 Packaging Materials
    - INDT 3753 Introduction to Industrial Coatings
    - INDT 3843 Rapid Prototyping
    - INDT 3854 Powder Coatings
    - INDT 3864 Liquid Coatings
    - INDT 3873 E-Coatings
    - INDT 4233 Maintenance Management
    - INDT 4243 System Design for Industrial Finishing Applications
    - INDT 4343 Computer Aided Drafting and Design
    - INDT 4543 Process Troubleshooting
    - INDT 4553 Oil and Gas Production
    - INDT 4703 Sustainable Packaging
    - INDT 4713 Healthcare and Food Packaging
- Restructure curriculum components into new sections
    - Introductory Skills
        - INDT 1203 Industrial Drafting and Print Reading
        - INDT 1813 Basic Industrial Electricity and Electronics
        - INDT 2113 Introduction to PLC Programming
        - INDT 2123 Introduction to CNC Programming
        - INDT 3223 Industrial Materials
        - INDT 3813 Writing for Industry
    - Management Skills
        - INDT 3063 Industrial Relations
        - INDT 3373 Forecast and Cost Modeling
    - Addition of options Management Skills
        - ACC 2013 Principles of Financial Accounting or ACC 2203 Survey of Accounting
        - BL 2413 Legal Environment of Business
        - MGT 3823 Responsible Leadership
        - *Any MGT 3000+ level course with the approval of the instructor and advisor*
    - General Knowledge
        - INDT 2323 Welding Technology
        - INDT 3043 Industrial Safety
        - INDT 3243 Industrial Metrology
        - INDT 3363 Motion & Time Study
        - INDT 4223 Quality Assurance

- Seminars
  - INDT 1101 Introduction to Industrial Technology
  - INDT 3101 Junior Seminar
  - INDT 4801 Senior Seminar

Industrial Automation Concentration:

- Addition of the following courses into Industrial Automation Concentration Required Courses
  - INDT 2613 Industrial Fluid Power
  - INDT 3103 Advanced Electricity and Electronics
  - INDT 4343 Computer Aided Drafting and Design
- Addition of Approved Electives
  - INDT 2323 Welding Technology
  - INDT 2343 Parametric Modeling for 3D Design
  - INDT 3543 Process Equipment and Instrumentation
  - INDT 3683 CNC Machining Processes
  - INDT 4213 Energy Source and Power
  - INDT 4463 Manufacturing Technology & Processes II
- Addition of 6 hours of Additional Electives
  - Completion of any two INDT 3000 + Level courses

Manufacturing and Maintenance Management Concentration:

- Addition of the following courses into Manufacturing and Maintenance Management Concentration Required Courses:
  - INDT 3103 Advanced Industrial Electricity and Electronics
  - INDT 2343 Parametric Modeling for 3D Design
  - INDT 3683 CNC Machining Processes
  - INDT 3843 Rapid Prototyping
  - INDT 4233 Maintenance Management
- Addition of Approved Electives
  - INDT 2323 Welding Technology
  - INDT 2353 Industrial Computer Aided Drafting & Design
  - INDT 3323 Welding Technology II
  - INDT 3543 Process Equipment & Instrumentation
  - INDT 4103 Industrial Control Systems
  - INDT 4203 Automated Systems I
  - INDT 4303 Robotics
  - INDT 4543 Process Troubleshooting
- Addition of 6 hours of Additional Electives
  - Completion of any two INDT 3000 + Level courses

Industrial Coatings:

- Addition of the following courses into Industrial Coatings Concentration Required Courses:
  - INDT 2613 Industrial Fluid Power
  - INDT 3103 Advanced Electricity & Electronics

    - INDT 3753 Introduction to Industrial Coatings
    - INDT 3854 Powder Coatings
    - INDT 3864 Liquid Coatings
    - INDT 4103 Industrial Controls
    - INDT 4303 Industrial Robotics
    - INDT 4373 Lean Six Sigma
- Addition of Approved Electives
    - INDT 2323 Welding Technology
    - INDT 2343 Parametric Modeling for 3D Design
    - INDT 2343 Industrial Computer Aided Drafting and Design
    - INDT 3873 E-Coatings
    - INDT 4243 System Design for Industrial Finishing Applications
    - INDT 4263 Manufacturing Technology and Processes I
    - INDT 4463 Manufacturing Technology and Processes II
- Addition of 6 hours of Additional Electives
    - Completion of any two INDT 3000 + Level courses

Industrial Packaging:

- Addition of the following courses into Industrial Packaging Concentration Required Courses:
    - INDT 2343 Parametric Modeling for 3D Design
    - INDT 3703 Principles of Packaging
    - INDT 3713 Packaging Materials
    - MKT 3323 International Logistics
    - INDT 4203 Automated Systems I
    - INDT 4373 Lean Six Sigma
    - INDT 4703 Sustainable Packaging
- Addition of Approved Electives
    - INDT 2323 Welding Technology
    - INDT 2353 Industrial Computer Aided Drafting & Design
    - INDT 2613 Industrial Fluid Power
    - INDT 3843 Rapid Prototyping
    - INDT 4233 Maintenance Management
    - INDT 4263 Manufacturing Technology and Processes I
    - INDT 4403 Automated Systems II
    - INDT 4713 Healthcare and Food Packaging
- Addition of 6 hours of Additional Electives
    - Completion of any two INDT 3000 + Level courses

Process Technology:

- Addition of the following courses into the Process Technology Concentration Required Courses:
    - INDT 2323 Welding Technology
    - INDT 2353 Industrial Computer Aided Drafting and Design
    - INDT 2613 Fluid Power
    - INDT 3533 Intro to Process Technology

    - INDT 3543 Process Equipment & Instrumentation
    - INDT 4233 Maintenance Management
    - INDT 4533 Process Systems and Operations
    - INDT 4543 Process Troubleshooting
- Addition of Approved Electives
    - INDT 2343 Parametric Modeling for 3D Design
    - INDT 3323 Welding Technology II
    - INDT 3103 Advanced Electricity & Electronics
    - INDT 4103 Industrial Control Systems
    - INDT 4303 Industrial Robotics
    - INDT 4553 Oil and Gas Production
- Addition of 6 hours of Additional Electives
    - Completion of any two INDT 3000 + Level courses

Catalog Description (Old):
The industrial technology curriculum is designed for students who want to prepare for employment leading to supervisory and management positions in the production, automation, maintenance, or logistics areas of industry. The role of the Industrial Technology graduate is that of a facilitator of ideas from senior management to the production floor. Successful completion of the four-year curriculum would provide an excellent background in science, mathematics, design, and human relations. This is coupled with the practical use of both manual and automated machinery and the associated tools, as well as knowledge of industrial manufacturing processes, materials, and logistics.

To this extent the curriculum is divided into three concentrations:
- Industrial Automation
- Industrial Distribution
- Manufacturing & Maintenance Management

These concentrations are designed to give students a specialization that they can take into the workforce and build upon throughout their industrial career. Graduates should quickly become proficient in both the supervisory and administrative roles of dealing with personnel, and depending upon the concentration selected, the graduate should become adept in the various aspects of the manufacture, distribution and automation of industrial products and processes. Employment opportunities are excellent for this degree.

The MSU Bulletin is not the final source of information. Departmental advisement is critically important for the course sequence and selection. Students should always get advisement and approval from their MSU advisor for course scheduling.

Upper division courses (3000 level and up) must be taken at a senior college or university. See a faculty advisor for prerequisites and proper course sequence.
NOTE: This curriculum lends itself well to a minor in Business Administration or Marketing.

Catalog Description (New):

As industry evolves, so should education to meet new demands. The Industrial Technology program works with industry to meet their needs and close skills gaps seen in various industries. The Industrial Technology curriculum encourages hands on learning in the classroom utilizing technologies found in industry. The curriculum is designed to provide a well-rounded study of various areas of industry including maintenance, programming, design, safety, systems analysis, and communication and troubleshooting skills. The Industrial Technology program is a great fit for students who like working with their hands and learning by doing. Industrial Technology students are leaders in their chosen fields with employment opportunities on the rise. The department provides one-on-one advising for all Industrial Technology students on all campuses.

To this extent, the following concentrations are available:
- Maintenance and Manufacturing Management
- Industrial Automation
- Industrial Packaging
- Industrial Coatings

- Process Technology

These concentrations are designed to give students a specialization that they can take into the workforce and build upon throughout their industrial career. Graduates should quickly become proficient in both the supervisory and administrative roles of dealing with personnel, and depending upon the concentration selected, the graduate should become adept in the various aspects of the manufacture, automation, coatings, design, safety of industrial products and systems analysis. Employment opportunities are excellent for this degree.

The MSU Bulletin is not the final source of information. Departmental advisement is critically important for the course sequence and selection. Students should always get advisement and approval from their MSU advisor for course scheduling.

Upper division courses (3000 level and up) must be taken at a senior college or university. See a faculty advisor for prerequisites and proper course sequence.

NOTE: This curriculum lends itself well to a minor in Business Administration or Marketing.

Curriculum Outline Table:

CURRENT Degree Description	PROPOSED Degree Description
Degree: Bachelor of Science Major: Industrial Technology Concentration: Manufacturing and Maintenance Management, Industrial Automation*, Industrial Distribution*	Degree: Bachelor of Science Major: Industrial Technology Concentration: Manufacturing and Maintenance Management, Industrial Automation, **Industrial Packaging, Industrial Coatings, Process Technology**
The industrial technology curriculum is designed for students who want to prepare for employment leading to supervisory and management positions in the production, automation, maintenance, or logistics areas of industry. The role of the Industrial Technology graduate is that of a facilitator of ideas from senior management to the production floor. Successful completion of the four-year curriculum would provide an excellent background in science, mathematics, design, and human relations. This is coupled with the practical use of both manual and automated machinery and the associated tools, as well as knowledge of industrial manufacturing processes, materials, and logistics. *To this extent the curriculum is divided into three concentrations:* • *Industrial Automation* • *Industrial Distribution* • *Manufacturing & Maintenance Management* *These concentrations are designed to give students a*	**As industry evolves, so should education to meet new demands. The Industrial Technology program works with industry to meet their needs and close skills gaps seen in various industries. The Industrial Technology curriculum encourages hands on learning in the classroom utilizing technologies found in industry. The Industrial Technology program is a great fit for students who like working with their hands and learning by doing. Industrial Technology students are leaders in their chosen fields with employment opportunities on the rise. The department provides one-on-one advising for all Industrial Technology students on all campuses.** To this extent, the curriculum is divided into five concentrations: • **Industrial Automation** • **Industrial Coatings** • **Industrial Packaging** • **Manufacturing & Maintenance Management** • **Process Technology**

specialization that they can take into the workforce and build upon throughout their industrial career. Graduates should quickly become proficient in both the supervisory and administrative roles of dealing with personnel, and depending upon the concentration selected, the graduate should become adept in the various aspects of the manufacture, distribution and automation of industrial products and processes. Employment opportunities are excellent for this degree. *The MSU Bulletin is not the final source of information. Departmental advisement is critically important for the course sequence and selection. Students should always get advisement and approval from their MSU advisor for course scheduling.* *Upper division courses (3000 level and up) must be taken at a senior college or university. See a faculty advisor for prerequisites and proper course sequence.* *NOTE: This curriculum lends itself well to a minor in Business Administration or Marketing.* Concentrations available are: -Maintenance and Manufacturing Management -Industrial Automation *-Industrial Distribution*	**The curriculum is designed to provide a well-rounded study of various areas of industry including maintenance, programming, design, safety, systems analysis, and communication and troubleshooting skills.** Employment opportunities are excellent for this degree. The MSU Bulletin is not the final source of information. Departmental advisement is critically important for the course sequence and selection. Students should always get advisement and approval from their MSU advisor for course scheduling. Upper division courses (3000 level and up) must be taken at a senior college or university. See a faculty advisor for prerequisites and proper course sequence. **NOTE: This curriculum lends itself well to a minor in Business Administration or Marketing.** Concentrations available are: -Maintenance and Manufacturing Management -Industrial Automation **-Industrial Packaging** **-Industrial Coatings** **-Process Technology**
CONCENTRATION DESCRIPTION **Industrial Automation** The Industrial Automation concentration is designed for students who wish to enter a career in the automation of manufacturing processes. This concentration is concerned with fixed automation, robotics, and the troubleshooting of automated systems and their role in the manufacturing environment.	CONCENTRATION DESCRIPTION **Industrial Automation** The Industrial Automation concentration is designed for students who wish to enter a career in the automation of manufacturing processes. This concentration is concerned with fixed automation, robotics, and the troubleshooting of automated systems and their role in the manufacturing environment.

CURRENT CURRICULUM OUTLINE	Required Hours
English (General Education):	6
EN 1103 English Composition I	
EN 1113 English Composition II	
Fine Arts (General Education):	3
Any Gen Ed Course	
Natural Sciences:	8
CH 1043 or higher	
CH 1051 or higher	

PROPOSED CURRICULUM OUTLINE	Required Hours
English (General Education):	6
EN 1103 English Composition I	
EN 1113 English Composition II	
Fine Arts (General Education):	3
Any Approved Gen Ed Course	
Natural Sciences:	8
CH 1043 or higher	
CH 1051 or higher	

PH 1013 or higher PH 1011 or higher		PH 1013 or higher PH 1011 or higher	
Extra Science: *CH 1213 or higher* *PH 1023 or higher*	3		
Math (General Education): *MA 1323 or higher* MA 1613 or higher BQA/MA/ST 2113	9	**Math (General Education):** **MA 1313 or higher** MA 1613 or higher BQA/MA/ST 2113	9
Humanities (General Education): Any Gen Ed Course	6	**Humanities (General Education):** Any Approved Gen Ed Course	6
Social/Behavioral Sciences (General Education): Any Social/Behavioral Gen Ed Course	6	**Social/Behavioral Sciences (General Education):** Any Social/Behavioral Gen Ed Course	6
General Education Total	41	General Education Total	38
MAJOR CORE COURSES *INDT 1203 Industrial Drafting & Print Reading* *INDT 1814 Basic Industrial Electricity & Electronics* INDT 2113 Introduction to PLC Programming INDT 2123 Introduction to CNC Programming *INDT 2323 Welding Technology* *INDT 2613 Industrial Fluid Power* *INDT 3044 Industrial Safety* INDT 3063 Industrial Human Relations *INDT 3104 Advanced Industrial Electricity & Electronics* INDT 3223 Industrial Materials INDT 3243 Industrial Metrology *INDT 3343 3D Modeling for Manufacturing* INDT 3363 Motion and Time Study *INDT 3373 Forecast and Cost Modeling* *INDT 3683 CNC Machine Metal Processes*	59	**MAJOR CORE COURSES** ***Introductory Skills*** **INDT 1003 Technical Drafting and Print Reading** **INDT 1813 Basic Industrial Electricity and Electronics** INDT 2113 Introduction to PLC Programming INDT 2123 Introduction to CNC Programming **INDT 3813 Technical Writing and Presentation for Industry** ***Management Skills*** INDT 3063 Industrial Human Relations INDT 3373 Forecast and Cost Modeling **Management Skills requirement is satisfied by successful completion of ACC 2013 Principles of Financial Accounting, BL 2413 Legal Environment of Business, MGT 3823 Responsible Leadership or any MGT 3000 + Level with approval from advisor and instructor**	42 15 9

INDT 3813 Writing for Industry *INDT 4213 Energy Sources and Power Technology* *INDT 4224 Quality Assurance* INDT 4801 Senior Seminar Oral Communication Requirement: Satisfied by successful completion of INDT 3044, INDT 3063, INDT 3363, and INDT 3813 Writing Requirement: Satisfied by successful completion of INDT 3063 and INDT 3813 Computer Literacy: Satisfied by successful completion of INDT 1203, INDT 3343, INDT 3373, INDT 3813, and INDT 4801		***General Knowledge*** INDT 3223 Industrial Materials **INDT 3043 Industrial Safety** INDT 3243 Industrial Metrology INDT 3363 Motion & Time Study **INDT 4223 Quality Assurance** ***Seminars*** **INDT 1001 Introduction to Industrial Technology** **INDT 3101 Junior Seminar** INDT 4801 Senior Seminar Oral Communication Requirement: Satisfied by successful completion of INDT 3043, INDT 3063, INDT 3363, and INDT 3813 Writing Requirement: Satisfied by successful completion of INDT 3063 and INDT 3813 Computer Literacy: Satisfied by successful completion of INDT 1003, INDT 3343, INDT 3373, INDT 3813, and INDT 4801	15 3
Major Core Courses Total	59	Major Core Courses Total	42
CONCENTRATION REQUIRED COURSES <u>Industrial Automation</u> *ACC 2013 Principles of Financial Accounting* *BL 2413 The Legal Environment of Business* INDT 4103 Industrial Control Systems INDT 4203 Automated Systems I INDT 4233 Maintenance Management INDT 4303 Industrial Robotics INDT 4403 Automated Systems II *Concentration Course requirement is satisfied by*	24	**CONCENTRATION REQUIRED COURSES** <u>Industrial Automation</u> **INDT 2353 Computer Aided Drafting and Design** **INDT 2613 Industrial Fluid Power** **INDT 3103 Advanced Electricity and Electronics** INDT 4103 Industrial Control Systems INDT 4203 Automated Systems I INDT 4233 Maintenance Management INDT 4303 Industrial Robotics INDT 4403 Automated Systems II	24

successful completion of INDT 4343 Computer Aided Drafting & Design, INDT 4373 Lean Six Sigma, INDT 4263 Manufacturing Technology and Processing I			
Concentration Required Courses Total	24	Concentration Required Courses Total	24
		CONCENTRATION ELECTIVE COURSES **INDT 2323 Welding Technology** **INDT 2343 Parametric Modeling for 3D Design** **INDT 3543 Process Equipment and Instrumentation** **INDT 3683 CNC Machining Processes** **INDT 42313 Energy Source & Power** INDT 4263 Manufacturing Technology and Processes I **INDT 4463 Manufacturing Technology and Processes II**	12
		ADDITIONAL ELECTIVES **Additional Electives requirement is satisfied by successful completion of any INDT 3000 + Level course.**	6
Total Hours	124	Total Hours	122
		CONCENTRATION DESCRIPTION **Manufacturing and Maintenance Management** The Manufacturing and Maintenance Management concentration is designed for students who want to enter a career in the manufacturing sector. This concentration is concerned with the management, maintenance and day-to-day operation and improvement of manufacturing processes.	
		PROPOSED CURRICULUM OUTLINE	Required Hours
		CONCENTRATION REQUIRED COURSES <u>Manufacturing and Maintenance Management</u> **INDT 2343 Parametric Modeling for 3D Design** **INDT 3103 Advanced Industrial Electricity & Electronics** **INDT 3683 CNC Machining Processes** **INDT 3843 Rapid Prototyping**	24

INDT 4233 Maintenance Management INDT 4263 Manufacturing Technology and Processes I **INDT 4373 Lean Six Sigma** INDT 4463 Manufacturing Technology and Processes II	
Concentration Required Courses Total	24
CONCENTRATION ELECTIVE COURSES **INDT 2323 Welding Technology** **INDT 2353 Industrial Computer Aided Drafting & Design** **INDT 3323 Welding Technology II** **INDT 3543 Process Equipment & Instrumentation** **INDT 4103 Industrial Control Systems** INDT 4203 Automated Systems I INDT 4303 Robotics **INDT 4543 Process Troubleshooting**	12
ADDITIONAL ELECTIVES **Additional Electives requirement is satisfied by successful completion of any INDT 3000 + Level course.**	6
Total Hours	122
CONCENTRATION DESCRIPTION **Industrial Coatings** The Industrial Coatings concentration provides classroom instruction and hands-on, practical experience to prepare students for employment in the industrial coatings field. The materials prepare individuals to prepare and treat surfaces, apply various coating materials, and analyze quality at all stages of the process. The concentration emphasizes safe work practices, quality surface creation and preparation, and effective coatings while learning about coating equipment, application, and properties.	
PROPOSED CURRICULUM OUTLINE	Required Hours
CONCENTRATION REQUIRED COURSES <u>Industrial Coatings</u>	24

INDT 2613 Industrial Fluid Power **INDT 3103 Advanced Electricity & Electronics** **INDT 3753 Introduction to Industrial Coatings** **INDT 3853 Powder Coatings** **INDT 3863 Liquid Coatings** **INDT 4103 Industrial Controls** **INDT 4303 Industrial Robotics** **INDT 4373 Lean Six Sigma**	
Concentration Required Courses Total	24
CONCENTRATION ELECTIVE COURSES **INDT 2323 Welding Technology** **INDT 2343 Parametric Modeling for 3D design** **INDT 2353 Industrial Computer Aided Drafting and Design** **INDT 3873 E-Coatings** **INDT 4243 System Design for Industrial Finishing Applications** **INDT 4263 Manufacturing Technology and Processes I** **INDT 4463 Manufacturing Technology and Processes II**	12
ADDITIONAL ELECTIVES **Additional Electives requirement is satisfied by successful completion of any INDT 3000 + Level course.**	6
Total Hours	122
CONCENTRATION DESCRIPTION **Industrial Packaging**	
The Industrial Packaging concentration provides classroom instruction and hands-on, practical experience to prepare students for employment in the packaging development field. The materials prepare individuals to identify the needs and design sustainable, effective packaging products. The concentration emphasizes design principles, material characteristics, and sustainable products.	

PROPOSED CURRICULUM OUTLINE	Required Hours
CONCENTRATION REQUIRED COURSES	24
Industrial Packaging	
INDT 2613 Industrial Fluid Power	
INDT 3103 Advanced Electricity & Electronics	
INDT 3753 Introduction to Industrial Coatings	
INDT 3853 Powder Coatings	
INDT 3863 Liquid Coatings	
INDT 4103 Industrial Controls	
INDT 4303 Industrial Robotics	
INDT 4373 Lean Six Sigma	
Concentration Required Courses Total	24
CONCENTRATION ELECTIVE COURSES	12
INDT 2323 Welding Technology	
INDT 2343 Parametric Modeling for 3D Design	
INDT 2353 Industrial Computer Aided Drafting and Design	
INDT 3873 E-Coatings	
INDT 4243 System Design for Industrial Finishing Applications	
INDT 4263 Manufacturing Technology and Processes I	
INDT 4463 Manufacturing Technology and Processes II	
ADDITIONAL ELECTIVES	6
Additional Electives requirement is satisfied by successful completion of any INDT 3000 + Level course.	
Total Hours	122
CONCENTRATION DESCRIPTION	
Process Technology	
The Process Technology concentration provides classroom instruction and hands-on, practical experience to prepare students for employment, and chemical/petrochemical products. The	

	concentration emphasizes safe and efficient work practices while learning about the equipment, instrumentation, systems, and operations related to chemical processing.	
	PROPOSED CURRICULUM OUTLINE	Required Hours
	CONCENTRATION REQUIRED COURSES	24
	Process Technology	
	INDT 2353 Industrial Computer Aided Drafting and Design	
	INDT 2323 Welding Technology	
	INDT 2613 Fluid Power	
	INDT 3533 Intro to Process Technology	
	INDT 3543 Process Equipment & Instrumentation	
	INDT 4233 Maintenance Management	
	INDT 4533 Process Systems & Operations	
	INDT 4543 Process Troubleshooting	
	CONCENTRATION ELECTIVE COURSES	12
	INDT 2343 Parametric Modeling for 3D Design	
	INDT 3323 Welding Technology II	
	INDT 3103 Advanced Electricity & Electronics	
	INDT 4103 Industrial Control Systems	
	INDT 4303 Industrial Robotics	
	INDT 4553 Oil and Gas Production	
	ADDITIONAL ELECTIVES	6
	Additional Electives requirement is satisfied by successful completion of any INDT 3000 + Level course.	
	Total Hours	122

Justification and Student Learning Outcomes:
The industrial technology faculty have proposed these modifications after reviewing the curriculum and obtaining feedback from the industrial technology advisory board, industry leaders, and graduates of the program who are in senior management/supervisory positions. The modifications to the industrial technology core have been made to allow for better sequencing of courses so that the student can build upon the knowledge gained in lower-level classes and to allow students to create personalized pathways to aid them in developing the skills needed for their chosen career fields. Modifications were also made to the concentration areas to give industrial technology students more exposure to issues that are pertinent to their chosen concentration area, thus giving them more opportunities to gain initial employment, as well as career development. By offering the courses online, it will provide an opportunity for the program to reach potential students nationwide.

The Distribution concentration was removed due to lack of interest by students. While this concentration has been eliminated, some skills and knowledge bases have been redistributed among the remaining two and three new concentrations.

The Industrial Coatings, Industrial Packaging, and Process Technology concentrations have been developed as a response to inquiries from industry as well as identified education and skills gaps found in certain industries. The industry advisory board requested a packaging and paint concentration to aid in filling skills gaps found in industry. There are no similar concentrations that focus on the specified areas of industry that was requested by the industry advisory board.

The Industrial Packaging program was created to develop skilled packaging designers for companies who have specialized packaging requirements. These students will be able to develop packaging from material selection to creation to how packaging affects environmental concerns. Skills learned in the concentration can be applied to numerous industries that require design, testing, and logistics skills.

The Industrial Coatings program was created to develop skilled employees from surface prep, coating choice and mix, to application and quality inspections. These students will be able to provide theory and practical knowledge to any industry field where a coating is required to provide safety, identification, or extend the use of a product.

The Process Technology concentration was developed to fill a gap in education for those working in the field. While programs exist in the junior/community college level of academia, there is no bachelor's degree offered in the state. This concentration was created to provide support and a more skilled workforce for the oil and gas industry. Skills learned in the Process Technology concentration can be applied to a plethora of industries that require a systems analysis approach to product development.

Currently, there is a major shortfall of technical employees at both the state and national levels. These proposed changes will give graduating students the ability to find employment in high quality technical positions.

The modifications do not duplicate any programs are currently in the system. The current program has a good cross-section of students, and this is anticipated to remain the same.

The industrial technology program at Mississippi State University has a very high placement rate, and salaries are consummate with those of graduating industrial engineers. As the demand for more highly qualified technicians increases, the placement rates and salaries expected to increase.

The learning outcomes of this program are that students should be able to facilitate ideas from senior management to the production floor. They could also be able to manage the day-to-day operations, maintenance, and production troubleshooting of complex industrial equipment and systems. The graduate student should also be able to make recommendations on adaptation, deletion, or replacement/capital investment of equipment to aid the manufacturing process.

Support:
Accompanying this degree program modification is a letter of support signed by all the faculty in the industrial technology program. The faculty unanimously voted to support the proposed degree program changes for the industrial technology curriculum.

Proposed 4-Letter Abbreviation:
The proposed 4-letter abbreviation for the program is – INDT

Effective Date:
The proposed effective date is Fall 2022

MISSISSIPPI STATE UNIVERSITY

COLLEGE OF EDUCATION
Department of Instructional Systems
and Workforce Development
P.O. Box 9730
108 Herbert Street
100 Industrial Education Building
Mississippi State, MS 39762
P. 662.325.2281
F. 662.325.7599
iswd.msstate.edu

February 3, 2022

TO: Box Council and UCCC Committee Members

FROM: Lara Threet

RE: Support of: Approval to revise the Industrial Technology degree curriculum

This letter of support is offered by the Industrial Technology degree program faculty for the proposed following revisions.

- Removal of the Industrial Distribution Concentration
- Removal of INDT 1203 Industrial Drafting and Print Reading
- Addition of the Industrial Coatings Concentration
- Addition of the Industrial Packaging Concentration
- Addition of the Process Technology Concentration
- Addition of the following courses
    - INDT 1001 Introduction to Industrial Technology
    - INDT 1003 Technical Drafting & Print Reading
    - INDT 1133 Intro to Process Technology
    - INDT 2533 Processing of Oil and Gas
    - INDT 3101 Junior Seminar
    - INDT 3133 Process Equipment & Instrumentation
    - INDT 3233 Process Systems and Operations
    - INDT 3323 Welding Technology II
    - INDT 3333 Process Quality and Troubleshooting
    - INDT 3703 Principles of Packaging
    - INDT 3713 Packaging Materials
    - INDT 3753 Industrial Coatings
    - INDT 3853 Powder Coatings
    - INDT 3863 Liquid Coatings
    - INDT 3873 E-Coatings
    - INDT 4243 System Design for Industrial Finishing Applications
    - INDT 4443 Additive Manufacturing & Rapid Prototyping
    - INDT 4703 Sustainable Packaging
    - INDT 4713 Healthcare and Food Packaging
- Modification of credit hours of INDT 1814 Basic Industrial Electricity and Electronics to INDT 1813 Basic Industrial Electricity and Electronics
- Modification of course number of INDT 1814 Basic Industrial Electricity and Electronics to INDT 1813 Basic Industrial Electricity and Electronics

- Modification of course name INDT 3343 3D Modeling for Manufacturing to INDT 2343 Parametric Modeling for 3D Design
- Modification of course number from INDT 3343 3D Modeling for Manufacturing to INDT 2343 Parametric Modeling for 3D Design
- Modification of course number from INDT 4343 Computer Aided Drafting & Design to INDT 2353 Industrial Computer Aided Drafting & Design
- Modification of course name from INDT 4343 Computer Aided Drafting & Design to INDT 2353 Industrial Computer Aided Drafting Design
- Modification of course number from INDT 3044 Industrial Safety to INDT 3043 Industrial Safety
- Modification of course hours from INDT 3044 Industrial Safety to INDT 3043 Industrial Safety
- Modification of credit hours from INDT 3014 Advanced Industrial Electricity and Electronics to INDT 3103 Advanced Industrial Electricity and Electronics
- Modification of course number from INDT 3014 Advanced Industrial Electricity and Electronics to INDT 3103 Advanced Industrial Electricity and Electronics
- Modification of course name from INDT 3813 Writing for Industry to INDT 3813 Technical Writing & Presentation for Industry
- Modification of credit hours from INDT 4224 Quality Assurance to INDT 4223 Quality Assurance
- Modification of course number from INDT 4224 Quality Assurance to INDT 4223 Quality Assurance
- Removal of the following from the Industrial Technology Degree Core requirements
    - INDT 2323 Welding Technology
    - INDT 2613 Industrial Fluid Power
    - INDT 3103 Advanced Industrial Electricity and Electronics
    - INDT 3343 3D Modeling for Manufacturing
    - INDT 3373 Forecast and Cost Modeling
    - INDT 3683 CNC Machine Metal Processes
    - INDT 4213 Energy Sources and Power Technology
- Addition of the following to the Industrial Technology Degree Core requirements
    - INDT 1001 Introduction to Industrial Technology
    - INDT 1003 Technical Drafting and Print Reading
    - INDT 3101 Junior Seminar
- Degree flow restructure to include the following skill sets
    - Introductory Skills
    - Management Skills
    - General Knowledge Skills
    - Seminars

The changes presented will provide a more robust curriculum to help meet the growing needs of industry for technical employees and aid with articulation and course flows.

As indicated by the signatures below, the Industrial Technology program unanimously approves the above proposal as written for submission to the Box Council and the UCCC.

Industrial Technology Program Members:

Lara Threet 2/3/22
Ms. Lara Threet Date

2/3/22
Dr. John Wyatt Date

Mickey Giordano 2/4/2022
Mr. Mickey Giordano Date

2/3/22
Mrs. Jenn Dupré Date

2/3/2022
Mr. Jody Buchanan Date

Swapnil Patole 2/3/2022
Dr. Swapnil Patole Date

2/4/2022
Dr. Kay Morgan Date

MISSISSIPPI STATE UNIVERSITY

Richard C. Adkerson School of Accountancy
P.O. Box EF
Mississippi State, MS 39762-5661
P. 662.325.3710
F. 662.325.1646
business.msstate.edu/accounting

February 7, 2022

To Whom it May Concern:

The Adkerson School of Accountancy does not expect an issue in providing ACC 2013 Financial Accounting Principles as an elective option to the three concentrations with Industrial Technology.

Sincerely,

Shawn Mauldin

Shawn Mauldin
Director
Adkerson School of Accountancy

MISSISSIPPI STATE UNIVERSITY

Management & Information Systems Department
College of Business

P.O. Box 9581
Mississippi State, MS 39762

P. 662.325.3928

To: University Committee on Courses and Curricula

From: Head, Management & Information Systems Department
Starkville Campus

Date: February 4, 2022

This letter is to express the support of the Department of Management & Information Systems (MIS) for the inclusion of MGT 3823: Responsible Leadership as an elective option in the curriculum for Industrial Technology students. As discussed with the Program Coordinator Lara Threet, students seeking this elective will need approval from their advisor and the instructor.

Thank you,

Laura E. Marler

MISSISSIPPI STATE UNIVERSITY

COLLEGE OF BUSINESS
Department of Marketing, Quantitative Analysis & Businsess Law
P.O. Box 9582
324 McCool Hall
Mississippi State, MS 39762
P. 662.325.3163
F. 662.325.7012

To: University Committee on Courses and Curricula

From: Melissa Moore, Professor of Marketing and Department Head, Marketing, Quantitative Analysis and Business Law Department

Date: February 4, 2022

The department of Marketing, Quantitative Analysis and Business Law supports the addition of MKT 3323 (International Logistics) as a required course and BL 2413 (Legal Environment of Business) as an elective course as part of the newly created concentration, Industrial Packaging. If you have any questions, or need any additional information, please contact Dr. Melissa Moore at mmoore@business.msstate.edu.

Dr. Melissa Moore, Professor of Marketing and Department Head

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, along with all required copies, to UCCC, Garner Hall, Room 279, Mail Stop 9702.

College: Education **Department:** ISWD

Contact Person: Lara Threet **Mail Stop:** 9730 **E-mail:** lthreet@colled.msstate.edu

Nature of Change: Modification **Date Initiated:** 02/01/2022 **Effective Date:** Fall 2022

Degree to be offered at: Campus 5

Current Degree Program Name: BS Industrial Technology

Major: Industrial Technology **Concentration:** Industrial Automation, Industrial Coatings, Industrial Packaging, Manufacturing & Maintenance Management, Process Technology

New Degree Program Name:

Major: **Concentration: Industrial Coatings, Industrial Packaging, Process Technology**

Summary of Proposed Changes: Please see attached sheet

Approved:	***Date:***
Department Head	***Date:*** 2/4/2022
Chair, College or School Curriculum Committee	4/13/2022
Dean of College or School	04/14/2022
Chair, University Committee on Courses and Curricula	
Chair, Graduate Council (if applicable)	
Chair, Deans Council	

☐ IHL Action Required

☐ SACS Letter Sent

A summary of the proposed changes for the Industrial Technology degree are as follows:

General Education:
Addition of MA 1313 College Algebra or MA 1323 Trigonometry from only MA 1323 Trigonometry

Industrial Technology Changes:

- We will remove the Industrial Distribution Concentration.
- We will add the following concentrations:
    - Industrial Coatings
    - Industrial Packaging
    - Process Technology

Industrial Technology Core Changes:

- Removal of INDT 1203 Industrial Drafting and Print Reading from the degree program
- Modification of credit hours for the following:
    - INDT 1814 Basic Industrial Electricity and Electronics to INDT 1813 Industrial Electricity and Electronics
    - INDT 3044 Industrial Safety to INDT 3043 Industrial Safety
    - INDT 3104 Advanced Industrial Electricity and Electronics to INDT 3103 Advanced Industrial Electricity and Electronics
    - INDT 4224 Quality Assurance to INDT 4223 Quality Assurance
- Modification in course number for the following:
    - INDT 1814 Basic Industrial Electricity and Electronics to INDT 1813 Industrial Electricity and Electronics
    - INDT 3044 Industrial Safety to INDT 3043 Industrial Safety
    - INDT 3104 Advanced Industrial Electricity and Electronics to INDT 3103 Advanced Industrial Electricity and Electronics
    - INDT 4224 Quality Assurance to INDT 4223 Quality Assurance
    - INDT 3343 3D Modeling for Manufacturing to INDT 2343 Parametric Modeling for 3D Design
    - INDT 4343 Computer Aided Drafting & Design to INDT 2353 Industrial Computer Aided Drafting & Design
- Modification of course name for the following:
    - INDT 3343 3D Modeling for Manufacturing to INDT 2343 Parametric Modeling for 3D Design
    - INDT 3813 Writing for Industry to INDT 3813 Technical Writing & Presentation for Industry
    - INDT 4343 Computer Aided Drafting & Design to INDT 2353 Industrial Computer Aided Drafting Design
- Removal of the following from the Industrial Technology Core Course requirements
    - INDT 2323 Welding Technology
    - INDT 2613 Industrial Fluid Power
    - INDT 3104 Advanced Industrial Electricity and Electronics
    - INDT 3343 3D Modeling for Manufacturing
    - INDT 3373 Forecast and Cost Modeling
    - INDT 3683 CNC Machine Metal Processes

    - INDT 4213 Energy Sources and Power Technology
- Addition of the following courses:
    - INDT 1001 Introduction to Industrial Technology
    - INDT 1003 Technical Drafting and Print Reading
    - INDT 3101 Junior Seminar
    - INDT 3323 Welding Technology II
    - INDT 3533 Intro to Process Technology
    - INDT 3543 Process Equipment & Instrumentation
    - INDT 3703 Principles of Packaging
    - INDT 3713 Packaging Materials
    - INDT 3753 Introduction to Industrial Coatings
    - INDT 3843 Rapid Prototyping
    - INDT 3854 Powder Coatings
    - INDT 3864 Liquid Coatings
    - INDT 3873 E-Coatings
    - INDT 4233 Maintenance Management
    - INDT 4243 System Design for Industrial Finishing Applications
    - INDT 4343 Computer Aided Drafting and Design
    - INDT 4543 Process Troubleshooting
    - INDT 4553 Oil and Gas Production
    - INDT 4703 Sustainable Packaging
    - INDT 4713 Healthcare and Food Packaging
- Restructure curriculum components into new sections
    - Introductory Skills
        - INDT 1203 Industrial Drafting and Print Reading
        - INDT 1813 Basic Industrial Electricity and Electronics
        - INDT 2113 Introduction to PLC Programming
        - INDT 2123 Introduction to CNC Programming
        - INDT 3223 Industrial Materials
        - INDT 3813 Writing for Industry
    - Management Skills
        - INDT 3063 Industrial Relations
        - INDT 3373 Forecast and Cost Modeling
    - Addition of options Management Skills
        - ACC 2013 Principles of Financial Accounting or ACC 2203 Survey of Accounting
        - BL 2413 Legal Environment of Business
        - MGT 3823 Responsible Leadership
        - *Any MGT 3000+ level course with the approval of the instructor and advisor*
    - General Knowledge
        - INDT 2323 Welding Technology
        - INDT 3043 Industrial Safety
        - INDT 3243 Industrial Metrology
        - INDT 3363 Motion & Time Study
        - INDT 4223 Quality Assurance

- Seminars
  - INDT 1101 Introduction to Industrial Technology
  - INDT 3101 Junior Seminar
  - INDT 4801 Senior Seminar

Industrial Automation Concentration:

- Addition of the following courses into Industrial Automation Concentration Required Courses
  - INDT 2613 Industrial Fluid Power
  - INDT 3103 Advanced Electricity and Electronics
  - INDT 4343 Computer Aided Drafting and Design
- Addition of Approved Electives
  - INDT 2323 Welding Technology
  - INDT 2343 Parametric Modeling for 3D Design
  - INDT 3543 Process Equipment and Instrumentation
  - INDT 3683 CNC Machining Processes
  - INDT 4213 Energy Source and Power
  - INDT 4463 Manufacturing Technology & Processes II
- Addition of 6 hours of Additional Electives
  - Completion of any two INDT 3000 + Level courses

Manufacturing and Maintenance Management Concentration:

- Addition of the following courses into Manufacturing and Maintenance Management Concentration Required Courses:
  - INDT 3103 Advanced Industrial Electricity and Electronics
  - INDT 2343 Parametric Modeling for 3D Design
  - INDT 3683 CNC Machining Processes
  - INDT 3843 Rapid Prototyping
  - INDT 4233 Maintenance Management
- Addition of Approved Electives
  - INDT 2323 Welding Technology
  - INDT 2353 Industrial Computer Aided Drafting & Design
  - INDT 3323 Welding Technology II
  - INDT 3543 Process Equipment & Instrumentation
  - INDT 4103 Industrial Control Systems
  - INDT 4203 Automated Systems I
  - INDT 4303 Robotics
  - INDT 4543 Process Troubleshooting
- Addition of 6 hours of Additional Electives
  - Completion of any two INDT 3000 + Level courses

Industrial Coatings:

- Addition of the following courses into Industrial Coatings Concentration Required Courses:
  - INDT 2613 Industrial Fluid Power
  - INDT 3103 Advanced Electricity & Electronics

    - INDT 3753 Introduction to Industrial Coatings
    - INDT 3854 Powder Coatings
    - INDT 3864 Liquid Coatings
    - INDT 4103 Industrial Controls
    - INDT 4303 Industrial Robotics
    - INDT 4373 Lean Six Sigma
- Addition of Approved Electives
    - INDT 2323 Welding Technology
    - INDT 2343 Parametric Modeling for 3D Design
    - INDT 2343 Industrial Computer Aided Drafting and Design
    - INDT 3873 E-Coatings
    - INDT 4243 System Design for Industrial Finishing Applications
    - INDT 4263 Manufacturing Technology and Processes I
    - INDT 4463 Manufacturing Technology and Processes II
- Addition of 6 hours of Additional Electives
    - Completion of any two INDT 3000 + Level courses

Industrial Packaging:

- Addition of the following courses into Industrial Packaging Concentration Required Courses:
    - INDT 2343 Parametric Modeling for 3D Design
    - INDT 3703 Principles of Packaging
    - INDT 3713 Packaging Materials
    - MKT 3323 International Logistics
    - INDT 4203 Automated Systems I
    - INDT 4373 Lean Six Sigma
    - INDT 4703 Sustainable Packaging
- Addition of Approved Electives
    - INDT 2323 Welding Technology
    - INDT 2353 Industrial Computer Aided Drafting & Design
    - INDT 2613 Industrial Fluid Power
    - INDT 3843 Rapid Prototyping
    - INDT 4233 Maintenance Management
    - INDT 4263 Manufacturing Technology and Processes I
    - INDT 4403 Automated Systems II
    - INDT 4713 Healthcare and Food Packaging
- Addition of 6 hours of Additional Electives
    - Completion of any two INDT 3000 + Level courses

Process Technology:

- Addition of the following courses into the Process Technology Concentration Required Courses:
    - INDT 2323 Welding Technology
    - INDT 2353 Industrial Computer Aided Drafting and Design
    - INDT 2613 Fluid Power
    - INDT 3533 Intro to Process Technology

    - INDT 3543 Process Equipment & Instrumentation
    - INDT 4233 Maintenance Management
    - INDT 4533 Process Systems and Operations
    - INDT 4543 Process Troubleshooting
- Addition of Approved Electives
    - INDT 2343 Parametric Modeling for 3D Design
    - INDT 3323 Welding Technology II
    - INDT 3103 Advanced Electricity & Electronics
    - INDT 4103 Industrial Control Systems
    - INDT 4303 Industrial Robotics
    - INDT 4553 Oil and Gas Production
- Addition of 6 hours of Additional Electives
    - Completion of any two INDT 3000 + Level courses

Catalog Description (Old):
The industrial technology curriculum is designed for students who want to prepare for employment leading to supervisory and management positions in the production, automation, maintenance, or logistics areas of industry. The role of the Industrial Technology graduate is that of a facilitator of ideas from senior management to the production floor. Successful completion of the four-year curriculum would provide an excellent background in science, mathematics, design, and human relations. This is coupled with the practical use of both manual and automated machinery and the associated tools, as well as knowledge of industrial manufacturing processes, materials, and logistics.

To this extent the curriculum is divided into three concentrations:
- Industrial Automation
- Industrial Distribution
- Manufacturing & Maintenance Management

These concentrations are designed to give students a specialization that they can take into the workforce and build upon throughout their industrial career. Graduates should quickly become proficient in both the supervisory and administrative roles of dealing with personnel, and depending upon the concentration selected, the graduate should become adept in the various aspects of the manufacture, distribution and automation of industrial products and processes. Employment opportunities are excellent for this degree.

The MSU Bulletin is not the final source of information. Departmental advisement is critically important for the course sequence and selection. Students should always get advisement and approval from their MSU advisor for course scheduling.

Upper division courses (3000 level and up) must be taken at a senior college or university. See a faculty advisor for prerequisites and proper course sequence.
NOTE: This curriculum lends itself well to a minor in Business Administration or Marketing.

Catalog Description (New):

As industry evolves, so should education to meet new demands. The Industrial Technology program works with industry to meet their needs and close skills gaps seen in various industries. The Industrial Technology curriculum encourages hands on learning in the classroom utilizing technologies found in industry. The curriculum is designed to provide a well-rounded study of various areas of industry including maintenance, programming, design, safety, systems analysis, and communication and troubleshooting skills. The Industrial Technology program is a great fit for students who like working with their hands and learning by doing. Industrial Technology students are leaders in their chosen fields with employment opportunities on the rise. The department provides one-on-one advising for all Industrial Technology students on all campuses.

To this extent, the following concentrations are available:
- Maintenance and Manufacturing Management
- Industrial Automation
- Industrial Packaging
- Industrial Coatings

- Process Technology

These concentrations are designed to give students a specialization that they can take into the workforce and build upon throughout their industrial career. Graduates should quickly become proficient in both the supervisory and administrative roles of dealing with personnel, and depending upon the concentration selected, the graduate should become adept in the various aspects of the manufacture, automation, coatings, design, safety of industrial products and systems analysis. Employment opportunities are excellent for this degree.

The MSU Bulletin is not the final source of information. Departmental advisement is critically important for the course sequence and selection. Students should always get advisement and approval from their MSU advisor for course scheduling.

Upper division courses (3000 level and up) must be taken at a senior college or university. See a faculty advisor for prerequisites and proper course sequence.

NOTE: This curriculum lends itself well to a minor in Business Administration or Marketing.

Curriculum Outline Table:

CURRENT Degree Description	PROPOSED Degree Description
Degree: Bachelor of Science Major: Industrial Technology Concentration: Manufacturing and Maintenance Management, Industrial Automation*, Industrial Distribution*	Degree: Bachelor of Science Major: Industrial Technology Concentration: Manufacturing and Maintenance Management, Industrial Automation, **Industrial Packaging, Industrial Coatings, Process Technology**
The industrial technology curriculum is designed for students who want to prepare for employment leading to supervisory and management positions in the production, automation, maintenance, or logistics areas of industry. The role of the Industrial Technology graduate is that of a facilitator of ideas from senior management to the production floor. Successful completion of the four-year curriculum would provide an excellent background in science, mathematics, design, and human relations. This is coupled with the practical use of both manual and automated machinery and the associated tools, as well as knowledge of industrial manufacturing processes, materials, and logistics. *To this extent the curriculum is divided into three concentrations:* • *Industrial Automation* • *Industrial Distribution* • *Manufacturing & Maintenance Management* *These concentrations are designed to give students a*	**As industry evolves, so should education to meet new demands. The Industrial Technology program works with industry to meet their needs and close skills gaps seen in various industries. The Industrial Technology curriculum encourages hands on learning in the classroom utilizing technologies found in industry. The Industrial Technology program is a great fit for students who like working with their hands and learning by doing. Industrial Technology students are leaders in their chosen fields with employment opportunities on the rise. The department provides one-on-one advising for all Industrial Technology students on all campuses.** To this extent, the curriculum is divided into five concentrations: • **Industrial Automation** • **Industrial Coatings** • **Industrial Packaging** • **Manufacturing & Maintenance Management** • **Process Technology**

specialization that they can take into the workforce and build upon throughout their industrial career. Graduates should quickly become proficient in both the supervisory and administrative roles of dealing with personnel, and depending upon the concentration selected, the graduate should become adept in the various aspects of the manufacture, distribution and automation of industrial products and processes. Employment opportunities are excellent for this degree. *The MSU Bulletin is not the final source of information. Departmental advisement is critically important for the course sequence and selection. Students should always get advisement and approval from their MSU advisor for course scheduling.* *Upper division courses (3000 level and up) must be taken at a senior college or university. See a faculty advisor for prerequisites and proper course sequence.* *NOTE: This curriculum lends itself well to a minor in Business Administration or Marketing.* Concentrations available are: -Maintenance and Manufacturing Management -Industrial Automation *-Industrial Distribution*	**The curriculum is designed to provide a well-rounded study of various areas of industry including maintenance, programming, design, safety, systems analysis, and communication and troubleshooting skills.** Employment opportunities are excellent for this degree. The MSU Bulletin is not the final source of information. Departmental advisement is critically important for the course sequence and selection. Students should always get advisement and approval from their MSU advisor for course scheduling. Upper division courses (3000 level and up) must be taken at a senior college or university. See a faculty advisor for prerequisites and proper course sequence. **NOTE: This curriculum lends itself well to a minor in Business Administration or Marketing.** Concentrations available are: -Maintenance and Manufacturing Management -Industrial Automation **-Industrial Packaging** **-Industrial Coatings** **-Process Technology**
CONCENTRATION DESCRIPTION **Industrial Automation** The Industrial Automation concentration is designed for students who wish to enter a career in the automation of manufacturing processes. This concentration is concerned with fixed automation, robotics, and the troubleshooting of automated systems and their role in the manufacturing environment.	CONCENTRATION DESCRIPTION **Industrial Automation** The Industrial Automation concentration is designed for students who wish to enter a career in the automation of manufacturing processes. This concentration is concerned with fixed automation, robotics, and the troubleshooting of automated systems and their role in the manufacturing environment.

CURRENT CURRICULUM OUTLINE	Required Hours
English (General Education):	6
EN 1103 English Composition I	
EN 1113 English Composition II	
Fine Arts (General Education):	3
Any Gen Ed Course	
Natural Sciences:	8
CH 1043 or higher	
CH 1051 or higher	

PROPOSED CURRICULUM OUTLINE	Required Hours
English (General Education):	6
EN 1103 English Composition I	
EN 1113 English Composition II	
Fine Arts (General Education):	3
Any Approved Gen Ed Course	
Natural Sciences:	8
CH 1043 or higher	
CH 1051 or higher	

PH 1013 or higher PH 1011 or higher		PH 1013 or higher PH 1011 or higher	
Extra Science: *CH 1213 or higher* *PH 1023 or higher*	3		
Math (General Education): *MA 1323 or higher* MA 1613 or higher BQA/MA/ST 2113	9	**Math (General Education):** **MA 1313 or higher** MA 1613 or higher BQA/MA/ST 2113	9
Humanities (General Education): Any Gen Ed Course	6	**Humanities (General Education):** Any Approved Gen Ed Course	6
Social/Behavioral Sciences (General Education): Any Social/Behavioral Gen Ed Course	6	**Social/Behavioral Sciences (General Education):** Any Social/Behavioral Gen Ed Course	6
General Education Total	41	General Education Total	38
MAJOR CORE COURSES *INDT 1203 Industrial Drafting & Print Reading* *INDT 1814 Basic Industrial Electricity & Electronics* INDT 2113 Introduction to PLC Programming INDT 2123 Introduction to CNC Programming *INDT 2323 Welding Technology* *INDT 2613 Industrial Fluid Power* *INDT 3044 Industrial Safety* INDT 3063 Industrial Human Relations *INDT 3104 Advanced Industrial Electricity & Electronics* INDT 3223 Industrial Materials INDT 3243 Industrial Metrology *INDT 3343 3D Modeling for Manufacturing* INDT 3363 Motion and Time Study *INDT 3373 Forecast and Cost Modeling* *INDT 3683 CNC Machine Metal Processes*	59	**MAJOR CORE COURSES** ***Introductory Skills*** **INDT 1003 Technical Drafting and Print Reading** **INDT 1813 Basic Industrial Electricity and Electronics** INDT 2113 Introduction to PLC Programming INDT 2123 Introduction to CNC Programming **INDT 3813 Technical Writing and Presentation for Industry** ***Management Skills*** INDT 3063 Industrial Human Relations INDT 3373 Forecast and Cost Modeling **Management Skills requirement is satisfied by successful completion of ACC 2013 Principles of Financial Accounting, BL 2413 Legal Environment of Business, MGT 3823 Responsible Leadership or any MGT 3000 + Level with approval from advisor and instructor**	42 15 9

INDT 3813 Writing for Industry *INDT 4213 Energy Sources and Power Technology* *INDT 4224 Quality Assurance* INDT 4801 Senior Seminar Oral Communication Requirement: Satisfied by successful completion of INDT 3044, INDT 3063, INDT 3363, and INDT 3813 Writing Requirement: Satisfied by successful completion of INDT 3063 and INDT 3813 Computer Literacy: Satisfied by successful completion of INDT 1203, INDT 3343, INDT 3373, INDT 3813, and INDT 4801		***General Knowledge*** INDT 3223 Industrial Materials **INDT 3043 Industrial Safety** INDT 3243 Industrial Metrology INDT 3363 Motion & Time Study **INDT 4223 Quality Assurance** ***Seminars*** **INDT 1001 Introduction to Industrial Technology** **INDT 3101 Junior Seminar** INDT 4801 Senior Seminar Oral Communication Requirement: Satisfied by successful completion of INDT 3043, INDT 3063, INDT 3363, and INDT 3813 Writing Requirement: Satisfied by successful completion of INDT 3063 and INDT 3813 Computer Literacy: Satisfied by successful completion of INDT 1003, INDT 3343, INDT 3373, INDT 3813, and INDT 4801	15 3
Major Core Courses Total	59	Major Core Courses Total	42
CONCENTRATION REQUIRED COURSES <u>Industrial Automation</u> *ACC 2013 Principles of Financial Accounting* *BL 2413 The Legal Environment of Business* INDT 4103 Industrial Control Systems INDT 4203 Automated Systems I INDT 4233 Maintenance Management INDT 4303 Industrial Robotics INDT 4403 Automated Systems II *Concentration Course requirement is satisfied by*	24	**CONCENTRATION REQUIRED COURSES** <u>Industrial Automation</u> **INDT 2353 Computer Aided Drafting and Design** **INDT 2613 Industrial Fluid Power** **INDT 3103 Advanced Electricity and Electronics** INDT 4103 Industrial Control Systems INDT 4203 Automated Systems I INDT 4233 Maintenance Management INDT 4303 Industrial Robotics INDT 4403 Automated Systems II	24

successful completion of INDT 4343 Computer Aided Drafting & Design, INDT 4373 Lean Six Sigma, INDT 4263 Manufacturing Technology and Processing I			
Concentration Required Courses Total	24	Concentration Required Courses Total	24
		CONCENTRATION ELECTIVE COURSES **INDT 2323 Welding Technology** **INDT 2343 Parametric Modeling for 3D Design** **INDT 3543 Process Equipment and Instrumentation** **INDT 3683 CNC Machining Processes** **INDT 42313 Energy Source & Power** INDT 4263 Manufacturing Technology and Processes I **INDT 4463 Manufacturing Technology and Processes II**	12
		ADDITIONAL ELECTIVES **Additional Electives requirement is satisfied by successful completion of any INDT 3000 + Level course.**	6
Total Hours	124	Total Hours	122
		CONCENTRATION DESCRIPTION **Manufacturing and Maintenance Management** The Manufacturing and Maintenance Management concentration is designed for students who want to enter a career in the manufacturing sector. This concentration is concerned with the management, maintenance and day-to-day operation and improvement of manufacturing processes.	
		PROPOSED CURRICULUM OUTLINE	Required Hours
		CONCENTRATION REQUIRED COURSES <u>Manufacturing and Maintenance Management</u> **INDT 2343 Parametric Modeling for 3D Design** **INDT 3103 Advanced Industrial Electricity & Electronics** **INDT 3683 CNC Machining Processes** **INDT 3843 Rapid Prototyping**	24

INDT 4233 Maintenance Management INDT 4263 Manufacturing Technology and Processes I **INDT 4373 Lean Six Sigma** INDT 4463 Manufacturing Technology and Processes II	
Concentration Required Courses Total	24
CONCENTRATION ELECTIVE COURSES **INDT 2323 Welding Technology** **INDT 2353 Industrial Computer Aided Drafting & Design** **INDT 3323 Welding Technology II** **INDT 3543 Process Equipment & Instrumentation** **INDT 4103 Industrial Control Systems** INDT 4203 Automated Systems I INDT 4303 Robotics **INDT 4543 Process Troubleshooting**	12
ADDITIONAL ELECTIVES **Additional Electives requirement is satisfied by successful completion of any INDT 3000 + Level course.**	6
Total Hours	122
CONCENTRATION DESCRIPTION **Industrial Coatings** The Industrial Coatings concentration provides classroom instruction and hands-on, practical experience to prepare students for employment in the industrial coatings field. The materials prepare individuals to prepare and treat surfaces, apply various coating materials, and analyze quality at all stages of the process. The concentration emphasizes safe work practices, quality surface creation and preparation, and effective coatings while learning about coating equipment, application, and properties.	
PROPOSED CURRICULUM OUTLINE	Required Hours
CONCENTRATION REQUIRED COURSES <u>Industrial Coatings</u>	24

INDT 2613 Industrial Fluid Power **INDT 3103 Advanced Electricity & Electronics** **INDT 3753 Introduction to Industrial Coatings** **INDT 3853 Powder Coatings** **INDT 3863 Liquid Coatings** **INDT 4103 Industrial Controls** **INDT 4303 Industrial Robotics** **INDT 4373 Lean Six Sigma**	
Concentration Required Courses Total	24
CONCENTRATION ELECTIVE COURSES **INDT 2323 Welding Technology** **INDT 2343 Parametric Modeling for 3D design** **INDT 2353 Industrial Computer Aided Drafting and Design** **INDT 3873 E-Coatings** **INDT 4243 System Design for Industrial Finishing Applications** **INDT 4263 Manufacturing Technology and Processes I** **INDT 4463 Manufacturing Technology and Processes II**	12
ADDITIONAL ELECTIVES **Additional Electives requirement is satisfied by successful completion of any INDT 3000 + Level course.**	6
Total Hours	122
CONCENTRATION DESCRIPTION **Industrial Packaging**	
The Industrial Packaging concentration provides classroom instruction and hands-on, practical experience to prepare students for employment in the packaging development field. The materials prepare individuals to identify the needs and design sustainable, effective packaging products. The concentration emphasizes design principles, material characteristics, and sustainable products.	

PROPOSED CURRICULUM OUTLINE	Required Hours
CONCENTRATION REQUIRED COURSES	24
Industrial Packaging	
INDT 2613 Industrial Fluid Power	
INDT 3103 Advanced Electricity & Electronics	
INDT 3753 Introduction to Industrial Coatings	
INDT 3853 Powder Coatings	
INDT 3863 Liquid Coatings	
INDT 4103 Industrial Controls	
INDT 4303 Industrial Robotics	
INDT 4373 Lean Six Sigma	
Concentration Required Courses Total	24
CONCENTRATION ELECTIVE COURSES	12
INDT 2323 Welding Technology	
INDT 2343 Parametric Modeling for 3D Design	
INDT 2353 Industrial Computer Aided Drafting and Design	
INDT 3873 E-Coatings	
INDT 4243 System Design for Industrial Finishing Applications	
INDT 4263 Manufacturing Technology and Processes I	
INDT 4463 Manufacturing Technology and Processes II	
ADDITIONAL ELECTIVES	6
Additional Electives requirement is satisfied by successful completion of any INDT 3000 + Level course.	
Total Hours	122
CONCENTRATION DESCRIPTION	
Process Technology	
The Process Technology concentration provides classroom instruction and hands-on, practical experience to prepare students for employment, and chemical/petrochemical products. The	

	concentration emphasizes safe and efficient work practices while learning about the equipment, instrumentation, systems, and operations related to chemical processing.	
	PROPOSED CURRICULUM OUTLINE	Required Hours
	CONCENTRATION REQUIRED COURSES	24
	Process Technology	
	INDT 2353 Industrial Computer Aided Drafting and Design	
	INDT 2323 Welding Technology	
	INDT 2613 Fluid Power	
	INDT 3533 Intro to Process Technology	
	INDT 3543 Process Equipment & Instrumentation	
	INDT 4233 Maintenance Management	
	INDT 4533 Process Systems & Operations	
	INDT 4543 Process Troubleshooting	
	CONCENTRATION ELECTIVE COURSES	12
	INDT 2343 Parametric Modeling for 3D Design	
	INDT 3323 Welding Technology II	
	INDT 3103 Advanced Electricity & Electronics	
	INDT 4103 Industrial Control Systems	
	INDT 4303 Industrial Robotics	
	INDT 4553 Oil and Gas Production	
	ADDITIONAL ELECTIVES	6
	Additional Electives requirement is satisfied by successful completion of any INDT 3000 + Level course.	
	Total Hours	122

Justification and Student Learning Outcomes:
The industrial technology faculty have proposed these modifications after reviewing the curriculum and obtaining feedback from the industrial technology advisory board, industry leaders, and graduates of the program who are in senior management/supervisory positions. The modifications to the industrial technology core have been made to allow for better sequencing of courses so that the student can build upon the knowledge gained in lower-level classes and to allow students to create personalized pathways to aid them in developing the skills needed for their chosen career fields. Modifications were also made to the concentration areas to give industrial technology students more exposure to issues that are pertinent to their chosen concentration area, thus giving them more opportunities to gain initial employment, as well as career development.

The Distribution concentration was removed due to lack of interest by students. While this concentration has been eliminated, some skills and knowledge bases have been redistributed among the remaining two and three new concentrations.

The Industrial Coatings, Industrial Packaging, and Process Technology concentrations have been developed as a response to inquiries from industry as well as identified education and skills gaps found in certain industries. The industry advisory board requested a packaging and paint concentration to aid in filling skills gaps found in industry. There are no similar concentrations that focus on the specified areas of industry that was requested by the industry advisory board.

Currently, there is a major shortfall of technical employees at both the state and national levels. These proposed changes will give graduating students the ability to find employment in high quality technical positions. To meet the demand for technical employees worldwide, the faculty of the Industrial Technology program agree the new concentrations should be offered online with the two previously approved concentrations. By offering the courses online, it will provide an opportunity for the program to reach potential students around the world.

The target audience for the online program would primarily be those already working in industry who are looking to take the next step in their career or who want to change career paths. These students need the flexibility an online degree program offers to succeed. Another target population are potential students who have other obligations or restrictions that prohibit them from attending classes face to face. The programs offered are not readily available online across the nation.

The modifications do not duplicate any programs are currently in the system. The current program has a good cross-section of students, and this is anticipated to remain the same.

The industrial technology program at Mississippi State University has a very high placement rate, and salaries are consummate with those of graduating industrial engineers. As the demand for more highly qualified technicians increases, the placement rates and salaries expected to increase.

The learning outcomes of this program are that students should be able to facilitate ideas from senior management to the production floor. They could also be able to manage the day-to-day operations, maintenance, and production troubleshooting of complex industrial equipment and

systems. The graduate student should also be able to make recommendations on adaptation, deletion, or replacement/capital investment of equipment to aid the manufacturing process.

Support:
Accompanying this degree program modification is a letter of support signed by all the faculty in the industrial technology program. The faculty unanimously voted to support the proposed degree program changes for the industrial technology curriculum.

Proposed 4-Letter Abbreviation:
The proposed 4-letter abbreviation for the program is – INDT

Effective Date:
The proposed effective date is Fall 2022

MISSISSIPPI STATE UNIVERSITY

COLLEGE OF EDUCATION
Department of Instructional Systems
and Workforce Development
P.O. Box 9730
108 Herbert Street
100 Industrial Education Building
Mississippi State, MS 39762
P. 662.325.2281
F. 662.325.7599
iswd.msstate.edu

February 3, 2022

TO: Box Council and UCCC Committee Members

FROM: Lara Threet

RE: Support of: Approval to revise the Industrial Technology degree curriculum

This letter of support is offered by the Industrial Technology degree program faculty for the proposed following revisions.

- Removal of the Industrial Distribution Concentration
- Removal of INDT 1203 Industrial Drafting and Print Reading
- Addition of the Industrial Coatings Concentration
- Addition of the Industrial Packaging Concentration
- Addition of the Process Technology Concentration
- Addition of the following courses
    - INDT 1001 Introduction to Industrial Technology
    - INDT 1003 Technical Drafting & Print Reading
    - INDT 1133 Intro to Process Technology
    - INDT 2533 Processing of Oil and Gas
    - INDT 3101 Junior Seminar
    - INDT 3133 Process Equipment & Instrumentation
    - INDT 3233 Process Systems and Operations
    - INDT 3323 Welding Technology II
    - INDT 3333 Process Quality and Troubleshooting
    - INDT 3703 Principles of Packaging
    - INDT 3713 Packaging Materials
    - INDT 3753 Industrial Coatings
    - INDT 3853 Powder Coatings
    - INDT 3863 Liquid Coatings
    - INDT 3873 E-Coatings
    - INDT 4243 System Design for Industrial Finishing Applications
    - INDT 4443 Additive Manufacturing & Rapid Prototyping
    - INDT 4703 Sustainable Packaging
    - INDT 4713 Healthcare and Food Packaging
- Modification of credit hours of INDT 1814 Basic Industrial Electricity and Electronics to INDT 1813 Basic Industrial Electricity and Electronics
- Modification of course number of INDT 1814 Basic Industrial Electricity and Electronics to INDT 1813 Basic Industrial Electricity and Electronics

- Modification of course name INDT 3343 3D Modeling for Manufacturing to INDT 2343 Parametric Modeling for 3D Design
- Modification of course number from INDT 3343 3D Modeling for Manufacturing to INDT 2343 Parametric Modeling for 3D Design
- Modification of course number from INDT 4343 Computer Aided Drafting & Design to INDT 2353 Industrial Computer Aided Drafting & Design
- Modification of course name from INDT 4343 Computer Aided Drafting & Design to INDT 2353 Industrial Computer Aided Drafting Design
- Modification of course number from INDT 3044 Industrial Safety to INDT 3043 Industrial Safety
- Modification of course hours from INDT 3044 Industrial Safety to INDT 3043 Industrial Safety
- Modification of credit hours from INDT 3014 Advanced Industrial Electricity and Electronics to INDT 3103 Advanced Industrial Electricity and Electronics
- Modification of course number from INDT 3014 Advanced Industrial Electricity and Electronics to INDT 3103 Advanced Industrial Electricity and Electronics
- Modification of course name from INDT 3813 Writing for Industry to INDT 3813 Technical Writing & Presentation for Industry
- Modification of credit hours from INDT 4224 Quality Assurance to INDT 4223 Quality Assurance
- Modification of course number from INDT 4224 Quality Assurance to INDT 4223 Quality Assurance
- Removal of the following from the Industrial Technology Degree Core requirements
    - INDT 2323 Welding Technology
    - INDT 2613 Industrial Fluid Power
    - INDT 3103 Advanced Industrial Electricity and Electronics
    - INDT 3343 3D Modeling for Manufacturing
    - INDT 3373 Forecast and Cost Modeling
    - INDT 3683 CNC Machine Metal Processes
    - INDT 4213 Energy Sources and Power Technology
- Addition of the following to the Industrial Technology Degree Core requirements
    - INDT 1001 Introduction to Industrial Technology
    - INDT 1003 Technical Drafting and Print Reading
    - INDT 3101 Junior Seminar
- Degree flow restructure to include the following skill sets
    - Introductory Skills
    - Management Skills
    - General Knowledge Skills
    - Seminars

The changes presented will provide a more robust curriculum to help meet the growing needs of industry for technical employees and aid with articulation and course flows.

As indicated by the signatures below, the Industrial Technology program unanimously approves the above proposal as written for submission to the Box Council and the UCCC.

Industrial Technology Program Members:

Lara Threet 2/3/22
Ms. Lara Threet Date

2/3/22
Dr. John Wyatt Date

Mickey Giordano 2/4/2022
Mr. Mickey Giordano Date

2/3/22
Mrs. Jenn Dupré Date

2/3/2022
Mr. Jody Buchanan Date

Swapnil Patole 2/3/2022
Dr. Swapnil Patole Date

2/4/2022
Dr. Kay Morgan Date

MISSISSIPPI STATE UNIVERSITY

Richard C. Adkerson School of Accountancy
P.O. Box EF
Mississippi State, MS 39762-5661
P. 662.325.3710
F. 662.325.1646
business.msstate.edu/accounting

February 7, 2022

To Whom it May Concern:

The Adkerson School of Accountancy does not expect an issue in providing ACC 2013 Financial Accounting Principles as an elective option to the three concentrations with Industrial Technology.

Sincerely,

Shawn Mauldin

Shawn Mauldin
Director
Adkerson School of Accountancy

MISSISSIPPI STATE UNIVERSITY

Management & Information Systems Department
College of Business

P.O. Box 9581
Mississippi State, MS 39762

P. 662.325.3928

To: University Committee on Courses and Curricula

From: Head, Management & Information Systems Department
Starkville Campus

Date: February 4, 2022

This letter is to express the support of the Department of Management & Information Systems (MIS) for the inclusion of MGT 3823: Responsible Leadership as an elective option in the curriculum for Industrial Technology students. As discussed with the Program Coordinator Lara Threet, students seeking this elective will need approval from their advisor and the instructor.

Thank you,

Laura E. Marler

MISSISSIPPI STATE UNIVERSITY

COLLEGE OF BUSINESS
Department of Marketing, Quantitative Analysis & Businsess Law
P.O. Box 9582
324 McCool Hall
Mississippi State, MS 39762
P. 662.325.3163
F. 662.325.7012

To: University Committee on Courses and Curricula

From: Melissa Moore, Professor of Marketing and Department Head, Marketing, Quantitative Analysis and Business Law Department

Date: February 4, 2022

The department of Marketing, Quantitative Analysis and Business Law supports the addition of MKT 3323 (International Logistics) as a required course and BL 2413 (Legal Environment of Business) as an elective course as part of the newly created concentration, Industrial Packaging. If you have any questions, or need any additional information, please contact Dr. Melissa Moore at mmoore@business.msstate.edu.

Dr. Melissa Moore, Professor of Marketing and Department Head

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 Education **Department:** Curriculum, Instruction, and Special Education

Contact Person: Kellie Fondren Mail Stop: 9705 E-mail: pkb22@msstate.edu
Nature of Change: Program Modification
Date Initiated: 12-5-2020 Effective Date: Fall 2022

Current Degree Program Name: Bachelor of Science

Major: Special Education Concentration: N/A

New Degree Program Name: no change

Major: no change Concentration: no change

Summary of Proposed Changes:

The proposed changes to the undergraduate special education program of study will include the addition of TECH 4763 Digital Tools for 21st Century Teaching and Learning., which will replace EDF 3333 Social Foundations on the program of study. Further, EDX 3253 Evaluating Learning in Special Education will be added to the program of study replacing EPY 3253 Evaluating Learning. Finally, EDX 4243 Planning for Diversity in Learners in Special Education will replace EPY 4243 Planning for Diversity in Learners on the program of study.

This program modification is being requested due to discussions during Teacher Education Council meetings that included representation from employers, school and community partners as well as Completer/Alumni Survey data revealed the need for more technology preparation and the EDF and EPY courses be more content specific to the program area.

The University of Mississippi and The University of Kentucky are two EPPS that have added similar coursework into their special education program of study.

Approved:	Date:
Department Head	3.24.2022
Chair, College or School Curriculum Committee	4/14/2022
Dean of College or School	04/14/2022
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 Major: Special Education Concentration:		Degree: Bachelor Major: Special Education Concentration:	
The program in Special Education is designed to prepare teachers to teach children and youth with learning disabilities, intellectual disabilities, and other areas of exceptionality. The curriculum in special education is designed to meet the requirements for the endorsements in the areas of specialization. The degree program includes extensive field experiences working in schools and classrooms. Courses in the degree program provide students with methods for teaching early childhood, elementary, and secondary students with special needs. The degree program culminates in a semester-long teaching internship in a K-12 setting.		The program in Special Education is designed to prepare teachers to teach children and youth with learning disabilities, intellectual disabilities, and other areas of exceptionality. The curriculum in special education is designed to meet the requirements for the endorsements in the areas of specialization. The degree program includes extensive field experiences working in schools and classrooms. Courses in the degree program provide students with methods for teaching early childhood, elementary, and secondary students with special needs. The degree program culminates in a semester-long teaching internship in a K-12 setting.	
CURRENT CURRICULUM OUTLINE	Required Hours	**PROPOSED CURRICULUM OUTLINE**	Required Hours
English (Ex: EN 1103 English Comp I):	6	English (Ex: EN 1103 English Comp I):	6
Fine Arts (General Education):	3	Fine Arts (General Education):	3
Natural Sciences (2 labs required from Gen Ed):	6-8	Natural Sciences (2 labs required from Gen Ed):	6-8
Math or Science Elective	3	Math or Science Elective	3
Math (General Education): MA 1313	6-9	Math (General Education):	6-9
Humanities (General Education):	6	Humanities (General Education):	6
Social/Behavioral Sciences (Gen Ed):	6	Social/Behavioral Sciences (Gen Ed):	6
Collateral Electives	21	Collateral Electives	21
EDX 3203 Introduction to Learning Disabilities	3	EDX 3203 Introduction to Learning Disabilities	3
EDX 3213 Individualizing Instruction for Exceptional Children	3	EDX 3213 Individualizing Instruction for Exceptional Children	3

EDX 3223 Introduction to Emotional and Behavioral Disorders	3	EDX 3223 Introduction to Emotional and Behavioral Disorders	3
EDX 3233 Contingency Management	3	EDX 3233 Contingency Management	3
EPY 2513 Human Growth and Development	3	EPY 2513 Human Growth and Development	3
EDX 4103 Introduction to Teaching Students with Intellectual and Developmental Disabilities	3	EDX 4103 Introduction to Teaching Students with Intellectual and Developmental Disabilities	3
EDF 3333 Social Foundations	*3*	**TECH Digital Tools for 21st Century Teaching and Learning**	**3**
RDG 3113 Early Literacy 1* RDG 3123 Early Literacy 2* (* Courses must be taken together)	6	RDG 3113 Early Literacy 1* RDG 3123 Early Literacy 2* (* Courses must be taken together)	6
EDX 4113 Methods and Materials for Early Childhood Students with Disabilities	3	EDX 4113 Methods and Materials for Early Childhood Students with Disabilities	3
EDX 4413 Working with Parents of Students with Disabilities	3	EDX 4413 Working with Parents of Students with Disabilities	3
EDX 4353 Assistive Technology \	3	EDX 4353 Assistive Technology	3
EDX 4123 Methods and Materials for Elementary Students with Disabilities	3	EDX 4123 Methods and Materials for Elementary Students with Disabilities	3
EDX 4133 Methods and Materials for Secondary Students with Disabilities	3	EDX 4133 Methods and Materials for Secondary Students with Disabilities	3
EPY 3253 Evaluating Learning	*3*	**EDX 3253 Evaluating Learning in Special Education**	**3**
EDF 4243 Planning for Diversity of Learners	*3*	**EDX 4243 Planning for Diversity of Learners in Special Education**	**3**
EDX 4886 Teaching Internship in Special Education	6	EDX 4886 Teaching Internship in Special Education	6
EDX 4896 Teaching Internship in Special Education	6	EDX 4896 Teaching Internship in Special Education	6
EDX 4873 Professional Seminar in Special Education	3	EDX 4873 Professional Seminar in Special Education	3
Total Hours	123	Total Hours	123

3. Justification and Student Outcomes

The Special Education faculty have reviewed the program of study and the course objectives for each course to ensure we are preparing preservice teachers with the most recent evidence based practices. This program modification is being requested after multiple to discussions during Teacher Education Council meetings that included representation from employers, school and community partners as well as Completer/Alumni Survey data revealed the need for more technology preparation and the EDF and EPY courses be more content specific to the program

area. Students have been asked to provide evaluative feedback of courses to determine gaps in professional skills needs to develop an effective learning environment. After the review of feedback from students, professions, and community partners, our faculty are proposing the following changes to the undergraduate special education program of study to strengthen the learning outcomes of teacher candidates. The addition of TECH 4763 Digital Tools for 21st Century Teaching and Learning., will replace EDF 3333 Social Foundations on the program of study. Further, EDX 3253 Evaluating Learning in Special Education will be added to the program of study replacing EPY 3253 Evaluating Learning. Finally, EDX 4243 Planning for Diversity in Learners in Special Education will replace EPY 4243 Planning for Diversity in Learners on the program of study. The student outcomes for the College of Education will not change. The modifications will provide opportunity to strengthen the outcomes for students completing our program.

The student outcomes for the College of Education:
1. Professionalism: The knowledge, skills and dispositions needed to become a professional and to help all students learn; the demonstration of responsible, ethical behavior and good judgment.
2. Differentiation and Individualization: Knowledge and understanding of human behavior and individual differences; the ability to adapt instruction/services to meet the needs of all students/clientele.
3. Knowledge of Content: The deep understanding of both content and teaching strategies relevant to the discipline.
4. Assessment/Evaluation: The basic skills of assessment and evaluation relevant to the major field of study; the ability to use assessments to improve teaching, learning, and performance.
5. Communication Skills: Ability to use appropriate language, speak and write with clarity, use standard English in writing and speaking; the demonstration of good listening and interpersonal skills.
6. Social/Cultural Skills: The belief that all students can learn and the relevant social and cultural skills for a diverse environment; tolerant, fair, and culturally appropriate behavior.
7. Technology: The ability to infuse appropriate technology into professional practice. 8. Reflection: The ability to use self-reflection and problem-solving for improvement and
personal and professional growth.
9. Collaboration: The ability to work cooperatively with peers/colleagues, parents, the community, and other entities.
10. Planning: The basic skills of planning instruction/services to meet the needs of diverse populations; the ability to design and implement effective strategies that positively impact student learning.
11. Managing: The basic skills of management in diverse settings.
12. Resourcefulness: The skills in locating and utilizing relevant resources at the local, state, regional, national, and international levels.

The program modification applies to all campuses (1, 2, 5). Students must be enrolled in Phase II (Teacher Education) of the program and special education majors.

1. This program change will not alter how we meet local, state, regional, and national educational and cultural needs.
2. This program change will not result in duplication in the system.
3. This program change will not advance student diversity within the discipline.
4. This program change will result in an increase in the potential placement of graduates.
5. The program change will not result in an increase in the potential salaries of graduates.

4. SUPPORT- See attached letters of support.
5. PROPOSED 4-LETTER ABBREVIATION: EXED

6. Effective Date- August 2022.

MISSISSIPPI STATE UNIVERSITY

COLLEGE OF EDUCATION
Department of Curriculum, Instruction, and Special Education
P.O. Box 9705
175 President's Circle
Allen Hall, Room 310
Mississippi State, MS 39762
P. 662.325.3523
F. 662.325.7857
cise.msstate.edu

March 21, 2022

Dr. Nicholson,

The special education faculty supports the proposed modification to the undergraduate special education program of study will include the addition of TECH 4763 Digital Tools for 21st Century Teaching and Learning. EDF 3333 Social Foundations will be removed. The addition of new course EDX 3253 Evaluating Learning in Special Education with EPY 3253 Evaluating Learning being removed. The addition of new course EDX 4243 Planning for Diversity in Learners in Special Education with EDF 4243 Planning for Diversity in Learners being removed.

This program modification is being requested due to discussions during Teacher Education Council meetings that included representation from employers, school, and community partners as well as Completer/Alumni Survey data revealed the need for more technology preparation and the EDF and EPY courses be more content specific to the program area.

Thank you,

Dr. Kent Coffey — Date

Dr. Sandy Devlin — 3/23/22

Dr. Kellie Fondren — 3/21/2022

DATE: January 06, 2021

TO: Box Council and UCCC Committee Members

FROM: Dr. Gregory M. Francom

RE: Support of TECH 4763/6763 Course revisions and inclusion

This letter of support is offered by the Instructional Systems and Workforce Development faculty for the inclusion of the TECH 4763/6763 Digital Tools for 21st Century Learning course in the Special Education degree program. As indicated by the signatures below, a majority of the program area faculty have approved the proposal as written for submission to the Box Council and the UCCC.

The ISWD faculty have indicated below their support (or do not support) the proposal as written for submission to the Box Council and the UCCC.

Name	Support	Do not support	Signature
Adams, James	☐	☐	James k adams
Beriswill, Joanne	☐	☐	Joanne Beriswill
Bracey, Pamela	☑	☐	P. Bracey
Francom, Greg	☑	☐	Gregory M. Francom
Lee, Sang Joon	☑	☐	Sang Joon Lee
Okojie, Mabel	☐	☐	MabelepeOkojie
Sun, Yan	☑	☐	Yan Sun
Yu, Chien	☑	☐	Chien Yu
Yu, Wei-Chieh	☑	☐	Weichieh Yu

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: Education **Department:** Curriculum, Instruction, & Special Education

Contact Person: Dr. Janice Nicholson **Mail Stop:** 9705 **E-mail:** jin4@msstate.edu

Nature of Change: Degree Program Modification

Date Initiated: March 16, 2022 **Effective Date:** Fall 2022

Current Degree Program Name: Master of Arts in Teaching

Major: Secondary Teacher Alternate Route **Concentration:** N/A

New Degree Program Name: No change

Major: No change **Concentration:** N/A

Summary of Proposed Changes:
Delete a 6-credit hour internship course (EDS 8886) and replace it with two 3-credit hour internship courses (EDS 8883, EDS 8893).

Approved:	**Date:**
J nicholson Department Head	3. 24. 2022
Richard Hunt Chair, College or School Curriculum Committee	4-11-2022
Kimberly R. Hall Dean of College or School	04/11/2022
Chair, University Committee on Courses and Curricula	
Chair, Graduate Council(if applicable)	
Chair, Deans Council	

PROPOSAL ELEMENTS

1. CATALOG DESCRIPTION

No change.

See Table Below

2. CURRICULUM OUTLINE

GRADUATE DEGREE MODIFICATION OUTLINE FORM

CURRENT Degree Description	PROPOSED Degree Description
Degree: Master of Arts Major: Secondary Education Concentrations: N/A	Degree: Master of Arts Major: Secondary Education Concentrations: N/A
The MATS program is an alternate route secondary licensure program of study that consists of 30 semester hours of graduate-level coursework. It is designed for a candidate with a bachelor's degree in a content discipline who wishes to prepare for a career as a teacher. All admitted MATS students applying for a teaching license must have taken the ACT with a minimum composite score of 21 or have passing Praxis Core. Passing scores, as set by *MOE* on the Praxis 11-Specialty Area Test are also required for licensure. MATS students must also pass a certified background check prior to admission. Students in the MATS will complete the comprehensive examination in the final semester or final 6 hours of enrollment by registering for and passing the Praxis Principles of Learning and Teaching (PLT) examination through ETS.	The MATS program is an alternate route secondary licensure program of study that consists of 30 semester hours of graduate-level coursework. It is designed for a candidate with a bachelor's degree in a content discipline who wishes to prepare for a career as a teacher. All admitted MATS students applying for a teaching license must have taken the ACT with a minimum composite score of 21 or have passing Praxis Core. Passing scores, as set by **MDE** on the Praxis 11-Specialty Area Test are also required for licensure. MATS students must also pass a certified background check prior to admission. Students in the MATS will complete the comprehensive examination in the final semester or final 6 hours of enrollment by registering for and passing the Praxis Principles of Learning and Teaching (PLT) examination through ETS.

CURRENT CURRICULUM OUTLINE	Required Hours	PROPOSED CURRICULUM OUTLINE	Required Hours
College Required Courses N/A	0	**College Required Courses** N/A	0
Major Required Courses EDS 8243 Advanced Planning & Managing of Learning EDS 6403 Evaluation in Learning in Sec Schools	 3 3	**Major Required Courses** EDS 8243 Advanced Planning & Managing of Learning EDS 6403 Evaluation in Learning in Sec Schools	 3 3

EDS 8623 Principles of Effective Instruction in Sec Schools	3	EDS 8623 Principles of Effective Instruction in Sec Schools	3
EDX 8173 Special Ed in the Regular Classroom	3	EDX 8173 Special Ed in the Regular Classroom	3
EDS 8103 Adv Methodologies in Middle & Sec Ed	3	EDS 8103 Adv Methodologies in Middle & Sec Ed	3
RDG 8653 Teaching Reading in the Sec Schools	3	RDG 8653 Teaching Reading in the Sec Schools	3
EDS 66x3 Methods in Secondary Teaching	3	EDS 66x3 Methods in Secondary Teaching	3
EDS 8613 Middle & Secondary School Curriculum	3	EDS 8613 Middle & Secondary School Curriculum	3
EDS 8886 Dimensions of Learning I	*6*	**EDS 8883 Secondary Internship I**	**3**
		EDS 8893 Secondary Internship II	**3**
Total Hours	30	Total Hours	30

3. JUSTIFICATION AND STUDENT LEARNING OUTCOMES

The Mississippi Department of Education (MDE) requires that the internship for students enrolled in this degree program be completed over 1 year instead of 1 semester. Therefore, EDS 8886 Dimensions I needs to be replaced with 2 courses over 1 year (EDS 8883 Secondary Internship I and EDS 8893 Secondary Internship II). EDS 8883 and EDS 8893 were offered during the 2015 – 2016 school year and they are listed in the course catalog. No other changes are being made to the degree program.

4. SUPPORT

This degree program is offered on Campus 2 and Campus 5. Letters of support from both are included.

5. PROPOSED 4-LETTER ABBREVIATION

No Change

6. EFFECTIVE DATE

Fall 2022

MISSISSIPPI STATE UNIVERSITY

COLLEGE OF EDUCATION
Department of Curriculum, Instruction,
and Special Education
P.O. Box 9705
175 President's Circle
Allen Hall, Room 310
Mississippi State, MS 39762
P. 662.325.3523
F. 662.325.7857
cise.msstate.edu

March 24, 2022

To Whom It May Concern:

The secondary education faculty supports the degree program modification for the Master of Arts degree program in Secondary Education, specifically the addition of EDS 8883 and EDS 8893 and the deletion of EDS 8886.

Sincerely,

Paul E Binford — 3/24/22
Dr. Paul Binford — Date

Peggy S. Hopper — 3-24-22
Dr. Peggy Hopper — Date

Lindon Ratliff — 3-24-22
Dr. Lindon Ratliff — Date

Dr. Ryan Walker Digitally signed by Dr. Ryan Walker Date: 2022.03.24 16:33:55 -05'00'
Dr. Ryan Walker — Date

MISSISSIPPI STATE UNIVERSITY

MSU - MERIDIAN
Division of Education
College Park Campus
1000 Hwy 19 North
Meridian, MS 39307
P. 601.484.0170
F. 601.484.0280
meridian.msstate.edu

March 16, 2022

To Whom It May Concern:

The MSU-Meridian Division of Education supports the degree program modification for the Master of Arts degree program in Secondary Education, specifically the addition of EDS 8883 and EDS 8893 and the deletion of EDS 8886.

Sincerely,

Kimberly R. Hall

Kimberly R. Hall
Head, Division of Education

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 Education Department: Counseling, Educational Psychology, and Foundations
Contact Person: Zaccheus Ahonle Mail Stop: 9727 E-mail: zja34@msstate.edu
Nature of Change: Program Modification - Addition of Distance Education (Campus 5) for M.S. Degree in Counselor Education, Clinical Mental Health and Rehabilitation Counseling Program Concentration Areas.
Date Initiated: 2/1/2022 Effective Date: Fall 2022

Current Degree Program Name: Master's of Science

Major: Counselor Education Concentration: (1) Rehabilitation Counseling
(2) Clinical Mental Health Counseling
(3) School Counseling

New Degree Program Name: Master's of Science

Major: Counselor Education Concentration: (1) Rehabilitation Counseling (Add Campus 5)
(2) Clinical Mental Health Counseling (Add Campus 5)
(3) School Counseling (no change) .

Summary of Proposed Changes:
The department currently offers CACREP accredited MS programs in Counselor Education with concentrations in Rehabilitation Counseling, Clinical Mental Health Counseling, and School Counseling. All concentrations are approved for Campuses 1 and 2. The requested changes are to add Campus 5 approval for Rehabilitation Counseling and Clinical Mental Health Counseling. All core courses are approved for Campus 5. All Clinical Mental Health Concentration Courses are approved for Campus 5. The Rehabilitation Counseling Councentration Area Courses are being submitted for parallel approvel.

Approved: _____ Department Head	Date: 2/11/2022
_____ Chair, College or School Curriculum Committee	4/11/2022
Kimberly R. Hall Dean of College or School	04.11.2022
_____ Chair, University Committee on Courses and Curricula	_____
_____ Chair, Graduate Council (if applicable)	_____
_____ Chair, Deans Council	_____

GRADUATE DEGREE MODIFICATION OUTLINE FORM

CURRENT Degree Description	PROPOSED Degree Description
Degree: Master's of Science Major: Counselor Education Concentrations: Clinical Mental Health Counseling, School Counseling, Rehabilitation Counseling	Degree: Master's of Science Major: Counselor Education Concentrations: Clinical Mental Health Counseling, School Counseling, Rehabilitation Counseling
The Department of Counseling, Educational Psychology, and Foundations offers graduate programs in clinical mental health counseling, rehabilitation counseling, and school counseling. The Master of Science degree programs in clinical mental health counseling, rehabilitation counseling, and school counseling are planned programs consisting of 60 semester hours. The concentration in rehabilitation counseling prepares graduates for certification as a Certified Rehabilitation Counselor in all fifty states, as well as a Licensed Professional Counselor (LPC) in the state of Mississippi. Counseling doctoral applications are due February 1. Applications for master's and educational specialist programs are due March 1. Applications will be considered until full enrollment is attained. Applications may be reviewed at other times for general educational psychology. For further information, write to the Graduate Coordinator. The department prepares students for careers as school counselors, student affairs professionals in higher education, and as counselors in rehabilitation, college counseling centers, and other mental health community agencies. Teaching and research assistantships are available. Counseling Program Accreditations: The M.S. programs in Counseling are Clinical Mental Health, Rehabilitation, and School and are accredited by the Council for Accreditation of Counseling and Related Educational Programs (CACREP). The doctoral programs in counseling (PHCE) and in school counseling (PHSE) are also accredited CACREP. The school counseling program is also accredited by the National Council for Accreditation of Teacher Education (NCATE). Graduate study in counseling offers preparation in counseling at three degree levels. 1. The Master of Science (M.S.) degree in Counselor Education with concentrations in clinical mental health counseling; rehabilitation counseling; student affairs;	The Department of Counseling, Educational Psychology, and Foundations offers graduate programs in clinical mental health counseling, rehabilitation counseling, and school counseling. The Master of Science degree programs in clinical mental health counseling, rehabilitation counseling, and school counseling are planned programs consisting of 60 semester hours. The concentration in rehabilitation counseling prepares graduates for certification as a Certified Rehabilitation Counselor in all fifty states, as well as a Licensed Professional Counselor (LPC) in the state of Mississippi. Counseling doctoral applications are due February 1. Applications for master's and educational specialist programs are due March 1. Applications will be considered until full enrollment is attained. Applications may be reviewed at other times for general educational psychology. For further information, write to the Graduate Coordinator. The department prepares students for careers as school counselors, student affairs professionals in higher education, and as counselors in rehabilitation, college counseling centers, and other mental health community agencies. Teaching and research assistantships are available. Counseling Program Accreditations: The M.S. programs in Counseling are Clinical Mental Health, Rehabilitation, and School and are accredited by the Council for Accreditation of Counseling and Related Educational Programs (CACREP). The doctoral programs in counseling (PHCE) and in school counseling (PHSE) are also accredited CACREP. The school counseling program is also accredited by the National Council for Accreditation of Teacher Education (NCATE). Graduate study in counseling offers preparation in counseling at three degree levels. 1. The Master of Science (M.S.) degree in Counselor Education with concentrations in clinical mental health counseling; rehabilitation counseling; student affairs; college counseling;

college counseling; and school counseling
2. The Educational Specialist (Ed.S.) degree in Education with concentrations in counseling *and school psychology* provide advanced coursework sought by students seeking licensure or higher levels of certification
3. The Doctor of Philosophy (Ph.D.) degree *with two majors:* Counselor Education *and Student Counseling & Guidance*

Admission Criteria for Counseling Programs

Applications for master's and educational specialist programs are due by March 1. Counseling doctoral applications are due by February 1. Applications will be considered until full enrollment is attained. Applications may be reviewed at other times for general educational psychology. For further information, write to the Graduate Coordinator.

A student accepted into the M.S. degree program in counseling must hold a baccalaureate degree and a minimum GPA of 3.00 on the last 60 hours of undergraduate work. Satisfactory Graduate Record Examination (GRE) scores (verbal, quantitative, and analytic writing) taken within the past five years must be submitted.

A student accepted into the Ed.S. degree program with a concentration in counseling must hold a master's degree in counseling or related field (as determined by program concentration), a minimum GPA of 3.30 on all graduate work, and satisfactory GRE scores (verbal, quantitative, and analytical writing).

A student accepted into a Ph.D. program must hold a master's degree from a CACREP- or CORE-accredited program in counseling or meet CACREP curriculum requirements as part of the doctoral program of study. Satisfactory results of the Graduate record Examination (GRE) taken with the past five years must be submitted.

Applicants for all counseling degree programs must also produce all other application requirements detailed by the Graduate School (e.g., letters of recommendation, statement of purpose).

Students admitted to a counseling program must maintain continuous enrollment. A student who is not enrolled or is inactive for one calendar year must be re-screened for readmission into the department prior to re-enrollment in the University (see the Readmission section under General Requirements for Admission in this publication).

and school counseling
2. The Educational Specialist (Ed.S.) degree in Education with concentrations in counseling *and school psychology* provide advanced coursework sought by students seeking licensure or higher levels of certification
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Admission Criteria for Counseling Programs

Applications for master's and educational specialist programs are due by March 1. Counseling doctoral applications are due by February 1. Applications will be considered until full enrollment is attained. Applications may be reviewed at other times for general educational psychology. For further information, write to the Graduate Coordinator.

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Applicants for all counseling degree programs must also produce all other application requirements detailed by the Graduate School (e.g., letters of recommendation, statement of purpose).

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Provisional Admission for Counseling Programs

Provisional Admission for Counseling Programs

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 admission 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). These 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.

Satisfactory Academic Performance

In addition to the requirements of Mississippi State University for graduate students, a student in any of the counseling programs is required to earn a grade of B or better in each skills course before being permitted to progress to the next course in the sequence. These "gatekeeper" courses include:

COE 8023	Counseling Theory	3
COE 8013	Counseling Skills Development	3
COE 8053	Practicum	3
COE 8633	Psychosocial Rehabilitation (CMHC only)	3
COE 8150	Academic School Year Field Experience Practicum	1-9
COE 8730	Internship	6

Unsatisfactory performance in graduate-level coursework is defined as a grade of U, D, or F in any course and/or more than two grades below a B after admission to the program. The grade of C, while not considered a failing grade, is seen as indicative of minimal academic performance. Only two grades of C are allowed during a student's work on a degree. Unsatisfactory performance also includes failing the master's comprehensive examination twice, failing the written doctoral preliminary/comprehensive examination twice, failing the oral doctoral

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 admission 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). These 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.

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preliminary/comprehensive examination twice, or failing the doctoral dissertation defense twice. Any of these or a combination of these failures will result in termination of the student's graduate program in counseling.			
CURRENT CURRICULUM OUTLINE	Required Hours	**PROPOSED CURRICULUM OUTLINE**	Required Hours
College Required Courses		College Required Courses	
Major Required Courses Master of Science in Counselor Education Prerequisites and Core Courses		Major Required Courses Master of Science in Counselor Education Prerequisites and Core Courses	
COE 6903—Developmental Counseling and Mental Health	3	COE 6903—Developmental Counseling and Mental Health	3
COE 8023—Counseling Theory	3	COE 8023—Counseling Theory	3
COE 8013—Counseling Skills Development	3	COE 8013—Counseling Skills Development	3
COE 8043—Group Techniques and Procedures	3	COE 8043—Group Techniques and Procedures	3
COE 8053/8150—Practicum	3-6	COE 8053/8150—Practicum	3-6
COE 8063—Research Techniques for Counselors	3	COE 8063—Research Techniques for Counselors	3
COE 8083—Assessment Techniques in Counseling	3	COE 8083—Assessment Techniques in Counseling	3
COE 8073—Cultural Foundations in Counseling	3	COE 8073—Cultural Foundations in Counseling	3
COE 8303—Family Counseling Theory	3	COE 8303—Family Counseling Theory	3
COE 8633—Psychosocial Rehabilitation	3	COE 8633—Psychosocial Rehabilitation	3
COE 8703—Principles of Clinical Mental Health Counseling	3	COE 8703—Principles of Clinical Mental Health Counseling	3
COE 8730/8740—Internship	6	COE 8730/8740—Internship	6
Concentration 1. Courses Clinical Mental Health Counseling		Concentration 1. Courses Clinical Mental Health Counseling	
COE 8203—Placement and Career Development	3	COE 8203—Placement and Career Development	3
COE 8773—Counseling the Chemically Dependent Client OR	3	COE 8773—Counseling the Chemically Dependent Client OR	3
COE 8783—Counseling the Chemically Dependent Family	3	COE 8783—Counseling the Chemically Dependent Family	3
COE 8803—Crisis Response in Counseling	3	COE 8803—Crisis Response in Counseling	3
Approved Electives (9 hours of coursework with COE prefix)	12	Approved Electives (9 hours of coursework with COE prefix)	12
Concentration 2. Courses School Counseling		Concentration 2. Courses School Counseling	

COE 8203—Placement and Career Development	3	COE 8203—Placement and Career Development	3
COE 8903—School Counseling Services	3	COE 8903—School Counseling Services	3
COE 8923—Seminar in School Counseling	3	COE 8923—Seminar in School Counseling	3
One of the following:		One of the following:	
COE 8913—Counseling Children	3	COE 8913—Counseling Children	3
EPY 6113—Behavioral and Cognitive Behavioral Interventions	3	EPY 6113—Behavioral and Cognitive Behavioral Interventions	3
EPY 8253—Child and Adolescent Development and Psychopathology	3	EPY 8253—Child and Adolescent Development and Psychopathology	3
Approved Electives *If 45 credit hours of Prerequisite and Core Courses are taken, the student will take 6 hours of electives	9	Approved Electives *If 45 credit hours of Prerequisite and Core Courses are taken, the student will take 6 hours of electives	9
Concentration 3. Courses Rehabilitation Counseling		Concentration 3. Courses Rehabilitation Counseling	
COE 6373—Vocational Assessment of Special Needs Persons	3	COE 6373—Vocational Assessment of Special Needs Persons	3
COE 8353—Vocational Rehabilitation Counseling	3	COE 8353—Vocational Rehabilitation Counseling	3
COE 8363—Psychological Aspects of Disability	3	COE 8363—Psychological Aspects of Disability	3
COE 8373—Medical Aspects of Disability	3	COE 8373—Medical Aspects of Disability	3
COE 8383—Job Placement in Rehabilitation	3	COE 8383—Job Placement in Rehabilitation	3
Approved Electives	6	Approved Electives	6
Total Hours	60		60

Justification (Campus 1, 2, & 5) and Student Learning Outcomes

Adding the availability of the online degree options for Rehabilitation Counseling and Clinical Mental Health Counseling would make the degrees available to individuals both across the state of Mississippi as well as outside of the state ,who historically have been unable to access both programs because of barriers due to distance and geographical locations (i.e. rural areas). Additionally, Mississippi State University is currently one of the few institutions among our peer institutions and the Southeastern Conference (SEC) that does not currently offer counseling programs via distance education. For example, University of Alabama offers their Rehabilitation program 100% via distance education for interested students. Similarly, Auburn offers their Clinical Mental Health Counseling program both on-campus and online. Gran Canyon University (a peer institution) offers their Master's Degree in Clinical Mental Health 100% via distance education. This change would allow us to join these other universities in meeting the need of creating rehabilitation and mental health professionals with various specialty areas. Further, Southern Mississippi offers several online programs, but not counseling. This change will allow us to fill this gap. In view of the recent impact of COVID-19 on all sectors of our economy, including higher education, the need to offer Rehabilitation Counseling and Clinical Mental Health Counseling courses online cannot be over-emphasized.

1. Will this Program change meet local, state, regional, and national educational and cultural needs?
Yes. Currently, there is a shortage of rehabilitation and mental health professional across all 82 counties in the state of Mississippi. This shortage is similar across much of the country. Additionally, rehabilitation counselors provide specialization care to a host of individuals across the spectrum of disabilities, including physical, development, and social-emotional. As this demand increases at the local, state, regional, and national level, it is essential professionals are being produced to meet the demand. Second, the Mississippi Department of Rehabilitation Services (MDRS) would love the opportunity of sponsoring the professional

development of its current rehabilitation and mental health professionals through enrollment in online graduate degree programs. Offering Rehabilitation and Clinical Mental Health programs online, would fit seamlessly into the lives of everyday people while pursuing their degree. Third, creating an online version of the Rehabilitation and Mental Health programs will improves access and inclusion as potential students in rural Mississippi who otherwise may not have the opportunity to attend a face to face program can now participate.

2. Will this program change result in a duplication in the system?
No.

3. Will this program change/advance student diversity within the discipline?
Yes, particularly the distance education component. Offering programs via distance education allows for education to reach a broader base of individuals, including those who are not local, may not be able to readily attend face to face program, are working professionals, etc.

4. Will this program change result in the potential placement of graduates in MS, the Southeast, and the U.S.?
Yes, this program change will result in an increase in the potential placement of graduates in MS, the Southeast, and nationally. The proposed Campus 5 offering would allow interested rehabilitation and clinical mental health counseling students (particularly rural students) to conveniently meet all the course and degree requirements necessary for certification as well as licensure as Licensed Professional Counselors, which will make them more marketable.

5. Will this program change result in an increase in the potential salaries of graduates in MS, the Southeast, and the U.S.?
Yes, this program change will result in an increase in the potential salaries of graduates in MS, the Southeast, and the nationally. Graduates will be able to without relocating, be able to obtain an education that would allow them to become both certified and licensed professional counselors, which will make them more marketable and receive higher salaries.

Learning outcomes: There will be no modification in the learning outcomes.

Support: Please see letter from program faculty from both Campus 1 & 2 in the Department of Counseling, Educational Psychology, and Foundations supporting the changes to the degree program. The proposed modifications will not require additional support in terms of personnel and material requirements (faculty, lab space, classroom space, equipment).

Proposed 4-letter Abbreviation: No changes proposed.

Effective Date: Fall 2022.

MISSISSIPPI STATE UNIVERSITY

Department of Counseling,
Educational Psychology, and Foundations
Mailstop 9727
175 President Circle
508 Allen Hall
Mississippi State, MS 39762
P. 662.325.3426
F. 662.325.3263
cep.msstate.edu

TO: Box Council and UCCC Committee Members

FROM: Starkville - Counselor Education Faculty

RE: Master's Degree Program Modification

DATE: January 25, 2022

Dear Box Council and UCCC Committee Members,

This letter of support is offered by the Starkville Counselor Education Faculty members for the proposed Counseling Master's graduate degree program modification to add Campus 5 for Clinical Mental Health Counseling and Rehabilitation Counseling concentration areas. As indicated by the signatures below, a majority of the program faculty at Starkville have approved the proposal as written for submission to the Box Council and the UCCC.

Program Faculty:

[Katherine Dooley, Ph.D.]

[Joan Looby, Ph.D.]

[Laith Mazahreh, Ph.D.]

[Cheryl Justice, Ph.D.]

[Rebecca M. Goldberg, Ph.D.]

[Sumedha Therthani, Ph.D.]

[Zaccheus J Ahonle, Ph.D.]

Appendix 10: Report of Intent to Offer an Existing Degree Program by Distance Learning
(Submit Appendix 10 in PDF format with signatures)

Institution:

Date of Initial Program Approval:	**Date of Implementation:**	**Cost to Offer by Distance Learning:**
n/a	8/1/20222	$10,000

Program Title as It Appears on Academic Program Inventory, Diploma, and Transcript:
Master's of Science in Counselor Education with a Concentration in Clinical Mental Health Counseling

Six-Digit CIP Code(s) & Four-Digit Sequence Code(s):
13.1101

CIP & Sequence codes: IHL Active Program Inventory

Degree(s) to be Awarded:
Master's of Science in Counselor Education with a Concentration in Clinical Mental Health Counseling

Credit Hour Requirements:
60

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):
Counseling, Educational Psychology, and Foundations

Institutional Contact: Daniel Gadke
Phone: 662.325.3312
Email: dgadke@colled.msstate.edu

Number of Students Expected to Enroll in First Six Years:		**Number of Graduates Expected in First Six Years:**	
Year One	10	**Year One**	0
Year Two	20	**Year Two**	10
Year Three	30	**Year Three**	20
Year Four	40	**Year Four**	30
Year Five	40	**Year Five**	40
Year Six	40	**Year Six**	40
Total	180	**Total**	140

Program Summary: The M.S. in Counselor Education with a concentration in Clinical Mental Health Counseling is a terminal degree designed to begin in the Fall Semester and be completed in two years. The concentration in CMHC leads to licensure as a Licensed Professional Counseling (LPC). The degree program is currently 60-credit hours per accreditation requirements. All students in the program must pass Master's Comprehensive Exams.

_____ _____
Chief Academic Officer Signature **Date**

_____ _____
Institutional Executive Officer Signature **Date**

Appendix 10: Report of Intent to Offer an Existing Degree Program by Distance Learning
(Submit Appendix 10 in PDF format with signatures)

Institution:

Date of Initial Program Approval:	Date of Implementation:	Cost to Offer by Distance Learning:
n/a	8/1/20222	$10,000

Program Title as It Appears on Academic Program Inventory, Diploma, and Transcript:
Master's of Science in Counselor Education with a Concentration in Rehabilitation Counseling

Six-Digit CIP Code(s) & Four-Digit Sequence Code(s):
13.1101

CIP & Sequence codes: IHL Active Program Inventory

Degree(s) to be Awarded:
Master's of Science in Counselor Education with a Concentration in Rehabilitation Counseling

Credit Hour Requirements:
60

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):
Counseling, Educational Psychology, and Foundations

Institutional Contact: Daniel Gadke
Phone: 662.325.3312
Email: dgadke@colled.msstate.edu

Number of Students Expected to Enroll in First Six Years:		Number of Graduates Expected in First Six Years:	
Year One	10	**Year One**	0
Year Two	20	**Year Two**	10
Year Three	30	**Year Three**	20
Year Four	40	**Year Four**	30
Year Five	40	**Year Five**	40
Year Six	40	**Year Six**	40
Total	180	**Total**	140

Program Summary: The M.S. in Counselor Education with a concentration in Rehabilitation Counseling is a terminal degree designed to begin in the Fall Semester and be completed in two years. The concentration in RC leads to certification as a Certificated Rehab Counselor (CRC) and Licensure as a Licensed Professional Counseling (LPC). The degree program is currently 60-credit hours per accreditation requirements. All students in the program must pass Master's Comprehensive Exams.

_____ _____
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: BCoE Department: Industrial and Systems Engineering

Contact Person: Reuben Burch Mail Stop: 9542 E-mail: burch@ise.msstate.edu
Nature of Change: certificate creation Date Initiated: Spr 2022 Effective Date: Fall 2022
Current Certificate Name: none

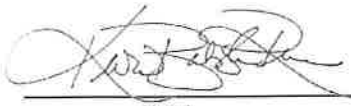
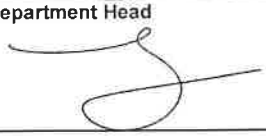
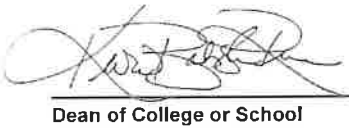
Major: Concentration:

New Certificate Program Name: Athlete Engineering

Major: Concentration:

Summary of Proposed Changes:

Creation of a post BS certificate in Athlete Engineering

Approved:	Date:
 Department Head	3/28/2022
 Chair, College or School Curriculum Committee T.J. Jankun-Kelly 2022.03.28 11:33:08 -05'00'	
 Dean of College or School	3/28/2022
Chair, University Committee on Courses and Curricula	
Chair, Graduate Council(if applicable)	
Chair, Deans Council	

Athlete Engineering Certificate Program UCCC

1. Catalog Description

Proposed New Degree Description

Degree: Athlete Engineering Certificate

Description: Athlete Engineering, a focused area of the field of human factors and ergonomics, refers to the human performance, processes, and analysis of athletes, be they sports, industrial (repetitive motion task workers), tactical (warfighters and emergency responders), or at-risk (chiropractic and rehabilitation) athletes. Mississippi State University (MSU) has created a first-of-its-kind Athlete Engineering research program through an interdisciplinary team formed from a collaboration between MSU Athletics, Bagley College of Engineering, the department of Kinesiology, and the school of Human Sciences. This research program uses both laboratory equipment and sport-specific wearable technologies to explore human performance (from a biomechanics and physiological perspective) and movement baselining and analysis. Wearable technology is not limited to donning solutions comprised of electronics; the definition of wearables includes helmets, shoes, personal protective equipment, and face coverings, as comfort and fit versus effectiveness is critical for user adoption. The interdisciplinary nature of the Athlete Engineering research team allows for more in-depth research and design of technology solutions and data that has real impact and meaning to the supported practitioners in MSU Athletics. MSU faculty involved in human performance, processes, and analysis research utilize many existing course offerings. Both students and external research partners in these programs have benefited from this coursework. Since the creation of the Athlete Engineering research program, the scope of the athletes supported has expanded beyond MSU into all professional sports leagues as well as into both Mississippi industry through partnership with local community colleges as well as our local military at the Columbus Air Force base with pilot training.

As students, these practitioners from sports teams, industrial companies, and military facilities who complete the Athlete Engineering Certificate will have a much greater chance of distinguishing themselves from peers as they look to be promoted and improve their autonomy, responsibility, salary, and other standings in their organizations. Many of the potential students targeted for this certificate program are already active in gaining certifications as part of the work they do to separate themselves while staying relevant in their field. Practitioners have reached out to Athlete Engineering affiliated faculty at MSU to request the creation of a program that offers something different from their current certificate and training options. The growing national reputation of Athlete Engineering research empowers MSU to be the first to fill this educational gap. Further, sports, industries, and military sectors are becoming increasingly dependent on wearables and human performance-drive technologies. With the aid of multiple National Science Foundation (NSF) awards funded to the Athlete Engineering research program, MSU faculty have become recognized experts in the wearable technology field as this interdisciplinary team creates their own data-capturing solutions while validating existing solutions often used in sports, industry, and military. Through this research, human performance for both sports and industry have already been incorporated into many of the proposed courses for this certificate where all students partner with sports teams and industry and military organizations, to solve human factors-related problems. Many of these course-driven projects result in publications that give back to the practitioner community (hence the growing reputation) thereby teaching the students how to create new knowledge while also supporting customers and improving safety-driven decision-making.

The intended flexibility of the Athlete Engineering Certificate allows any MSU student from across the university and any practitioner from across the worlds of sports, industry, and military to receive recognition for mastering human performance, performance technology, and the comfort and fit versus effectiveness expectation on behalf of the practitioner for these technology solutions. Graduate certificate degrees are available for both the on-campus and distance education learners. The Athlete Engineering Certificate comprises 12 credit hours in different human performance, processes, and analysis fields, all originating out of Industrial & Systems Engineering but in classes that partner with other engineering disciplines and Kinesiology and Human Science experts and faculty. The successful completion of the Athlete Engineering Certificate will expand students' foundation and understanding of the utilization of human performance, processes, and analysis methodologies within their fields. This certificate will provide the opportunity to promote the students' Athlete Engineering mastery to existing and future employers or potential graduate programs.

In short, this proposal certificate program is heavy on all things Human Factors with an emphasis on using technology and processes to aid all health and safety decision makers across the many sectors where human performance is a critical asset.

Proposed Curriculum Outline	**Required Hours**
Industrial & Systems Engineering: • IE 8153: Cognitive Engineering • IE 8163: Macroergonomics • IE 8143: Applied Ergonomics Methods • IE 8583: Enterprise Systems Engineering • IE 6113: Human Factors Engineering • *New approved electives	**12 hrs (pick any four of the courses listed)**
*New electives that are relevant to the Athlete Engineering Certificate curriculum and are approved by the academic point of contact will be added to this list to expand program offerings and depth.	
Total Hours	**12 hrs**
Other Requirements: • The Athlete Engineering Certificate is available only at the graduate level and must include all courses at the 6000-level or higher. • All students must have completed an undergraduate degree in a STEM or relevant discipline OR students must have completed an undergraduate degree in any discipline and be able to demonstrate relevant work experience. • Students must earn a "C" grade or higher in all course work. • The director of the Athlete Engineering Certificate will evaluate transcripts and make recommendations for awarding the certificate. • Despite the certificates interdisciplinary nature, the home department for the Athlete Engineering Certificate will be Industrial & Systems Engineering due to the required Human Factors components. • No course substitutions will be allowed. • All applicants will be reviewed by a certificate committee which will include the institutional contact. • Given that many of the Athlete Engineering Certificate students will need annual training hours to meet their existing certifications either in sports performance or industrial safety, a second level of the certificate program will be encouraged. Students will be allowed to complete two more courses out of the list of electives to achieve a **Certificate+** (or level 2) curriculum	

recognition. Because more relevant courses will be developed and added overtime to the program based on student feedback, this enables the students to maximize the program without requiring the transition to a full Master's degree. The Certificate+ will be a separate recognition certificate.

- The Athlete Engineering Certificate must be completed within 2 years. The **Certificate+** can be completed within two years after completing the original.

2. **Curriculum Outline:** All courses that will be used in the Athlete Engineering Certificate are already approved by UCCC (either fully or at the special topics level).

3. **Student Learning Outcomes and Assessment:**
   - Expected Outcome 1, Human Factors: Students will be able to understand how humans fit and work within systems such as sports teams and industrial and military organizations. There will be larger emphasis on human factors and human processes. Depending on the courses taken, emphasis areas will focus on (a) human capabilities and limitations affecting communications and responses in man-machine systems, (b) physiological and psychological fundamentals, (c) implications of human perceptual, cognitive, and psycho-motor capabilities on the design of systems for effective, efficient, and safe human-machine performance, (d) personnel, technological, and environmental factors influencing organizations and teams with the goal of keeping all "athletes" happy, healthy, and effective, and (e) design and improvement of an enterprise through the use of engineering tools and methods. Students will learn the relationship between macro- and micro- ergonomics.
     - Assessment: Students will complete the final exams in their Industrial & Engineering courses that focus on Human Factors. 70% of the students will score 80% or higher on their final research project or final exam (100-point scale).
   - Expected Outcome 2, Interdisciplinary Understanding (Kinesiology & Human Sciences): Students will be able to understand how the human body works including capabilities and limitations. There will be larger emphasis on human physiology and human biomechanics depending on the courses taken. Likewise, human science focus areas will include textiles and fashion design elements associated with comfort and discomfort of wearable technologies. Additional physiological elements such as sleep and internal body loading will be incorporated into the course materials as wearable technologies cover the full spectrum of human performance assessment.
     - Assessment: Students will complete the final exams in their Industrial & Engineering courses that are taught or co-taught with experts and faculty from Kinesiology and Human Sciences. 70% of the students will score 80% or higher on their final research project or final exam (100-point scale).
   - Expected Outcome 3, Human-focused Emphasis across sports, industry, and military: Student practitioners will be able to gain extended human performance understanding such that common Industrial & Systems Engineering methods can be applied to the sports, industrial, and tactical athlete personas including the design of their training regimen and human performance quantification.
     - Assessment: Students will complete the final exams in their Industrial & Engineering courses that are taught or co-taught with current and former practitioners whose experience includes sports, industry, and military work or collaboration. 70% of the

students will score 80% or higher on their final research project or final exam (100-point scale).

Distance Learning Courses:

All courses will be offered either exclusively through distance education or will offer an online section and will include the following actions to deter academic misconduct:

- Practicum exams. Students must apply both course content and academic publications to write a narrative in response to applied questions related to their preferred research area of interest. These assessments result in the students extending their learning beyond the material of the course while preventing the likelihood of cheating as each student will focus responses on self-specified topics identified earlier in the semester. All practicum exams will be evaluated for plagiarism, intentional or otherwise.
- Group projects. Collaboration will be encouraged empowering the student teams to extend their expertise beyond what they could do alone. Sports experts will work with industry experts as well as on-campus students giving people of all backgrounds different perspectives on the application of the course content. Teamwork will be encouraged therefore removing the need to assess for cheating. All project reports will be evaluated for plagiarism, intentional or otherwise.
- Develop large question banks. Where practicums and project reports cannot be used, regular exams will be different from semester to semester.
- Timed exams. Exams administered through distance education format will be timed in such a way that students will not have the opportunity to look up answers. The exam will timeout and submit automatically. Unanswered questions will not receive credit. The distance learner will be constrained to take exams under the same set of circumstances as on-line students.
- On-line proctoring. Distance education courses will implement current and future university on-line proctoring standards and protocols.

4. **Support:** See attached letters of support.

5. **Proposed 4-letter Abbreviation:** ATEC

6. **Effective Date:** May 15, 2022

MISSISSIPPI STATE UNIVERSITY
JAMES WORTH BAGLEY COLLEGE OF ENGINEERING

DEPARTMENT OF INDUSTRIAL & SYSTEMS ENGINEERING
Reuben F. Burch V, Ph.D.
Associate Professor / Jack Hatcher Chair / Associate Director
burch@ise.msstate.edu

February 18, 2022

RE: Approval for the Athlete Engineering Certificate Program

The Industrial & Systems Engineering (ISE) faculty and the Graduate Committee support the approval of offering the Athlete Engineering Certificate program via on-campus and distance. These two approvals are evidenced by the minutes from the ISE January 2022 meeting and the signature from the Graduate Committee Chair below. This certificate was vetted and approved with no concerns by the Graduate Committee on January 20th. The ISE voted unanimously to accept this certificate into ISE curriculum offerings on January 21st should it be approved by UCCC.

All classes currently proposed to comprise the certificate program either have companion 6000 level sections or are 8000 courses that are approved for campus 1, 5, and 6. This approval will align the 4000/6000 and 8000 level offerings to be offer across all three campuses. This also allows Engineering on the Coast student to take these courses in addition to all students physically enrolled on MSU's main campus or registered as online MSU students. This certificate is a stand-alone offering but can contribute to the completion of ISE or other graduate program curriculum.

Reuben F. Burch V — Digitally signed by Reuben F. Burch V Date: 2022.02.18 10:27:41 -06'00'
Reuben Burch

Linkan Bian — Digitally signed by Linkan Bian Date: 2022.02.18 11:09:19 -06'00'
Linkan Bian

Kari Babski-Reeves — Digitally signed by Kari Babski-Reeves Date: 2022.02.18 12:36:19 -06'00'
Kari Reeves

Appendix 16: Intent to Offer, Modify, or Delete Certificate* Program

(Submit Appendix 16 in PDF format with signatures)

Institution:

Date of Implementation:
Fall 2022

Six-Digit CIP Code (& Four-Digit Sequence Code if modification/deletion): 14.9999

Total Credit Hours: 12

CIP & Sequence codes: IHL Active Program Inventory

Program Title as will Appear on Academic Program Inventory: Athlete Engineering

X **Offer** ☐ **Modify** ☐ **Delete**

Responsible Academic Unit(s):
Industrial and Systems Engineering

Institutional Contact: Reuben Burch
Phone: 662.325.1677
Email: Burch@ise.msstate.edu

Vocational Certificate:	**Credit Bearing Program:**	**Title IV Financial Aid Eligible:**
Yes X	Yes X	Yes
No	No	No X

Which of the following best describes the certificate program:

Pre-Baccalaureate (Less than 1 Year)	Undergraduate program with duration less than one academic year; designed for completion in less than 30 credit hours
Pre-Baccalaureate (At Least 1 Year)	Undergraduate program with duration at least 1 year; designed for completion in at least 30 hours; does not meet requirements for Associate's or Bachelor's degrees
Post-Baccalaureate	Program designed beyond the baccalaureate degree but does not meet the requirements for a master's degree
Post-Master's	Program designed beyond the master's degree but does not meet the requirements for a doctoral degree
Other	Other certificate program not meeting one of the four criteria above.

Program Summary:

The Athlete Engineering (AE) certificate is designed for post BS student seeking to learn more regarding human performance evaluation and assessment across a number of fields (sports, industry, military, etc.). The AE certificate combines human performance courses, with analytical techniques, performance technology (sensors and wearable devices) to provide real time and post performance monitoring to evaluate human behavior, safety and develop solutions to prevent and control injuries and illnesses as well as design rehabilitation strategies.

Institutional Contact Signature _____ **Date** _____

Chief Academic Officer Signature _____ **Date** _____

*Certificate programs added to the Academic Program Inventory must be credit-bearing and be vocational in nature with some professional benefit to program completers. Undergraduate certificates are eligible for Title IV financial aid programs. Certificate programs that are not credit-bearing or are lifelong learning in nature (i.e. photography, travel, etc.) with no professional component should not be included in the Academic Program Inventory.

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:** Electrical & Computer Engineering

Contact Person: Jean Mohammadi-Aragh **Mail Stop:** 9571 **E-mail:** jean@ece.msstate.edu

Nature of Change: update first-year course names, consolidate EE and CPE senior design courses

Date Initiated: 4/12/2022 **Effective Date:** Fall 2022

Current Degree Program Name: Bachelor of Science in Computer Engineering

Major: Computer Engineering **Concentration:**

New Degree Program Name:

Major: **Concentration:**

Summary of Proposed Changes:

The changes proposed are as follows:

1. Update the name for ECE 1013 and 1022
2. Replace ECE 4532 CPE Design I with ECE 4512 Capstone Design I
3. Replace ECE 4542 CPE Design II with ECE 4522 Capstone Design II

Approved: **Date:**

_____	_____
Department Head	
_____	_____
Chair, College or School Curriculum Committee	
_____	_____
Dean of College or School	
_____	_____
Chair, University Committee on Courses and Curricula	
_____	_____
Chair, Graduate Council(if applicable)	
_____	_____
Chair, Deans Council	

PROPOSAL FOR THE MODIFICATION OF THE

B.S. IN COMPUTER ENGINEERING

1. CATALOG DESCRIPTION

See table below.

2. CURRICULUM OUTLINE

The changes proposed are as follows:

4. Update the name for ECE 1013 and 1022
5. Replace ECE 4532 CPE Design I with ECE 4512 Capstone Design I
6. Replace ECE 4542 CPE Design II with ECE 4522 Capstone Design II

Table 1. Comparison of Current CPE Degree and Proposed CPE Degree Programs

CURRENT Degree Description	PROPOSED Degree Description
Degree: Bachelor of Science in Computer Engineering Major: Computer Engineering Concentration:	Degree: Bachelor of Science in Computer Engineering Major: Computer Engineering Concentration:
Alumni, employers, faculty and students participate in a process used to develop educational objectives for the undergraduate programs in Electrical Engineering and Computer Engineering. Within a few years of graduation, program graduates completing the baccalaureate degree in Electrical or Computer Engineering will: • Be recognized by their peers as fundamentally sound in the application of mathematics, science, computing, and engineering. • Be engaged in the practice of Electrical or Computer Engineering as innovative problem solvers with a strong work ethic, by identifying and implementing solutions using the proper tools, practical approaches, and flexible thinking. • Be productive and demonstrate leadership in the practice of Electrical or Computer Engineering, both individually and within multidisciplinary teams, using effective oral and written communication skills when working with peers, supervisors, and the public. • Be responsible in the practice of Electrical or Computer Engineering, relying on sound engineering ethics, a commitment to lifelong learning and a genuine concern for society and the environment.	Alumni, employers, faculty and students participate in a process used to develop educational objectives for the undergraduate programs in Electrical Engineering and Computer Engineering. Within a few years of graduation, program graduates completing the baccalaureate degree in Electrical or Computer Engineering will: • Be recognized by their peers as fundamentally sound in the application of mathematics, science, computing, and engineering. • Be engaged in the practice of Electrical or Computer Engineering as innovative problem solvers with a strong work ethic, by identifying and implementing solutions using the proper tools, practical approaches, and flexible thinking. • Be productive and demonstrate leadership in the practice of Electrical or Computer Engineering, both individually and within multidisciplinary teams, using effective oral and written communication skills when working with peers, supervisors, and the public. • Be responsible in the practice of Electrical or Computer Engineering, relying on sound engineering ethics, a commitment to lifelong learning and a genuine concern for society and the environment.

With the origin of the modern computer dating back to the late 1940's and the growth of computer hardware fueled by the availability of digital integrated circuits starting in the late 1960's, computer engineers have enjoyed a pivotal role in technology that now permeates our entire society. Whether the end product is an integrated circuit, a system of networked embedded computers, or any system that relies on digital hardware or computer software, its development requires the skills of a computer engineer. While computing systems include both hardware and software, it is the optimal combination of these components that is the unique realm of the computer engineer. Today, computer engineers are a driving force in the technological and economic development of the digital age.	With the origin of the modern computer dating back to the late 1940's and the growth of computer hardware fueled by the availability of digital integrated circuits starting in the late 1960's, computer engineers have enjoyed a pivotal role in technology that now permeates our entire society. Whether the end product is an integrated circuit, a system of networked embedded computers, or any system that relies on digital hardware or computer software, its development requires the skills of a computer engineer. While computing systems include both hardware and software, it is the optimal combination of these components that is the unique realm of the computer engineer. Today, computer engineers are a driving force in the technological and economic development of the digital age.
The curriculum requirements for computer engineering are built around a substantial engineering core curriculum and required courses in electrical engineering and computer science. The requirements in mathematics, the basic sciences, and engineering sciences provide the breadth of exposure required for all engineering disciplines. Basic electrical engineering requirements include circuit theory, electronics and digital devices which are supplemented by upper-level courses in computer architecture, and computer aided design of digital systems. Basic computer science courses include a coordinated sequence providing fundamental knowledge in data structures, algorithms, object oriented programming, software engineering, real-time application and software development tools. These courses are developed across multiple platforms and are based on the Python and Java language. Upper-level courses in data communications and computer networks, algorithms and operating systems are also provided. Students wishing to gain depth of coverage in communications, parallel computing, *VLSI,* embedded systems or signal processing can achieve this with the availability of technical electives selected from an approved list or in consultation with a faculty advisor. Required courses in communications skills, social sciences and humanities provide studies in non-technical areas that are traditional in a broad-based education. A capstone senior design course requires students to apply newfound knowledge and explore entrepreneurship. Students research and identify a problem and work in teams applying a combination of hardware and software to develop a solution. Critical and Final Design Reviews enable students to develop their professional presentation skills.	The curriculum requirements for computer engineering are built around a substantial engineering core curriculum and required courses in electrical engineering and computer science. The requirements in mathematics, the basic sciences, and engineering sciences provide the breadth of exposure required for all engineering disciplines. Basic electrical engineering requirements include circuit theory, electronics and digital devices which are supplemented by upper-level courses in computer architecture, and computer aided design of digital systems. Basic computer science courses include a coordinated sequence providing fundamental knowledge in data structures, algorithms, object oriented programming, software engineering, real-time application and software development tools. These courses are developed across multiple platforms and are based on the Python and Java language. Upper-level courses in data communications and computer networks, algorithms and operating systems are also provided. Students wishing to gain depth of coverage in communications, parallel computing, embedded systems or signal processing can achieve this with the availability of technical electives selected from an approved list or in consultation with a faculty advisor. Required courses in communications skills, social sciences and humanities provide studies in non-technical areas that are traditional in a broad-based education. A capstone senior design course requires students to apply newfound knowledge and explore entrepreneurship. Students research and identify a problem and work in teams applying a combination of hardware and software to develop a solution. Critical and Final Design Reviews enable students to develop their professional presentation skills.
Students expecting to graduate from Mississippi State University with a bachelor of science degree in computer engineering, in addition to satisfactorily completing the CPE curriculum requirements, must meet the following minimum GPA requirements for graduation:	Students expecting to graduate from Mississippi State University with a bachelor of science degree in computer engineering, in addition to satisfactorily completing the CPE curriculum requirements, must meet the following minimum GPA requirements for graduation:

• make an overall C average on all hours scheduled and rescheduled at all institutions attended, including MSU (2.00 or better cumulative GPA) • make a C average on all hours scheduled and rescheduled at MSU (2.00 or better MSU GPA) • earn at least a 2.00 cumulative grade point average on all courses scheduled and rescheduled (average on all attempts) at MSU that are applied toward meeting degree requirements • earn at least a 2.5/4.0 average on all hours with ECE or CSE course prefixes at all institutions attended, including MSU, that are applied toward meeting degree requirements The computer engineering program is accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org. This program is offered through joint efforts of faculty in the Department of Electrical and Computer Engineering and the Department of Computer Science and Engineering.	• make an overall C average on all hours scheduled and rescheduled at all institutions attended, including MSU (2.00 or better cumulative GPA) • make a C average on all hours scheduled and rescheduled at MSU (2.00 or better MSU GPA) • earn at least a 2.00 cumulative grade point average on all courses scheduled and rescheduled (average on all attempts) at MSU that are applied toward meeting degree requirements • earn at least a 2.5/4.0 average on all hours with ECE or CSE course prefixes at all institutions attended, including MSU, that are applied toward meeting degree requirements The computer engineering program is accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org. This program is offered through joint efforts of faculty in the Department of Electrical and Computer Engineering and the Department of Computer Science and Engineering.

CURRENT CURRICULUM OUTLINE	Required Hours	PROPOSED CURRICULUM OUTLINE	Required Hours
EN 1103 English Comp I or EN 1104 Expanded English Comp I EN 1113 English Comp II or EN 1173 Accelerated Comp II	6	EN 1103 English Comp I or EN 1104 Expanded English Comp I EN 1113 English Comp II or EN 1173 Accelerated Comp II	6
Fine Arts: see General Education courses	3	Fine Arts: see General Education courses	3
Natural Sciences see Major Core		Natural Sciences see Major Core	
Math see Major Core		Math see Major Core	
Humanities see General Education courses	6	Humanities see General Education courses	6
Social/Behavioral Sciences see General Education courses	6	Social/Behavioral Sciences see General Education courses	6

Major Core Courses Math and Basic Science (31h)		Major Core Courses Math and Basic Science (31h)	
MA 1713 Calculus I	3	MA 1713 Calculus I	3
MA 1723 Calculus II	3	MA 1723 Calculus II	3
MA 2733 Calculus III	3	MA 2733 Calculus III	3
MA 2743 Calculus IV	3	MA 2743 Calculus IV	3
MA 3113 Introduction to Linear Algebra	3	MA 3113 Introduction to Linear Algebra	3
MA 3253 Differential Equations I	3	MA 3253 Differential Equations I	3
IE 4613 Engineering Statistics I	3	IE 4613 Engineering Statistics I	3
CH 1213 Chemistry I	3	CH 1213 Chemistry I	3
CH 1211 Investigations in Chemistry I	1	CH 1211 Investigations in Chemistry I	1
PH 2213 Physics I	3	PH 2213 Physics I	3
PH 2223 Physics II	3	PH 2223 Physics II	3
Engineering Topics (76h)		Engineering Topics (76h)	
CSE 1284 Introduction to Computer Programming	4	CSE 1284 Introduction to Computer Programming	4
CSE 1384 Intermediate Computer Programming	4	CSE 1384 Intermediate Computer Programming	4
CSE 2383 Data Structures and Analysis of Algorithms	3	CSE 2383 Data Structures and Analysis of Algorithms	3
CSE 2813 Discrete Structures	3	CSE 2813 Discrete Structures	3
CSE 4733 Operating Systems I	3	CSE 4733 Operating Systems I	3
CSE 4833 Intro Analysis of Algorithms	3	CSE 4833 Intro Analysis of Algorithms	3
ECE 1013 Introduction to ECE Design I	3	**ECE 1013 Foundations in ECE**	3
ECE 1022 Introduction to ECE Design II	2	**ECE 1022 Foundations in Design**	2
ECE 3423 Circuits I	3	ECE 3423 Circuits I	3
ECE 3421 Circuits I Lab	1	ECE 3421 Circuits I Lab	1
ECE 3433 Circuits II	3	ECE 3433 Circuits II	3
ECE 3244 Electronics I	4	ECE 3244 Electronics I	4
ECE 3443 Signals and Systems	3	ECE 3443 Signals and Systems	3
ECE 3714 Digital Devices and Logic Design	4	ECE 3714 Digital Devices and Logic Design	4
ECE 3724 Microprocessors	4	ECE 3724 Microprocessors	4
ECE 4724 Embedded Systems	4	ECE 4724 Embedded Systems	4
ECE 4532 CPE Design I	2	**ECE 4512 Capstone Design I**	2
ECE 4542 CPE Design II	2	**ECE 4522 Capstone Design II**	2
ECE 4713 Computer Architecture	3	ECE 4713 Computer Architecture	3
ECE 4743 Digital System Design	3	ECE 4743 Digital System Design	3
ECE 4833 Data Communication and Computer Networks	3	ECE 4833 Data Communication and Computer Networks	3
CPE technical electives (6h)	6	CPE technical electives (6h)	6
Professional Enrichment elective (3h)	3	Professional Enrichment elective (3h)	3
Oral Communication Requirement Fulfilled in ECE 1013, ECE 1022, ECE 4532, ECE 4542, and GE 3513		Oral Communication Requirement Fulfilled in ECE 1013, ECE 1022, ECE 4532, ECE 4542, and GE 3513	
Writing Requirement GE 3513 Technical Writing	3	Writing Requirement GE 3513 Technical Writing	3
Computer Literacy Fulfilled in Engineering Topics courses		Computer Literacy Fulfilled in Engineering Topics courses	
Concentration Courses		Concentration Courses	

Total Hours	128	Total Hours	128

3. JUSTIFICATION AND STUDENT LEARNING OUTCOMES

By renaming our two first-year courses and our two senior-level design courses, we are clarifying the courses' content and focus-areas. These changes will add clarification to our advising practices for the first-year courses. The changes related to merging and renaming our senior design courses will improve student course selection processes since most of our student teams include both EE and CPE majors.

As a result of this degree program modification, there are no changes to the student learning outcomes. The CPE student learning outcomes are as follows:

1. an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
2. an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
3. an ability to communicate effectively with a range of audiences
4. an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
5. an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
6. an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
7. an ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

- Will this program change meet local, state, regional, and national educational and cultural needs? **Yes**
- Will this program change result in duplication in the System? **No**
- Will this program change/advance student diversity within the discipline? **No**
- Will this program change result in an increase in the potential placement of graduates in MS, the Southeast, and the U.S.? **No**
- Will this program change result in an increase in the potential salaries of graduates in MS, the Southeast, and the U.S.? **No**

4. SUPPORT

See letters of support from ECE and CSE Departments.

5. PROPOSED 4-LETTER ABBREVIATION
No changes

6. EFFECTIVE DATE
Fall 2022

MISSISSIPPI STATE UNIVERSITY
JAMES WORTH BAGLEY COLLEGE OF ENGINEERING

DEPARTMENT OF
ELECTRICAL AND COMPUTER ENGINEERING
Undergraduate Program Committee

February 22, 2022

TO: James W. Bagley College of Engineering Committee on Courses and Curricula &
Mississippi State University University Committee on Courses and Curricula

FROM: Undergraduate Program Committee, Department of Electrical & Computer Engineering

RE: New course additions

The undergraduate committee has reviewed the proposed course modifications and additions for the below courses.

- ECE 1013 – name change “Introduction to Design I" to "Foundations in ECE”
- ECE 1022 – name change “Introduction to Design II" to "Foundations in Design”
- ECE 4512 – name change “EE Design I” to “Capstone Design I”
- ECE 4522 – name change “EE Design II” to “Capstone Design II”
- ECE 4913 – name change “Feedback Control Systems I" to "Feedback Control Systems”
- ECE 4923 – name change “Feedback Control Systems II" to "Digital Control Systems”
- ECE 4753 / 6753 – course modification / reactivation
- ECE 4793 / 6793 – course addition
- ECE 4683 / 6683 – course addition

We offer our unanimous support for these changes and the related degree program modifications to update ECE 1013, 1022, 4512, and 4522 in the curriculum tables. Please contact us if there are any questions or concerns.

Jean Mohammadi-Aragh
Digitally signed by Jean Mohammadi-Aragh
Date: 2022.02.22 16:31:02 -06'00'

Jean Mohammadi-Aragh
Chair, ECE Undergraduate Committee
Assistant Professor

Digitally signed by Randolph F. Follett
Date: 2022.02.22 17:12:32 -06'00'

Randy Follett
Member, ECE Undergraduate Committee
Associate Professor

Ryan B Green
Digitally signed by Ryan B Green
Date: 2022.02.23 10:01:28 -06'00'

Ryan Green
Member, ECE Undergraduate Committee
Assistant Professor

Dr. Ali Cafer Gurbuz
Digitally signed by Dr. Ali Cafer Gurbuz
Date: 2022.02.23 13:25:44 -06'00'

Ali Gurbuz
Member, ECE Undergraduate Committee
Assistant Professor

Umar Iqbal
Digitally signed by Umar Iqbal
DN: cn=Umar Iqbal, o=Mississippi State University, ou=Electrical & Computer Engineering, email=umar@ece.msstate.edu, c=US
Date: 2022.02.23 14:07:38 -06'00'

Umar Iqbal
Member, ECE Undergraduate Committee
Assistant Clinical Professor

Jane Moorhead
Digitally signed by Jane Moorhead
DN: cn=Jane Moorhead, o=Mississippi State, ou=ECE, email=jnm15@msstate.edu, c=US
Date: 2022.02.23 13:38:46 -06'00'

Jane Moorhead
Member, ECE Undergraduate Committee
Instructor

MISSISSIPPI STATE UNIVERSITY
JAMES WORTH BAGLEY COLLEGE OF ENGINEERING

DEPARTMENT OF
COMPUTER SCIENCE & ENGINEERING

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

February 28, 2022

Dear Dr. Mohammadi-Aragh:

The Department of Computer Science and Engineering supports the proposed changes to the CPE degree. Specifically, the faculty approves:

1. Updating the name for ECE 1013 and 1022
2. Replacing ECE 4532 CPE Design I with ECE 4512 Capstone Design I
3. Replacing ECE 4542 CPE Design II with ECE 4522 Capstone Design II

Sincerely,

Andy D. Perkins, PhD
Professor and Associate Department Head

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 and Engineering

Contact Person: Dr. George Trawick

Mail Stop: 9637 E-mail: trawick@cse.msstate.edu

Nature of Change: Degree modification

Date Initiated: 03/30/2022 Effective Date: Fall 2022

Current Degree Program Name: BS

Major: Cybersecurity

Concentration: N/A

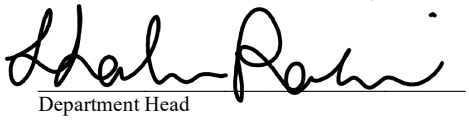
New Degree Program Name: BS

Major: Cybersecurity

Concentration: N/A

Summary of Proposed Changes: This modification is being made to accommodate a recent change to CSE 3723 Computer Organization, which added a lab component and changed to the 4 credit hour class CSE 3724, and also add CSE 2813 Discrete Structures.

Approved: Date:



Department Head 4/12/2022

Chair, College or School Curriculum Committee

Dean of College or School

Chair, University Committee on Courses and Curricula

Chair, Graduate Council (if applicable)

Chair, Deans Council

1. CATALOG DESCRIPTION - The catalog description remains unchanged.

The Bachelor of Science in Cyber Security is designed for students who wish to help meet the challenges posed by increasing cyber-threats. Using a multidisciplinary approach, the program is designed to provide students with a focused education for evaluating, understanding, and solving cyber security problems.

The Bachelor of Science degree requires the completion of a total of 128 credit hours of general studies, computer science, mathematics and science, and supporting technical courses. To graduate, a student must have a "C" average in all MSU computer science and engineering courses attempted.

2. CURRICULUM OUTLINE

CURRENT Degree Description	PROPOSED Degree Description
Degree: BS Major: Cybersecurity Concentration:	Degree: BS Major: Cybersecurity Concentration:
The Bachelor of Science in Cyber Security and Operations is designed for students who wish to help meet the challenges posed by increasing cyber-threats. Using a multidisciplinary approach, the program is designed to provide students with a focused education for evaluating, understanding, and solving cyber security problems. The Bachelor of Science degree requires the completion of a total of 128 credit hours of general studies, computer science, mathematics and science, and supporting technical courses. To graduate, a student must have a "C" average in all MSU computer science and engineering courses attempted.	The Bachelor of Science in Cybersecurity is designed for students who wish to help meet the challenges posed by increasing cyber-threats. Using a multidisciplinary approach, the program is designed to provide students with a focused education for evaluating, understanding, and solving cyber security problems. The Bachelor of Science degree requires the completion of a total of 128 credit hours of general studies, computer science, mathematics and science, and supporting technical courses. To graduate, a student must have a "C" average in all MSU computer science and engineering courses attempted.

CURRENT CURRICULUM OUTLINE	Required Hours	PROPOSED CURRICULUM OUTLINE	Required Hours
EN 1103 English Composition I EN 1113 English Composition II	3 3	EN 1103 English Composition I EN 1113 English Composition II	3 3
Fine Arts (any General Education course in this Category)	3	Fine Arts (General Education):	3
Natural Sciences: CH 1213 Chemistry I CH 1211 Chemistry Lab Science Elective: BIO 1134 Biological Science I, or PH 2213 Physics I, or PH 2223 Physics II, or CH 1223 Chemistry II & CH 1221, or BIO 1144 Biology II	 3 1 6	Natural Sciences: CH 1213 Chemistry I CH 1211 Chemistry Lab Science Elective: BIO 1134 Biological Science I, or PH 2213 Physics I, or PH 2223 Physics II, or CH 1223 Chemistry II & CH 1221, or BIO 1144 Biology II	 3 1 6

Math: MA 1713 Calculus I MA 1723 Calculus II MA 3113 Linear Algebra Math Elective: MA 2733 Calculus III, or MA 3053 Foundations of Math, or MA 4143 Graph Theory, or MA 4173 Number Theory	 3 3 3 3	Math: MA 1713 Calculus I MA 1723 Calculus II MA 3113 Linear Algebra Math Elective: MA 2733 Calculus III, or MA 3053 Foundations of Math, or MA 4143 Graph Theory, or MA 4173 Number Theory	 3 3 3 3
Humanities (any General Education course in this Category)	6	Humanities (General Education):	6
Social/Behavioral Sciences (any General Education course in this Category)	6	Social/Behavioral Sciences (Gen Ed):	6
Major Core Courses: CSE 1011 Intro to CSE CSE 1284 Intro Computer Prog CSE 1384 Intermediate Comp Prog CSE 2213 Methods & Tools in SW Development CSE 2383 Data Structures & Analysis of Algorithms CSE 3183 Systems Programming CSE 4153 Data Comm & Networks CSE 4173 Cryptography CSE 3763 Ethical & Legal Issues CSE 4733 Operating Systems I CSE 4243 Info & Comp Security CSE *3723* Computer Organization Communications Requirements: GE 3513 Technical Writing IE 4613 Engineering Statistics I or MA 4523 Intro to Prob or MA 4543 Intro to Math Stat 1 or BQA 2113 Bus Stats Methods Cyber Security Electives: BIS 4113 BIS Security CSE 4363 Software Reverse Engineering CSE 4743 Operating Systems II CSE 4773 Intro to Cyber Operations CSE 4253 Secure Software Engineering CSE 4383 Network Security CSE 4273 Digital Forensics	 1 4 4 3 3 3 3 3 3 3 3 *3* 3 3 15	Major Core Courses: CSE 1011 Intro to CSE CSE 1284 Intro Computer Prog CSE 1384 Intermediate Comp Prog CSE 2213 Methods & Tools in SW Development CSE 2383 Data Structures & Analysis of Algorithms **CSE 2813 Discrete Structures** CSE 3183 Systems Programming CSE 4153 Data Comm & Networks CSE 4173 Cryptography CSE 3763 Ethical & Legal Issues CSE 4733 Operating Systems I CSE 4243 Info & Comp Security CSE **3724** Computer Organization Communications Requirements: GE 3513 Technical Writing IE 4613 Engineering Statistics I or MA 4523 Intro to Prob or MA 4543 Intro to Math Stat 1 or BQA 2113 Bus Stats Methods Cyber Security Electives: BIS 4113 BIS Security CSE 4363 Software Reverse Engineering CSE 4743 Operating Systems II CSE 4773 Intro to Cyber Operations CSE 4253 Secure Software Engineering CSE 4383 Network Security CSE 4273 Digital Forensics	 1 4 4 3 3 **3** 3 3 3 3 3 **4** 3 3 15

Technical Electives: Any upper-level course in CS, ECE, or MA that is not already required Free Electives:	18 *10*	Technical Electives: Any upper-level course in CS, ECE, or MA that is not already required Free Electives:	18 **6**
Total Hours	128	Total Hours	128

3. JUSTIFICATION AND STUDENT LEARNING OUTCOMES

This modification is being made to accomodate the addition of a lab component to CSE 3723 Computer Organization, which is now CSE 3724. The faculty also voted to add a requirement of CSE 2813 Discrete Structures.

- Will this program change meet local, state, regional, and national educational and cultural needs? Yes
- Will this program change result in duplication in the System? No
- Will this program change/advance student diversity within the discipline? No
- Will this program change result in an increase in the potential placement of graduates in MS, the Southeast, and the U.S.? No
- Will this program change result in an increase in the potential salaries of graduates in MS, the Southeast, and the U.S.? No

The learning outcomes of this program, listed below, remain the same:

1. Graduates will demonstrate an ability to apply knowledge of mathematics, science, and engineering
2. Graduates will demonstrate an ability to design and conduct experiments, as well as to analyze and interpret data
3. Graduates will demonstrate an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
4. Graduates will demonstrate an ability to function on multidisciplinary teams
5. Graduates will demonstrate an ability to identify, formulate, and solve engineering problems
6. Graduates will demonstrate an understanding of professional and ethical responsibility
7. Graduates will demonstrate an ability to communicate effectively
8. Graduates will demonstrate the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context
9. Graduates will demonstrate a recognition of the need for, and an ability to engage in life-long learning
10. Graduates will demonstrate a knowledge of contemporary issues
11. Graduates will demonstrate an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice

4. SUPPORT – A letter of support from the CSE curriculum committee is attached.

5. PROPOSED 4-LETTER ABBREVIATION – CYSO

6. EFFECTIVE DATE – Fall 2022

MISSISSIPPI STATE UNIVERSITY
JAMES WORTH BAGLEY COLLEGE OF ENGINEERING

DEPARTMENT OF
COMPUTER SCIENCE & ENGINEERING

Professor and Billie J. Ball Endowed Professor in Engineering
Director of the Social, Therapeutic, and Robotic Systems (STaRS) Lab
cbethel@cse.msstate.edu

April 8, 2022

Dr. Andy Perkins, Chair
University Committee on Courses and Curricula
PO Box 5268
Mississippi State, MS 39762

Dr. Perkins:

The Computer Science and Engineering faculty voted to support the following changes at a faculty meeting held on April 1, 2022.

- Addition of the new course CSE 4693/6693 Machine Learning
- Addition of the new course CSE 4423 Data Visualization for the purpose of cross-listing with DSCI 4013 Data Visualization
- Addition of a new course CSE 4353/6353 Applications of Literature Programming in Software Development for the purpose of cross-listing with ECE 4793/6793
- Correction of prerequisites for CSE 4714/6714 Programming Languages, CSE 4733/6733 Operating Systems, and CSE 4153/6153 Data Communications and Networks to accommodate the recent change of CSE 3723 to a four hour course
- Correction of the prerequisites for CSE 4723 Compiler Construction to reflect changes made to the CSE curriculum in 2020
- Modification of the BS in Cybersecurity to add CSE 2813 Discrete Structures and accommodate the recent change of CSE 3723 to a four hour course
- Modification to the BS in Computer Science and BS in Software engineering to accommodate the recent change of CSE 3823 to a four hour course

Please feel free to contact me if there are any questions or concerns.

Sincerely,

Cindy L. Bethel

Cindy Bethel, Ph.D.
CSE Courses and Curricula Committee Chair
Professor

Jingdao Chen, Ph.D.
CSE Courses and Curricula Committee Member
Assistant Professor

Joshua Crowson
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 & Engineering

Contact Person: Dr. Shahram Rahimi Mail Stop: 9637 E-mail: rahimi@cse.msstate.edu
Nature of Change: Program Modification Date Initiated: 9/19/2021 Effective Date: Fall 2022
Current Degree Program Name: BS

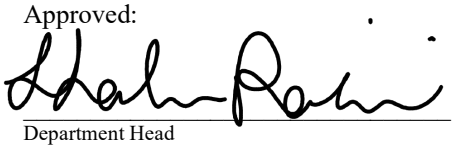
Major: Computer Science Concentration: Systems, Artificial Intelligence, Computational Science, Human and Visual Computing

New Degree Program Name: BS

Major: Computer Science Concentration: Systems, Artificial Intelligence, Computational Science, Human and Visual Computing

Summary of Proposed Changes: The Computer Science and Engineering faculty recently modified the course CSE 3723 Computer Organization to have a lab component and add 1 additional credit hour. This proposal accommodates that change within the BS in Computer Science.

Approved: Date:



4/12/2022

Department Head

Chair, College or School Curriculum Committee

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: BS Major: Computer Science Concentration: General, Systems, Artificial Intelligence, Computational Science, Human and Visual Computing	Degree: BS Major: Computer Science Concentration: General, Systems, Artificial Intelligence, Computational Science, Human and Visual Computing
Computer Science is the study of the principles, applications, and technologies of computing and computers. It involves the study of data and data structures and the algorithms to process these structures; principles of computer architecture-both hardware and software; problem solving and design methodologies; and language design, structure and translation techniques. Computer Science provides a foundation of knowledge for students with career objectives in a wide range of computing and computer-related professions. The objectives for the department with respect to the Bachelor of Science Degree in Computer Science are as follows: 1. The graduate will demonstrate an understanding of computer science principles and an ability to solve unstructured computer science problems through the successful entrance into and advancement in the computer science profession. 2. The graduate will demonstrate an appreciation for lifelong learning and for the value of continuing professional development through participation in graduate education, professional education or continuing education opportunities, attainment of professional licensure, or membership in professional societies. 3. The graduate will demonstrate an understanding of professional and ethical responsibilities to the profession, society and the environment incumbent on a computer science professional. 4. The graduate will successfully interact with others of different backgrounds, educations, and cultures. 5. The graduate will demonstrate effective communication skills in their profession. Computer Science graduates begin careers as computer programmers, system analysts, programmer/analysts, software engineers, systems programmers, computer system engineers and in a number of other computer-related jobs. A minor in computer science is available to students with major programs of study in other fields at the University. The Bachelor of Science degree requires the	Computer Science is the study of the principles, applications, and technologies of computing and computers. It involves the study of data and data structures and the algorithms to process these structures; principles of computer architecture-both hardware and software; problem solving and design methodologies; and language design, structure and translation techniques. Computer Science provides a foundation of knowledge for students with career objectives in a wide range of computing and computer-related professions. The objectives for the department with respect to the Bachelor of Science Degree in Computer Science are as follows: 1. The graduate will demonstrate an understanding of computer science principles and an ability to solve unstructured computer science problems through the successful entrance into and advancement in the computer science profession. 2. The graduate will demonstrate an appreciation for lifelong learning and for the value of continuing professional development through participation in graduate education, professional education or continuing education opportunities, attainment of professional licensure, or membership in professional societies. 3. The graduate will demonstrate an understanding of professional and ethical responsibilities to the profession, society and the environment incumbent on a computer science professional. 4. The graduate will successfully interact with others of different backgrounds, educations, and cultures. 5. The graduate will demonstrate effective communication skills in their profession. Computer Science graduates begin careers as computer programmers, system analysts, programmer/analysts, software engineers, systems programmers, computer system engineers and in a number of other computer-related jobs. A minor in computer science is available to students with major programs of study in other fields at the University. The Bachelor of Science degree requires the completion of a total of 128 credit hours of general studies, computer science, mathematics and science, and supporting technical courses. To graduate, a student must have a "C"

completion of a total of 128 credit hours of general studies, computer science, mathematics and science, and supporting technical courses. To graduate, a student must have a "C" average in all MSU computer science and engineering courses attempted. The computer science program is accredited by the Computing Accreditation Commission of ABET, http://www.abet.org.		average in all MSU computer science and engineering courses attempted. The computer science program is accredited by the Computing Accreditation Commission of ABET, http://www.abet.org.	
CURRENT CURRICULUM OUTLINE	Required Hours	PROPOSED CURRICULUM OUTLINE	Required Hours
English EN 1103 English Composition I EN 1113 English Composition II	 3 3	English EN 1103 English Composition I EN 1113 English Composition II	 3 3
Fine Arts (any General Education course in this category)	3	Fine Arts (any General Education course in this category)	3
Humanities (any General Education course in this category)	6	Humanities (any General Education course in this category)	6
Social Science (any General Education course in this category)	6	Social Science (any General Education course in this category)	6
Math MA 1713 Calculus I MA 1723 Calculus II MA 3113 Linear Algebra Math elective: Choose from MA 2733 Calculus III MA 3053 Foundations of Math MA 4143 Graph Theory MA 4173 Number Theory	 3 3 3 3	Math MA 1713 Calculus I MA 1723 Calculus II MA 3113 Linear Algebra Math elective: Choose from MA 2733 Calculus III MA 3053 Foundations of Math MA 4143 Graph Theory MA 4173 Number Theory	 3 3 3 3
Science CH 1213 Chemistry I CH 1211 Chemistry I Lab Science electives: Choose from PH 2213 Physics I PH 2223 Physics II CH 1223 Chemistry II & CH 1221 BIO 1134 Biological Science I BIO 1144 Biological Science II	 3 1 6	Science CH 1213 Chemistry I CH 1211 Chemistry I Lab Science electives: Choose from PH 2213 Physics I PH 2223 Physics II CH 1223 Chemistry II & CH 1221 BIO 1134 Biological Science I BIO 1144 Biological Science II	 3 1 6
Major Core Courses Statistics requirement: Choose from IE 4613 Engineering Statistics I MA 4523 Intro to Probability MA 4543 Intro to Math Stat I BQA 2113 Business Stats Methods	 3	Major Core Courses Statistics requirement: Choose from IE 4613 Engineering Statistics I MA 4523 Intro to Probability MA 4543 Intro to Math Stat I BQA 2113 Business Stats Methods	 3

Writing requirement: GE 3513 Technical Writing	3	Writing requirement: GE 3513 Technical Writing	3
CSE 1011 Intro to CSE	1	CSE 1011 Intro to CSE	1
CSE 1284 Intro to Comp Prog	4	CSE 1284 Intro to Comp Prog	4
CSE 1384 Intermediate Comp Prog	4	CSE 1384 Intermediate Comp Prog	4
CSE 2213 Methods & Tools in SW Dev	3	CSE 2213 Methods & Tools in SW Dev	3
CSE 2383 Data Str & Analysis of Alg	3	CSE 2383 Data Str & Analysis of Alg	3
CSE 2813 Discrete Structures	3	CSE 2813 Discrete Structures	3
CSE 3183 Systems Programming	3	CSE 3183 Systems Programming	3
CSE *3723* Computer Organization	3	CSE **3724** Computer Organization	**4**
CSE 3763 Ethical & Legal Issues	3	CSE 3763 Ethical & Legal Issues	3
CSE 4714 Theory & Implementation of Programming Languages	4	CSE 4714 Theory & Implementation of Programming Languages	4
CSE 4733 Operating Systems I	3	CSE 4733 Operating Systems I	3
CSE 4833 Intro to Analysis of Alg	3	CSE 4833 Intro to Analysis of Alg	3
Free Electives	*15*	Free Electives	**14**
<u>No Concentration</u> Technical electives	27	<u>No Concentration</u> Technical electives	27
<u>Systems Concentration</u> Choose from CSE 4153 Data Comm and Networks CSE 4163 Designing Parallel Alg CSE 4503 Database Management Sys CSE 4723 Compiler Construction CSE 4743 Operating Systems II Technical Electives	9 18	<u>Systems Concentration</u> Choose from CSE 4153 Data Comm and Networks CSE 4163 Designing Parallel Alg CSE 4503 Database Management Sys CSE 4723 Compiler Construction CSE 4743 Operating Systems II Technical Electives	9 18
<u>Artificial Intelligence Concentration</u> Choose from CSE 4623 Artificial Intelligence CSE 4643 AI Robotics CSE 4653 Cognitive Science CSE 4673 Machine Learning and Soft Computing Technical Electives	9 18	<u>Artificial Intelligence Concentration</u> Choose from CSE 4623 Artificial Intelligence CSE 4643 AI Robotics CSE 4653 Cognitive Science CSE 4673 Machine Learning and Soft Computing Technical Electives	9 18
<u>Computational Science Concentration</u> Choose from CSE 4163 Designing Parallel Alg CSE 4623 Computational Biology MA 4243 Data Analysis I MA 4313 Numerical Analysis I MA 3253 Differential Equations I Technical Electives	9 18	<u>Computational Science Concentration</u> Choose from CSE 4163 Designing Parallel Alg CSE 4623 Computational Biology MA 4243 Data Analysis I MA 4313 Numerical Analysis I MA 3253 Differential Equations I Technical Electives	9 18

Human and Visual Computing Concentration Choose from CSE 4413 Introduction to Graphics CSE 4443 Game Design CSE 4653 Cognitive Science CSE 4663 Human Comp Interaction IE 4113 Human Factors Engineering Technical Electives	9 18	Human and Visual Computing Concentration Choose from CSE 4413 Introduction to Graphics CSE 4443 Game Design CSE 4653 Cognitive Science CSE 4663 Human Comp Interaction IE 4113 Human Factors Engineering Technical Electives	9 18
Total Hours	128	Total Hours	128

3. JUSTIFICATION AND STUDENT LEARNING OUTCOMES

The Computer Science and Engineering faculty recently modified the course CSE 3723 Computer Organization to have a lab component and add 1 addition credit hour. This proposal accommodates that change within the BS in Computer Science.

- Will this program change meet local, state, regional, and national educational and cultural needs? Yes
- Will this program change result in duplication in the System? No
- Will this program change/advance student diversity within the discipline? No
- Will this program change result in an increase in the potential placement of graduates in MS, the Southeast, and the U.S.? No
- Will this program change result in an increase in the potential salaries of graduates in MS, the Southeast, and the U.S.? No

The student outcomes of the program are listed below.

Graduates of the program will have an ability to:

1. Analyze a complex computing problem and to apply principles of computing and other relevant disciplines to identify solutions.
2. Design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program's discipline.
3. Communicate effectively in a variety of professional contexts.
4. Recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles.
5. Function effectively as a member or leader of a team engaged in activities appropriate to the program's discipline.
6. Apply computer science theory and software development fundamentals to produce computing-based solutions.

4. SUPPORT

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

5. EFFECTIVE DATE

Fall 2022

MISSISSIPPI STATE UNIVERSITY
JAMES WORTH BAGLEY COLLEGE OF ENGINEERING

DEPARTMENT OF
COMPUTER SCIENCE & ENGINEERING

Professor and Billie J. Ball Endowed Professor in Engineering
Director of the Social, Therapeutic, and Robotic Systems (STaRS) Lab
cbethel@cse.msstate.edu

April 8, 2022

Dr. Andy Perkins, Chair
University Committee on Courses and Curricula
PO Box 5268
Mississippi State, MS 39762

Dr. Perkins:

The Computer Science and Engineering faculty voted to support the following changes at a faculty meeting held on April 1, 2022.

- Addition of the new course CSE 4693/6693 Machine Learning
- Addition of the new course CSE 4423 Data Visualization for the purpose of cross-listing with DSCI 4013 Data Visualization
- Addition of a new course CSE 4353/6353 Applications of Literature Programming in Software Development for the purpose of cross-listing with ECE 4793/6793
- Correction of prerequisites for CSE 4714/6714 Programming Languages, CSE 4733/6733 Operating Systems, and CSE 4153/6153 Data Communications and Networks to accommodate the recent change of CSE 3723 to a four hour course
- Correction of the prerequisites for CSE 4723 Compiler Construction to reflect changes made to the CSE curriculum in 2020
- Modification of the BS in Cybersecurity to add CSE 2813 Discrete Structures and accommodate the recent change of CSE 3723 to a four hour course
- Modification to the BS in Computer Science and BS in Software engineering to accommodate the recent change of CSE 3823 to a four hour course

Please feel free to contact me if there are any questions or concerns.

Sincerely,

Cindy L. Bethel

Cindy Bethel, Ph.D.
CSE Courses and Curricula Committee Chair
Professor

Jingdao Chen, Ph.D.
CSE Courses and Curricula Committee Member
Assistant Professor

Joshua Crowson
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:** Industrial & Systems Engineering

Contact Person: Lesley Strawderman **Mail Stop:** 9542 **E-mail:** strawderman@ise.msstate.edu

Nature of Change: Modification **Date Initiated:** 03/10/2022 **Effective Date:** Fall 2022

Current Degree Program Name: Bachelor of Science in Industrial Engineering

Major: Industrial Engineering **Concentration:** n/a

New Degree Program Name: No change

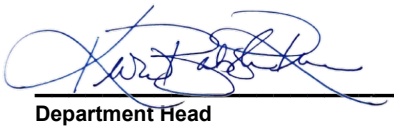
Major: No change **Concentration:** No change

Summary of Proposed Changes:

1) Add distance learning to the existing degree program.

2) Change the list of engineering science electives in the curriculum. Rather than including a list of courses, the explanation of the engineering science electives will say "*See academic advisor for a list of approved Engineering Science electives*."

Approved: **Date:**



3/25/2022

Department Head

Chair, College or School Curriculum Committee

Dean of College or School

Chair, University Committee on Courses and Curricula

Chair, Graduate Council(if applicable)

Chair, Deans Council

PROPOSAL FOR THE MODIFICATION OF THE
B.S. IN INDUSTRIAL ENGINEERING

1. CATALOG DESCRIPTION

Industrial and systems engineering is the application of engineering methods and the principles of scientific management to the design, improvement, and installation of integrated systems of people, materials, information, equipment, and energy. The industrial and systems engineer is concerned with the design of total systems, and is the leader in the drive for increased productivity and quality improvement.

The industrial and systems engineering (ISE) profession uses a variety of specialized knowledge and skills. These include communications, economics, mathematics, physical and social sciences, together with the methods of engineering analysis and design.

The ISE is often involved in designing or improving major systems that encompass the total organization. Consequently, he/she is often in contact with individuals from many segments of the organization. From his/her education and these experiences, the ISE develops a global view of the many inter-related operations necessary to deliver a firm's goods and services. Because of their management skills and global view of the organization, a large proportion of ISEs move into management, and later advance into top management positions.

Although ISE is especially important to all segments of industry, it is also applied in other types of organizations, such as transportation, health care, public utilities, agriculture, defense, government, merchandising, distribution, logistics, and other service sectors. With increasing emphasis on quality and productivity for successful international competition, it is expected that ISEs will be in increasing demand in the coming decades.

The objectives of the Department of Industrial and Systems Engineering are founded in Mississippi State University's educational philosophy and in the industrial engineering profession. They were developed to satisfy the needs of the department's constituents: students, employers, alumni, faculty, and the industrial engineering profession.

The ISE program aim is to graduate students having a broad education, with emphasis in ISE fundamentals and practices, which enables them to function effectively in systems involving people, materials, information, energy, and money.

The four educational objectives of the Bachelor of Science degree in Industrial Engineering are stated below.

1. Graduates of the Department of Industrial and Systems Engineering are versed in math, science, and engineering theory, know how to apply that theory, and are capable of functioning effectively producing solutions in a broad range of organizations.
2. Graduates of the Department of Industrial and Systems Engineering lead and interact cooperatively in professional situations with individuals having diverse backgrounds, cultures, training, education, and interests.
3. Graduates of the Department of Industrial and Systems Engineering think independently, critically examine ideas, and make discerning professional judgments, whether intellectual, ethical, or aesthetic.
4. Graduates of the Department of Industrial and Systems Engineering are professionally mature, responsible, and informed citizens who pursue lifelong learning.

Because of the importance of systems design in the many facets of industrial and systems engineering, instruction of the principles and methods of design is integrated throughout the curriculum of industrial engineering, and culminates in a major design experience in the student's senior year.

The Industrial Engineering Program is accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org.

For a list of online tuition, instructional support, and other distance fees, please see the Controller's website at: https://www.controller.msstate.edu/accountservices/tuition/

2. CURRICULUM OUTLINE

Extent of the degree that is offered through distance learning:

By fall 2022, we expect that 115 of the 128 hours required for the degree will be approved and offered through MSU's distance education offerings, which equates to approximately 90% of the degree.

Two required industrial engineering courses (IE 3323, IE 4914) are currently under UCCC review for distance approval, with an effective date of fall 2022 (pending approval).

A total of 13 hours in math and science are not currently approved for MSU's distance offerings or are not offered online frequently enough to meet our undergraduate student needs. These courses are:

- CH 1211 Chemistry Lab
- CH 1213 Chemistry I
- PH 2213 Physics I
- PH 2223 Physics II
- MA 2743 Calculus IV

These courses will need to be completed through MSU's Starkville, Meridian, or Gulf Coast campus offerings, or transferred to MSU from another institution. All 13 hours are widely available on MSU campuses and at Mississippi community colleges and other institutions of higher learning throughout the country. We do not anticipate any hardships for students related to access for these 13 credit hours.

CURRENT Degree Description	**PROPOSED Degree Description**
Degree: Bachelor of Science **Major: Industrial Engineering** **Concentration:**	**Degree: Bachelor of Science** **Major: Industrial Engineering** **Concentration:**
Industrial and systems engineering is the application of engineering methods and the principles of scientific management to the design, improvement, and installation of integrated systems of people, materials, information, equipment, and energy. The industrial and systems engineer is concerned with the design of total systems, and is the leader in the drive for increased productivity and quality improvement. The industrial and systems engineering profession uses a variety of specialized knowledge and skills. These include communications, economics, mathematics, physical and social sciences, together with the methods of engineering analysis and design. The industrial and systems engineer is often involved in designing or improving major systems that encompass the total organization. Consequently,	Industrial and systems engineering is the application of engineering methods and the principles of scientific management to the design, improvement, and installation of integrated systems of people, materials, information, equipment, and energy. The industrial and systems engineer is concerned with the design of total systems, and is the leader in the drive for increased productivity and quality improvement. The industrial and systems engineering profession uses a variety of specialized knowledge and skills. These include communications, economics, mathematics, physical and social sciences, together with the methods of engineering analysis and design. The industrial and systems engineer is often involved in designing or improving major systems that encompass the total organization. Consequently,

he/she is often in contact with individuals from many segments of the organization. From his/her education and these experiences, the industrial and systems engineer develops a global view of the many inter-related operations necessary to deliver a firm's goods and services. Because of their management skills and global view of the organization, a large proportion of industrial and systems engineers move into management, and later advance into top management positions.	he/she is often in contact with individuals from many segments of the organization. From his/her education and these experiences, the industrial and systems engineer develops a global view of the many inter-related operations necessary to deliver a firm's goods and services. Because of their management skills and global view of the organization, a large proportion of industrial and systems engineers move into management, and later advance into top management positions.
Although industrial and systems engineering is especially important to all segments of industry, it is also applied in other types of organizations, such as transportation, health care, public utilities, agriculture, defense, government, merchandising, distribution, logistics, and other service sectors. With increasing emphasis on quality and productivity for successful international competition, it is expected that industrial and systems engineers will be in increasing demand in the coming decades.	Although industrial and systems engineering is especially important to all segments of industry, it is also applied in other types of organizations, such as transportation, health care, public utilities, agriculture, defense, government, merchandising, distribution, logistics, and other service sectors. With increasing emphasis on quality and productivity for successful international competition, it is expected that industrial and systems engineers will be in increasing demand in the coming decades.
The objectives of the Department of Industrial and Systems Engineering are founded in Mississippi State University's educational philosophy and in the industrial engineering profession. They were developed to satisfy the needs of the department's constituents: students, employers, alumni, faculty, and the industrial engineering profession.	The objectives of the Department of Industrial and Systems Engineering are founded in Mississippi State University's educational philosophy and in the industrial engineering profession. They were developed to satisfy the needs of the department's constituents: students, employers, alumni, faculty, and the industrial engineering profession.
The Industrial Engineering program objective is to graduate students having a broad education, with emphasis in industrial and systems engineering fundamentals and practices, which enables them to function effectively in systems involving people, materials, information, energy, and money.	The Industrial Engineering program objective is to graduate students having a broad education, with emphasis in industrial and systems engineering fundamentals and practices, which enables them to function effectively in systems involving people, materials, information, energy, and money.
The four educational objectives of the Bachelor of Science degree in industrial engineering are stated below.	The four educational objectives of the Bachelor of Science degree in industrial engineering are stated below.
1. Graduates of the Department of Industrial and Systems Engineering are versed in math, science, and engineering theory, know how to apply that theory, and are capable of functioning effectively producing solutions in a broad range of organizations. 2. Graduates of the Department of Industrial and Systems Engineering lead and interact cooperatively in professional situations with individuals having diverse backgrounds, cultures, training, education, and interests. 3. Graduates of the Department of Industrial and	1. Graduates of the Department of Industrial and Systems Engineering are versed in math, science, and engineering theory, know how to apply that theory, and are capable of functioning effectively producing solutions in a broad range of organizations. 2. Graduates of the Department of Industrial and Systems Engineering lead and interact cooperatively in professional situations with individuals having diverse backgrounds, cultures, training, education, and interests. 3. Graduates of the Department of Industrial and

Systems Engineering think independently, critically examine ideas, and make discerning professional judgments, whether intellectual, ethical, or aesthetic. **4.** Graduates of the Department of Industrial and Systems Engineering are professionally mature, responsible, and informed citizens who pursue lifelong learning. Because of the importance of systems design in the many facets of industrial and systems engineering, instruction of the principles and methods of design is integrated throughout the curriculum of industrial engineering, and culminates in a major design experience in the student's senior year. The Industrial Engineering Program is accredited by the Engineering Accreditation Commission of ABET,http://www.abet.org.	Systems Engineering think independently, critically examine ideas, and make discerning professional judgments, whether intellectual, ethical, or aesthetic. **4.** Graduates of the Department of Industrial and Systems Engineering are professionally mature, responsible, and informed citizens who pursue lifelong learning. Because of the importance of systems design in the many facets of industrial and systems engineering, instruction of the principles and methods of design is integrated throughout the curriculum of industrial engineering, and culminates in a major design experience in the student's senior year. The Industrial Engineering Program is accredited by the Engineering Accreditation Commission of ABET,http://www.abet.org.
n/a	n/a

CURRENT CURRICULUM OUTLINE	Required Hours	**PROPOSED CURRICULUM OUTLINE**	Required Hours
English EN 1103 English Composition I EN 1113 English Composition II	6	English EN 1103 English Composition I EN 1113 English Composition II	6
Fine Arts: Any Gen. Ed. course	3	Fine Arts: Any Gen. Ed. course	3
Natural Sciences CH 1213 Fundamentals of Chemistry CH 1211 Investigations in Chemistry CH 1223 Fundamentals of Chemistry PH 2213 Physics I PH 2223 Physics II	13	Natural Sciences CH 1213 Fundamentals of Chemistry CH 1211 Investigations in Chemistry CH 1223 Fundamentals of Chemistry PH 2213 Physics I PH 2223 Physics II	13
Mathematics MA 1713 Calculus I MA 1723 Calculus II MA 2733 Calculus III MA 2743 Calculus IV MA 3113 Linear Algebra	15	Mathematics MA 1713 Calculus I MA 1723 Calculus II MA 2733 Calculus III MA 2743 Calculus IV MA 3113 Linear Algebra	15
Humanities: Any Gen. Ed. course	6	Humanities: Any Gen. Ed. course	6
Social Sciences EC 2123 Principles of Microeconomics PSY 1013 General Psychology	6	Social Sciences EC 2123 Principles of Microeconomics PSY 1013 General Psychology	6
Major Core Math/Science Elective[4]	 3	Major Core Math/Science Elective[4]	 3

Engineering Topics EM 2413 Engineering Mechanics I __ ___3 Engineering Science Elective[5] __ ___3 Engineering Science Elective[5] Computer Programming Elective[6] IE Topics IE 1313 Lean Work Systems IE 3123 Industrial Ergonomics IE 3323 Manufacturing Processes IE 3913 Engineering Economy I IE 4333 Production Control Systems I IE 4543 Logistics Engineering IE 4613 Engineering Statistics I IE 4623 Engineering Statistics II IE 4653 Quality Engineering IE 4733 Linear Programming I IE 4753 Systems Engineering & Analysis IE 4773 Systems Simulation I IE 4914 Industrial Systems Design IE 4933 Information Systems in IE Engineering Management Elective – choose one: • IE 4513 Engineering Administration • IE 4533 Project Management IE ___3 IE Design Elective[7] IE ___3 IE Design Elective[7] Other GE 3513 Technical Writing ACC 2023 Managerial Accounting Professional Enrichment Elective[8] Approved Elective[9]	12 52 12	Engineering Topics EM 2413 Engineering Mechanics I __ ___3 Engineering Science Elective[5] __ ___3 Engineering Science Elective[5] Computer Programming Elective[6] IE Topics IE 1313 Lean Work Systems IE 3123 Industrial Ergonomics IE 3323 Manufacturing Processes IE 3913 Engineering Economy I IE 4333 Production Control Systems I IE 4543 Logistics Engineering IE 4613 Engineering Statistics I IE 4623 Engineering Statistics II IE 4653 Quality Engineering IE 4733 Linear Programming I IE 4753 Systems Engineering & Analysis IE 4773 Systems Simulation I IE 4914 Industrial Systems Design IE 4933 Information Systems in IE Engineering Management Elective – choose one: • IE 4513 Engineering Administration • IE 4533 Project Management IE ___3 IE Design Elective[7] IE ___3 IE Design Elective[7] Other GE 3513 Technical Writing ACC 2023 Managerial Accounting Professional Enrichment Elective[8] Approved Elective[9]	12 52 12
Total Hours	128	Total Hours	128
[4] Math/Science Elective MA 3253 Differential Equations I MA 3053 Foundation of Math I MA 4143 Graph Theory MA 4313 Numerical Analysis I MA 4533 Probabilistic Random Process ST 4213 Nonparametric Methods PH 2233 Physics III CH 2313 Analytical Chemistry BIO 1134 Biology I GG 4153 Engineering Geology GG 4233 Applied Geophysics	3	[4] Math/Science Elective MA 3253 Differential Equations I MA 3053 Foundation of Math I MA 4143 Graph Theory MA 4313 Numerical Analysis I MA 4533 Probabilistic Random Process ST 4213 Nonparametric Methods PH 2233 Physics III CH 2313 Analytical Chemistry BIO 1134 Biology I GG 4153 Engineering Geology GG 4233 Applied Geophysics	3

[5] Engineering Science Electives: *EM 2433 Engineering Mechanics II* *EM 3213 Mechanics of Materials* *EM 3313 Fluid Mechanics* *ECE 3413 Intro to Electronic Circuits* *ECE 4483 Intro. to Remote Sensing* *ABE 3413 Bioinstrumentation* *ABE 3513 GPS & GIS in Ag. and Eng.* *ABE 4613 Biomechanics* *CE 2803 Environmental Engineering* *CE 3113 Transportation Engineering* *CE 3603 Structural Mechanics* *CHE 2213 Chemical Eng. Analysis* *CHE 3113 Chemical Eng. Thermodyn.* *CHE 3413 Engineering Materials* *ME 3113 Engineering Analysis* *ME 3403 Materials for ME Design* *ME 3513 Thermodynamics*	6	[5] **Engineering Science Electives:** **See academic advisor for a list of approved Engineering Science electives.**	6
[6] Computer Programming Electives: CSE 1233 Computer Programming w/C CSE 1284 Intro to Computer Program.	3	[6] Computer Programming Electives: CSE 1233 Computer Programming w/C CSE 1284 Intro to Computer Program.	3
[7] IE Design Elective - Any three-hour non-required industrial engineering course.	6	[7] IE Design Elective - Any three-hour non-required industrial engineering course.	6
[8] Professional Enrichment Elective Appropriately titled, the purpose of this elective is to aid students in the enrichment of their undergraduate program in a professional manner. The intent is to help students achieve objectives such as earning a minor or a certificate, preparing for the F.E. Exam, participating in the Study Abroad Program, or additional study in technical, primarily upper-division areas of study.	3	[8] Professional Enrichment Elective Appropriately titled, the purpose of this elective is to aid students in the enrichment of their undergraduate program in a professional manner. The intent is to help students achieve objectives such as earning a minor or a certificate, preparing for the F.E. Exam, participating in the Study Abroad Program, or additional study in technical, primarily upper-division areas of study.	3
[9] Approved Elective Students may choose nearly any course or combination of courses totaling three credit hours or more offered at MSU for the Approved Elective. The only exception is that students may not choose remedial courses (courses which are prerequisite to required or previously completed courses), LSK courses, and	3	[9] Approved Elective Students may choose nearly any course or combination of courses totaling three credit hours or more offered at MSU for the Approved Elective. The only exception is that students may not choose remedial courses (courses which are prerequisite to required or previously completed courses), LSK courses, and	3

physical education courses outside of varsity sports. Examples of courses that would directly benefit ISE students include: Engineering Graphics, Foreign language, Finance, Marketing, Engineering Entrepreneurship, etc.		physical education courses outside of varsity sports. Examples of courses that would directly benefit ISE students include: Engineering Graphics, Foreign language, Finance, Marketing, Engineering Entrepreneurship, etc.	

3. JUSTIFICATION FOR DISTANCE LEARNING OUTCOMES

- *Proposed Change 1*: Add distance learning to the existing degree program.

  Industrial engineers work in a variety of industries, including manufacturing, supply chain, energy, and healthcare. Industrial Engineering is a growing field, with increasing demand for our graduates from area employers. We have had numerous inquiries from prospective students about the availability of an online degree for our undergraduate program. These inquiries have increased in frequency over the past few years. Many of the potential students are already working full-time, and cannot quit their jobs to attend school full time in Starkville or the Gulf Coast campus. An online degree program would offer them the flexibility to complete their degree program while maintaining their current commitments.

  The industrial engineering program faculty are well versed in distance education. In fact, we have offered graduate degrees by distance since the 1980s. Distance learning and quality online instruction are core to our department values and strengths. The online undergraduate degree program will be modeled after our online graduate programs. The method of delivery for courses will be web-based, with students having the option of joining a course via live-stream or viewing a recorded version of the course at a later time. Contact hours and assessment methods for distance students are outlined in each course syllabus.

  The learning outcomes for the online delivery of the program will be identical to the learning outcomes for the current program.

- *Proposed Change 2*: Change the list of engineering science electives in the curriculum. Rather than including a list of courses, the explanation of the engineering science electives will say "*See academic advisor for a list of approved Engineering Science electives*."

  We have proposed to expand the list of courses for the *engineering science electives* to give students greater flexibility in defining what specific engineering topics they would like to study. Our current catalog includes 17 classes from which students can choose. However, we have expanded that list to include over 50 course options. This new list was created in collaboration with the other engineering departments to provide our students with the greatest flexibility in choosing their elective courses. Rather than listing the elective course options for the *engineering science electives*, we propose keeping a list of the electives with the academic advisor for reference. This also allows our program to update the list with the inclusion of new and state-of-the-art elective courses that become available.

- *Proposal modification questions:*
  1. Will this program change meet local, state, regional, and national educational and cultural needs? If so, please describe.

     Yes. ISE is one of the most in demand jobs within the state and nation given its broad applicability across all work sectors. Offering an online degree in ISE will provide access to

this degree to many that may not be able to physically attend due to work, financial, personal, and other constraints.

2. Will this program change result in duplication in the System? If so, please describe.
   No.
3. Will this program change/advance student diversity within the discipline? If so, please describe.
   Perhaps. There may be an increase in diversity as students already in the workforce are able to complete their degree online while maintaining their employment. We do anticipate that for those diversity students that desire or require that they remain remote, this will provide a pathway for them to complete the degree.
4. Will this program change result in an increase in the potential placement of graduates in MS, the Southeast, and the U.S.? If so, please describe.
   Yes. By offering the degree program online, we have the potential to increase the number of engineers for the regional workforce by removing barriers to college attendance for many prospective students.
5. Will this program change result in an increase in the potential salaries of graduates in MS, the Southeast, and the U.S.? If so, please describe.
   No.

TARGET AUDIENCES

The target audiences for the online degree offering include:

- Traditional students who are unable to attend school in person due to various reasons, including childcare, elder care, family commitments, needing to work full time, co-op assignments, or any other reason.
- Non-traditional students who already work in industry and desire a college degree to advance their career.
- Non-traditional students who started a degree in industrial engineering, did not complete their degree, and have a desire to finish their degree.
- Veterans and military personnel wanting to work in industrial engineering, but unable to attend school in person due to military assignment locations or other commitments.

4. LEARNING OUTCOMES

The department has adopted the seven new learning outcomes defined by the ABET accreditation board of our industrial engineering program. These outcomes are:

1. Students will be able to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.
2. Students will be able to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.
3. Students will be able to communicate effectively with a range of audiences
4. Students will be able to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.
5. Students will be able to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.

6. Students will be able to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.
7. Students will be able to acquire and apply new knowledge as needed, using appropriate learning strategies.

5. EFFECTIVE DATE

Fall 2022

6. CONTACT PERSON

Lesley Strawderman, strawderman@ise.msstate.edu, 662-325-7214

7. LETTER OF SUPPORT

See attached.

8. IHL FORM

See attached.

Appendix 10: Report of Intent to Offer an Existing Degree Program by Distance Learning

(Submit Appendix 10 in PDF format with signatures)

Institution:

Date of Initial Program Approval:	Date of Implementation:	Cost to Offer by Distance Learning:
	Fall 2022	**$5,500**

Program Title as It Appears on Academic Program Inventory, Diploma, and Transcript:	Six-Digit CIP Code(s) & Four-Digit Sequence Code(s):
Industrial Engineering	**143501 & 5227**

CIP & Sequence codes: IHL Active Program Inventory

Degree(s) to be Awarded:	Credit Hour Requirements:
Bachelor of Science	**128**

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):
Department of Industrial & Systems Engineering

Institutional Contact: Dr. Lesley Strawderman
Phone: 662-325-7214
Email: strawderman@ise.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	8	Year Three	3
Year Four	10	Year Four	6
Year Five	10	Year Five	8
Year Six	10	Year Six	10
Total	48	Total	27

Program Summary:

The catalog will mirror the Campus 1 catalog. Due to interest from students with full-time jobs in industrial engineering-related fields, the Department of Industrial & Systems Engineering desires to offer its undergraduate industrial engineering degree online. We anticipate successful recruitment and enrollment, mirroring strategies used in our online graduate programs. Program costs for the online degree will include some additional advising time and small instructional costs, which will be offset through income from distance fees and distance tuition.

Chief Academic Officer Signature _____ **Date** _____

Institutional Executive Officer Signature _____ **Date** _____

MISSISSIPPI STATE UNIVERSITY
JAMES WORTH BAGLEY COLLEGE OF ENGINEERING

DEPARTMENT OF INDUSTRIAL & SYSTEMS ENGINEERING

March 21, 2022

To: Bagley College of Engineering Committee on Courses and Curricula
University Committee on Courses and Curricula

From: Undergraduate Committee
Department of Industrial & Systems Engineering

RE: Degree Modification for BS Industrial Engineering

The undergraduate committee offers full support of the proposed degree modification for the Bachelor of Science in Industrial Engineering degree. The two requested changes are: (1) Add distance learning to the existing degree program, and (2) Change the list of engineering science electives in the curriculum.

Brian K. Smith, PhD, CPEM Digitally signed by Brian K. Smith, PhD, CPEM Date: 2022.03.21 11:41:46 -05'00'

Brian Smith, Chair

Jenna Johnson Digitally signed by Jenna Johnson Date: 2022.03.21 16:04:21 -05'00'

Jenna Johnson

Lesley Strawderman Digitally signed by Lesley Strawderman Date: 2022.03.21 16:07:36 -05'00'

Lesley Strawderman

Wenmeng Tian Digitally signed by Wenmeng Tian Date: 2022.03.21 16:09:45 -05'00'

Wenmeng Tian

Haifeng Wang Digitally signed by Haifeng Wang Date: 2022.03.21 16:40:02 -05'00'

Haifeng Wang

MISSISSIPPI STATE UNIVERSITY

COLLEGE OF ARTS AND SCIENCES
Department of Psychology

P.O. Box 6161
110 Magruder Hall
Mississippi State, MS 39762

P. 662.325.3202
F. 662.325.7212
www.psychology.msstate.edu

March 13, 2022

Bagley College of Engineering
160 McCain Hall
P.O. Box 9544
Mississippi State, MS 39762

Dear Colleagues:

I am delighted to provide a letter of support for your proposed on-line undergraduate Industrial Engineering (IE) program. My understanding is that you would like to include PSY 1013 (General Psychology), for which we have approval to deliver on Campus 1, 2, and 5, as part of the curriculum. I support including this course in your proposed on-line program.

Best of luck with your application.

Sincerely,

Mitchell E. Berman, Ph.D.
Professor and Department Head

Email: mberman@psychology.msstate.edu

MISSISSIPPI STATE UNIVERSITY

COLLEGE OF BUSINESS
Richard C. Adkerson School of Accountancy
P.O. Box EF
Mississippi State, MS 39762-5661
P. 662.325.3710
F. 662.325.1646
business.msstate.edu/accounting

March 23, 2022

To Whom It May Concern:

I am writing to express my support of the proposed online Bachelor of Science in Industrial Engineering. Specifically, the Adkerson School of Accountancy has the following course offered online that students in this program can take to meet degree requirements:

ACC 2023 Managerial Accounting

In the event that you should have any questions, or need additional information, please do not hesitate to contact me.

Sincerely,

Shawn Mauldin, PhD, CPA
Director & Professor of Accountancy

MISSISSIPPI STATE UNIVERSITY
JAMES WORTH BAGLEY COLLEGE OF ENGINEERING

DEPARTMENT OF
COMPUTER SCIENCE & ENGINEERING

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

March 22, 2022

To Whom It May Concern:

I am writing this memo to express the Department of Computer Science and Engineering's support for the proposed online B.S. program in Industrial Engineering by Industrial and Systems Engineering Department. Computer Science and Engineering will do its best to provide capacity in its online courses that are required for this degree.

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

Sincerely,

Shahram Rahimi, Ph.D.
Professor and Department Head

MISSISSIPPI STATE UNIVERSITY

COLLEGE OF ARTS & SCIENCES
Department of Mathematics & Statistics
P.O. Box MA
410 Allen Hall
Mississippi State, MS 39762
P. 662.325.3414
F. 662.325.0005
www.math.msstate.edu

March 25, 2022

Dr. Andy Perkins, Chair
University Committee on Courses and Curricula

Dear Dr. Perkins,

The Department of Mathematics and Statistics commits to supporting the distance B.S. in Industrial Engineering degree by providing capacity in distance sections of mathematics courses required for the degree and approved for online education. Currently, this includes the following courses:

MA 1713	Calculus I
MA 1723	Calculus II
MA 2733	Calculus III
MA 3113	Intro to Linear Algebra
MA 3253	Differential Equations

Additionally, as needed, students may enroll in distance sections of other mathematics and statistics courses to meet Calculus I prerequisites or serve as electives in the B.S. in Industrial Engineering degree.

Sincerely,

Mohsen Razzaghi
Professor and Head
Department of Mathematics and Statistics

MISSISSIPPI STATE UNIVERSITY
JAMES WORTH BAGLEY
COLLEGE OF ENGINEERING

OFFICE OF THE
DEAN OF ENGINEERING

March 9, 2022

To Whom It May Concern:

I am writing to express my support of the proposed online Bachelor of Science in Industrial Engineering. Specifically, my department has a course offered online that these students can take to meet degree requirements:

GE 3513 Technical Writing

If there are any questions or I can be of any additional support, please let me know.

Sincerely,

Amy Barton
Coordinator and Instructor, Shackouls Technical Communication Program
Bagley College of Engineering
Mississippi State University
(662) 325-4240
abarton@bagley.msstate.edu

MISSISSIPPI STATE UNIVERSITY
JAMES WORTH BAGLEY COLLEGE OF ENGINEERING

DEPARTMENT OF AEROSPACE ENGINEERING

Dr. Rani W. Sullivan
Professor & Interim Department Head
Richard H. Johnson Chair
sullivan@ae.msstate.edu

25 March 2022

To Whom It May Concern,

I am writing to express my support for the proposed online Bachelor of Science in Industrial Engineering. Specifically, my department will be offering undergraduate online engineering mechanics courses that students may take to fulfill degree requirements.

EM 2413 Engineering Mechanics I
EM 2433 Engineering Mechanics II

If there are any questions, please let me know.

Sincerely,

Rani W. Sullivan
Professor and Interim Department Head
Aerospace Engineering

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 & Engineering

Contact Person: Dr. Shahram Rahimi Mail Stop: 9637 E-mail: rahimi@cse.msstate.edu
Nature of Change: Program Modification Date Initiated: 03/30/2022 Effective Date: Fall 2022
Current Degree Program Name: BS

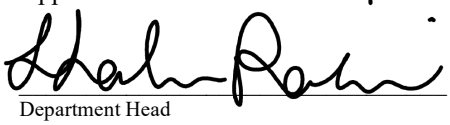
Major: Software Engineering Concentration: N/A

New Degree Program Name: BS

Major: Software Engineering Concentration: N/A

Summary of Proposed Changes: The Computer Science and Engineering faculty recently modified the course CSE 3723 Computer Organization to have a lab component and add 1 additional credit hour. This proposal accommodates that change within the BS in Software Engineering.

Approved: Date:



4/12/2022

Department Head

Chair, College or School Curriculum Committee

Dean of College or School

Chair, University Committee on Courses and Curricula

Chair, Graduate Council (if applicable)

Chair, Deans Council

1. **CATALOG DESCRIPTION**
   See below.

2. **CURRICULUM OUTLINE**

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: BS Major: Software Engineering Concentration: N/A	Degree: BS Major: Software Engineering Concentration: N/A
Software Engineering is the application of engineering practices to the design and maintenance of software. The Software Engineering degree program prepares students for careers in the engineering of large complex software systems and products. These systems often involve millions of lines of code and frequently operate in safety-critical environments. The Software Engineering major contains courses related to the study of software engineering in practice necessary to manage these development processes. The faculty for the Software Engineering program is drawn from the Department of Computer Science and Engineering and the Department of Industrial Engineering. The objectives for the department with respect to the Bachelor of Science Degree in Software Engineering are as follows: 1. The graduate will demonstrate an understanding of engineering principles and an ability to solve unstructured engineering problems through the successful entrance into and advancement in the engineering profession. 2. The graduate will demonstrate an appreciation for lifelong learning and for the value of continuing professional development through participation in graduate education, professional education or continuing education opportunities, attainment of professional licensure, or membership in professional societies. 3. The graduate will demonstrate an understanding of professional and ethical responsibilities to the profession, society and the environment incumbent on an engineering professional. 4. The graduate will successfully interact with others of different backgrounds, educations, and cultures. 5. The graduate will demonstrate effective communication skills in their profession.	Software Engineering is the application of engineering practices to the design and maintenance of software. The Software Engineering degree program prepares students for careers in the engineering of large complex software systems and products. These systems often involve millions of lines of code and frequently operate in safety-critical environments. The Software Engineering major contains courses related to the study of software engineering in practice necessary to manage these development processes. The faculty for the Software Engineering program is drawn from the Department of Computer Science and Engineering and the Department of Industrial Engineering. The objectives for the department with respect to the Bachelor of Science Degree in Software Engineering are as follows: 1. The graduate will demonstrate an understanding of engineering principles and an ability to solve unstructured engineering problems through the successful entrance into and advancement in the engineering profession. 2. The graduate will demonstrate an appreciation for lifelong learning and for the value of continuing professional development through participation in graduate education, professional education or continuing education opportunities, attainment of professional licensure, or membership in professional societies. 3. The graduate will demonstrate an understanding of professional and ethical responsibilities to the profession, society and the environment incumbent on an engineering professional. 4. The graduate will successfully interact with others of different backgrounds, educations, and cultures. 5. The graduate will demonstrate effective communication skills in their profession.

The software engineering program is accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org.		The software engineering program is accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org.	
CURRENT CURRICULUM OUTLINE	Required Hours	**PROPOSED CURRICULUM OUTLINE**	Required Hours
EN 1103 English Composition I EN 1113 English Composition II	3 3	EN 1103 English Composition I EN 1113 English Composition II	3 3
Fine Arts (General Education):	3	Fine Arts (General Education):	3
Natural Sciences CH 1213 Chemistry I CH 1211 Chemistry Lab Science Electives: Choose from: PH 2213 Physics I, PH 2223 Physics II, CH 1223 Chemistry II & CH 1221 Chemistry II Lab, BIO 1134 Biology I, BIO 1144 Biology II	 3 1 8	Natural Sciences CH 1213 Chemistry I CH 1211 Chemistry Lab Science Electives: Choose from: PH 2213 Physics I, PH 2223 Physics II, CH 1223 Chemistry II & CH 1221 Chemistry II Lab, BIO 1134 Biology I, BIO 1144 Biology II	 3 1 8
Math MA 1713 Calculus I MA 1723 Calculus II MA 3113 Linear Algebra Math Elective: Choose from: MA 2733 Calculus II, MA 3053 Foundations of Math, MA 4143 Graph Theory, MA 4173 Number Theory	 3 3 3 3	Math MA 1713 Calculus I MA 1723 Calculus II MA 3113 Linear Algebra Math Elective: Choose from: MA 2733 Calculus II, MA 3053 Foundations of Math, MA 4143 Graph Theory, MA 4173 Number Theory	 3 3 3 3
Humanities (General Education):	6	Humanities (General Education):	6
Social/Behavioral Sciences (Gen Ed):	6	Social/Behavioral Sciences (Gen Ed):	6
Major Core Courses IE 4613 Engineering Statistics I GE 3513 Technical Writing CSE 1011 Intro to CSE CSE 1284 Intro to Computer Programming CSE 1384 Intermediate Computer Prog CSE 2213 Methods & Tools in SW Dev CSE 2383 Data Structures CSE 2813 Discrete Structures CSE 3213 SW Eng Sr Project 1	 3 3 1 4 4 3 3 3 3	Major Core Courses IE 4613 Engineering Statistics I GE 3513 Technical Writing CSE 1011 Intro to CSE CSE 1284 Intro to Computer Programming CSE 1384 Intermediate Computer Prog CSE 2213 Methods & Tools in SW Dev CSE 2383 Data Structures CSE 2813 Discrete Structures CSE 3213 SW Eng Sr Project 1	 3 3 1 4 4 3 3 3 3

CSE 3223 SW Eng Sr Project 2	3	CSE 3223 SW Eng Sr Project 2	3
CSE *3723* Computer Organization	3	CSE **3724** Computer Organization	**4**
CSE 3763 Ethical & Legal Issues	3	CSE 3763 Ethical & Legal Issues	3
CSE 3813 Systems Programming	3	CSE 3813 Systems Programming	3
CSE 4214 Intro to Software Engineering	4	CSE 4214 Intro to Software Engineering	4
CSE 4233 SW Arch & Design	3	CSE 4233 SW Arch & Design	3
CSE 4283 SW Testing & QA	3	CSE 4283 SW Testing & QA	3
CSE 4733 Operating Systems I	3	CSE 4733 Operating Systems I	3
CSE 4833 Intro to Analysis of Algorithms	3	CSE 4833 Intro to Analysis of Algorithms	3
IE 4533 Project Mgmt or CSE 4223 SW Project Mgmt	3	IE 4533 Project Mgmt or CSE 4223 SW Project Mgmt	3
Technical Electives	15	Technical Electives	15
Free Electives	*10*	Free Electives	**9**
Total Hours		Total Hours	

3. JUSTIFICATION AND STUDENT LEARNING OUTCOMES

This modification is being made in order to provide a more flexible curriculum for our students, enabling them to take more courses in specialized area of computing that they choose. The changes also support the current ABET accreditation requirements. This will better prepare students for work in industry, government, and entrepreneurial pathways. The revised curriculum also introduces lower level CSE courses that students will take as freshmen and sophomores in order to better prepare them for higher level CSE courses. This is resulting from a longitudinal study of student outcomes since 2011, and will positively affect retention in that students will develop skills earlier that enables them to be confident in their technical abilities earlier and to be more successful in higher level CSE coursework.

- Will this program change meet local, state, regional, and national educational and cultural needs? **Yes**
- Will this program change result in duplication in the System? **No**
- Will this program change/advance student diversity within the discipline? **No**
- Will this program change result in an increase in the potential placement of graduates in MS, the Southeast, and the U.S.? **No**
- Will this program change result in an increase in the potential salaries of graduates in MS, the Southeast, and the U.S.? **No**

The student outcomes of the program are listed below.

Students will attain, by the time of graduation,

1. an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.
2. an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.
3. an ability to communicate effectively with a range of audiences.
4. an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.
5. an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.
6. an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.

7. an ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

4. SUPPORT

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

5. EFFECTIVE DATE

Fall 2022

MISSISSIPPI STATE UNIVERSITY
JAMES WORTH BAGLEY COLLEGE OF ENGINEERING

DEPARTMENT OF
COMPUTER SCIENCE & ENGINEERING

Professor and Billie J. Ball Endowed Professor in Engineering
Director of the Social, Therapeutic, and Robotic Systems (STaRS) Lab
cbethel@cse.msstate.edu

April 8, 2022

Dr. Andy Perkins, Chair
University Committee on Courses and Curricula
PO Box 5268
Mississippi State, MS 39762

Dr. Perkins:

The Computer Science and Engineering faculty voted to support the following changes at a faculty meeting held on April 1, 2022.

- Addition of the new course CSE 4693/6693 Machine Learning
- Addition of the new course CSE 4423 Data Visualization for the purpose of cross-listing with DSCI 4013 Data Visualization
- Addition of a new course CSE 4353/6353 Applications of Literature Programming in Software Development for the purpose of cross-listing with ECE 4793/6793
- Correction of prerequisites for CSE 4714/6714 Programming Languages, CSE 4733/6733 Operating Systems, and CSE 4153/6153 Data Communications and Networks to accommodate the recent change of CSE 3723 to a four hour course
- Correction of the prerequisites for CSE 4723 Compiler Construction to reflect changes made to the CSE curriculum in 2020
- Modification of the BS in Cybersecurity to add CSE 2813 Discrete Structures and accommodate the recent change of CSE 3723 to a four hour course
- Modification to the BS in Computer Science and BS in Software engineering to accommodate the recent change of CSE 3823 to a four hour course

Please feel free to contact me if there are any questions or concerns.

Sincerely,

Cindy L. Bethel

Cindy Bethel, Ph.D.
CSE Courses and Curricula Committee Chair
Professor

Jingdao Chen, Ph.D.
CSE Courses and Curricula Committee Member
Assistant Professor

Joshua Crowson
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:** Electrical & Computer Engineering

Contact Person: Jean Mohammadi-Aragh **Mail Stop:** 9571 **E-mail:** jean@ece.msstate.edu

Nature of Change: change names of four courses and the optional concentration

Date Initiated: 4/12/2022 **Effective Date:** Fall 2022

Current Degree Program Name: Bachelor of Science in Electrical Engineering

Current Majors:

Major: Electrical Engineering	**Concentration:** N/A
Major: Electrical Engineering	**Concentration:** *Power and Energy Engineering*

New Degree Program Name: Bachelor of Science in Electrical Engineering

Major: Electrical Engineering	**Concentration:** N/A
Major: Electrical Engineering	**Concentration: Power and Energy Systems**

Summary of Proposed Changes:

1. Change names of four courses (ECE 1013, 1022, 4512, 4522)
2. Update the name of the optional concentration

Approved: **Date:**

_____	_____
Department Head	
_____	_____
Chair, College or School Curriculum Committee	
_____	_____
Dean of College or School	
_____	_____
Chair, University Committee on Courses and Curricula	
_____	_____
Chair, Graduate Council(if applicable)	
_____	_____
Chair, Deans Council	

PROPOSAL FOR THE MODIFICATION OF THE

B.S. IN ELECTRICAL ENGINEERING

1. CATALOG DESCRIPTION

See table below

2. CURRICULUM OUTLINE

The changes proposed are as follows:

1. Update the names for ECE 1013, 1022, 4512, and 4522
2. Update the name for the "Power and Energy Engineering" concentration to "Power and Energy Systems" to reflect industry standard language.

CURRENT Degree Description	PROPOSED Degree Description
Degree: Bachelor of Science in Electrical Engineering Major: Electrical Engineering Concentration: N/A	Degree: Bachelor of Science in Electrical Engineering Major: Electrical Engineering Concentration: N/A
Alumni, employers, faculty and students participate in a process used to develop educational objectives for the undergraduate programs in Electrical Engineering and Computer Engineering. Within a few years of graduation, program graduates completing the baccalaureate degree in Electrical or Computer Engineering will: • Be recognized by their peers as fundamentally sound in the application of mathematics, science, computing, and engineering. • Be engaged in the practice of Electrical or Computer Engineering as innovative problem solvers with a strong work ethic, by identifying and implementing solutions using the proper tools, practical approaches, and flexible thinking. • Be productive and demonstrate leadership in the practice of Electrical or Computer Engineering, both individually and within multidisciplinary teams, using effective oral and written communication skills when working with peers, supervisors, and the public. • Be responsible in the practice of Electrical or Computer Engineering, relying on sound engineering ethics, a commitment to lifelong learning and a genuine concern for society and the environment. The electrical engineer is a principal contributor to the modern technological age in which we live today. Following in the footsteps of inventors such as Thomas Edison and Alexander Graham Bell, the electrical engineer is developing technology that improves the quality of life. Developments in microelectronics,	Alumni, employers, faculty and students participate in a process used to develop educational objectives for the undergraduate programs in Electrical Engineering and Computer Engineering. Within a few years of graduation, program graduates completing the baccalaureate degree in Electrical or Computer Engineering will: • Be recognized by their peers as fundamentally sound in the application of mathematics, science, computing, and engineering. • Be engaged in the practice of Electrical or Computer Engineering as innovative problem solvers with a strong work ethic, by identifying and implementing solutions using the proper tools, practical approaches, and flexible thinking. • Be productive and demonstrate leadership in the practice of Electrical or Computer Engineering, both individually and within multidisciplinary teams, using effective oral and written communication skills when working with peers, supervisors, and the public. • Be responsible in the practice of Electrical or Computer Engineering, relying on sound engineering ethics, a commitment to lifelong learning and a genuine concern for society and the environment. The electrical engineer is a principal contributor to the modern technological age in which we live today. Following in the footsteps of inventors such as Thomas Edison and Alexander Graham Bell, the electrical engineer is developing technology that improves the quality of life. Developments in microelectronics,

telecommunications, and power systems have had a profound effect on each of us. Electrical engineers have affected all segments of our society such as transportation, medicine, and the entertainment industry, to name only a few. Indeed, the electrical engineer has principally been responsible for the advent of the computer age in which we live today as well as the computer's miniaturization and rapid expansion in computational power.

The curriculum in electrical engineering has a foundation based on the principles of the electrical and physical sciences and uses mathematics as a common language to facilitate the solution of engineering problems. The core curriculum consists of a sequence of courses in digital devices, circuits and electronics, electromagnetic field theory, and modern energy conversion. In the senior year, students have the opportunity to take additional course work in one or more technical areas that include: telecommunications, electromagnetics, power systems, high voltage, feedback control systems, microelectronics, signal processing, and computer systems. Supporting course work outside electrical engineering consists of a strong background in mathematics, physical sciences, computer programming, social sciences, fine arts, humanities, and personal communication skills. Computers are used extensively throughout the curriculum, and students are expected to become proficient in higher-order programming languages and several application software tools. Although the concept of design is stressed throughout the program so as to emphasize the problem-solving skills of the engineer, the senior year includes a capstone design experience where much of the previous study is culminated. Through this two-semester design course sequence, students are required to integrate design and analytical problem-solving skills together with communication skills in a team environment.
Students expecting to graduate from Mississippi State University with a bachelor of science degree in electrical engineering, in addition to satisfactorily completing the EE curriculum requirements, must meet the following minimum GPA requirements for graduation:

- make an overall C average on all hours scheduled and rescheduled at all institutions attended, including MSU (2.00 or better cumulative GPA)
- make a C average on all hours scheduled and rescheduled at MSU (2.00 or better MSU GPA)
- earn at least a 2.00 cumulative grade point average on all courses scheduled and rescheduled (average on all attempts) at MSU that are applied toward meeting degree requirements
- earn at least a 2.5/4.0 average on all hours with ECE or CSE course prefixes at all institutions

telecommunications, and power systems have had a profound effect on each of us. Electrical engineers have affected all segments of our society such as transportation, medicine, and the entertainment industry, to name only a few. Indeed, the electrical engineer has principally been responsible for the advent of the computer age in which we live today as well as the computer's miniaturization and rapid expansion in computational power.

The curriculum in electrical engineering has a foundation based on the principles of the electrical and physical sciences and uses mathematics as a common language to facilitate the solution of engineering problems. The core curriculum consists of a sequence of courses in digital devices, circuits and electronics, electromagnetic field theory, and modern energy conversion. In the senior year, students have the opportunity to take additional course work in one or more technical areas that include: telecommunications, electromagnetics, power systems, high voltage, feedback control systems, microelectronics, signal processing, and computer systems. Supporting course work outside electrical engineering consists of a strong background in mathematics, physical sciences, computer programming, social sciences, fine arts, humanities, and personal communication skills. Computers are used extensively throughout the curriculum, and students are expected to become proficient in higher-order programming languages and several application software tools. Although the concept of design is stressed throughout the program so as to emphasize the problem-solving skills of the engineer, the senior year includes a capstone design experience where much of the previous study is culminated. Through this two-semester design course sequence, students are required to integrate design and analytical problem-solving skills together with communication skills in a team environment.
Students expecting to graduate from Mississippi State University with a bachelor of science degree in electrical engineering, in addition to satisfactorily completing the EE curriculum requirements, must meet the following minimum GPA requirements for graduation:

- make an overall C average on all hours scheduled and rescheduled at all institutions attended, including MSU (2.00 or better cumulative GPA)
- make a C average on all hours scheduled and rescheduled at MSU (2.00 or better MSU GPA)
- earn at least a 2.00 cumulative grade point average on all courses scheduled and rescheduled (average on all attempts) at MSU that are applied toward meeting degree requirements
- earn at least a 2.5/4.0 average on all hours with ECE or CSE course prefixes at all institutions

attended, including MSU, that are applied toward meeting degree requirements The electrical engineering program is accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org.	attended, including MSU, that are applied toward meeting degree requirements The electrical engineering program is accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org.
"[Click here and type old concentration description]"	"[Click here and type old concentration description]"

CURRENT CURRICULUM OUTLINE	Required Hours	PROPOSED CURRICULUM OUTLINE	Required Hours
EN 1103 English Comp I or EN 1104 Expanded English Comp I EN 1113 English Comp II or EN 1173 Accelerated Comp II	6	EN 1103 English Comp I or EN 1104 Expanded English Comp I EN 1113 English Comp II or EN 1173 Accelerated Comp II	6
Fine Arts: see General Education courses	3	Fine Arts: see General Education courses	3
Natural Sciences see Major Core		Natural Sciences see Major Core	
Math see Major Core		Math see Major Core	
Humanities see General Education courses	6	Humanities see General Education courses	6
Social/Behavioral Sciences see General Education courses	6	Social/Behavioral Sciences see General Education courses	6
Major Core Courses		Major Core Courses	
Math and Basic Science (31h)		Math and Basic Science (31h)	
MA 1713 Calculus I	3	MA 1713 Calculus I	3
MA 1723 Calculus II	3	MA 1723 Calculus II	3
MA 2733 Calculus III	3	MA 2733 Calculus III	3
MA 2743 Calculus IV	3	MA 2743 Calculus IV	3
MA 3113 Introduction to Linear Algebra	3	MA 3113 Introduction to Linear Algebra	3
MA 3253 Differential Equations I	3	MA 3253 Differential Equations I	3
IE 4613 Engineering Statistics I	3	IE 4613 Engineering Statistics I	3
CH 1213 Chemistry I	3	CH 1213 Chemistry I	3
CH 1211 Investigations in Chemistry I	1	CH 1211 Investigations in Chemistry I	1
PH 2213 Physics I	3	PH 2213 Physics I	3
PH 2223 Physics II	3	PH 2223 Physics II	3
Engineering Topics (76h)		Engineering Topics (76h)	
CSE 1284 Introduction to Computer Programming	4	CSE 1284 Introduction to Computer Programming	4
CSE 1384 Intermediate Computer Programming	4	CSE 1384 Intermediate Computer Programming	4
	3		3

CSE 2383 Data Structures and Analysis of Algorithms	3	CSE 2383 Data Structures and Analysis of Algorithms	3
ECE 1013 Introduction to ECE Design I	2	**ECE 1013 Foundations in ECE**	2
ECE 1022 Introduction to ECE Design II	3	**ECE 1022 Foundations in Design**	3
ECE 3423 Circuits I	1	ECE 3423 Circuits I	1
ECE 3421 Circuits I Lab	3	ECE 3421 Circuits I Lab	3
ECE 3433 Circuits II	4	ECE 3433 Circuits II	4
ECE 3244 Electronics I	3	ECE 3244 Electronics I	3
ECE 3443 Signals and Systems	3	ECE 3443 Signals and Systems	3
ECE 3313 Electromagnetics I	3	ECE 3313 Electromagnetics I	3
ECE 3323 Electromagnetics II	4	ECE 3323 Electromagnetics II	4
ECE 3614 Fundamentals of Energy Systems	2	ECE 3614 Fundamentals of Energy Systems	2
ECE 4512 EE Design I	2	**ECE 4512 Capstone Design I**	2
ECE 4522 EE Design II	4	**ECE 4522 Capstone Design II**	4
ECE 3714 Digital Devices and Logic Design	4	ECE 3714 Digital Devices and Logic Design	4
ECE 3724 Microprocessors	3	ECE 3724 Microprocessors	3
EM 2413 Engineering Mechanics I or ME 3513 Thermodynamics I	12	EM 2413 Engineering Mechanics I or ME 3513 Thermodynamics I	12
EE technical electives	3	EE technical electives	3
Engineering Science elective (3h)	3	Engineering Science elective (3h)	3
Professional Enrichment elective (3h) Oral Communication Requirement Fulfilled in ECE 1013, ECE 1022, ECE 4512, ECE 4522, and GE 3513 Writing Requirement GE 3513 Technical Writing Computer Literacy Fulfilled in Engineering Topics courses	3	Professional Enrichment elective (3h) Oral Communication Requirement Fulfilled in ECE 1013, ECE 1022, ECE 4512, ECE 4522, and GE 3513 Writing Requirement GE 3513 Technical Writing Computer Literacy Fulfilled in Engineering Topics courses	3
Concentration Courses	12	Concentration Courses	12
Total Hours	128	Total Hours	128

CURRENT Degree Description	PROPOSED Degree Description
Degree: Bachelor of Science in Electrical Engineering Major: Electrical Engineering Concentration: *Power and Energy Engineering*	Degree: Bachelor of Science in Electrical Engineering Major: Electrical Engineering Concentration: **Power and Energy Systems**

Alumni, employers, faculty and students participate in a process used to develop educational objectives for the undergraduate programs in Electrical Engineering and Computer Engineering. Within a few years of graduation, program graduates completing the baccalaureate degree in Electrical or Computer Engineering will:

- Be recognized by their peers as fundamentally sound in the application of mathematics, science, computing, and engineering.
- Be engaged in the practice of Electrical or Computer Engineering as innovative problem solvers with a strong work ethic, by identifying and implementing solutions using the proper tools, practical approaches, and flexible thinking.
- Be productive and demonstrate leadership in the practice of Electrical or Computer Engineering, both individually and within multidisciplinary teams, using effective oral and written communication skills when working with peers, supervisors, and the public.
- Be responsible in the practice of Electrical or Computer Engineering, relying on sound engineering ethics, a commitment to lifelong learning and a genuine concern for society and the environment.

The electrical engineer is a principal contributor to the modern technological age in which we live today. Following in the footsteps of inventors such as Thomas Edison and Alexander Graham Bell, the electrical engineer is developing technology that improves the quality of life. Developments in microelectronics, telecommunications, and power systems have had a profound effect on each of us. Electrical engineers have affected all segments of our society such as transportation, medicine, and the entertainment industry, to name only a few. Indeed, the electrical engineer has principally been responsible for the advent of the computer age in which we live today as well as the computer's miniaturization and rapid expansion in computational power.

The curriculum in electrical engineering has a foundation based on the principles of the electrical and physical sciences and uses mathematics as a common language to facilitate the solution of engineering problems. The core curriculum consists of a sequence of courses in digital devices, circuits and electronics, electromagnetic field theory, and modern energy conversion. In the senior year, students have the opportunity to take additional course work in one or more technical areas that include: telecommunications, electromagnetics, power systems, high voltage, feedback control systems, microelectronics, signal processing, and computer systems. Supporting course work outside

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electrical engineering consists of a strong background in mathematics, physical sciences, computer programming, social sciences, fine arts, humanities, and personal communication skills. Computers are used extensively throughout the curriculum, and students are expected to become proficient in higher-order programming languages and several application software tools. Although the concept of design is stressed throughout the program so as to emphasize the problem-solving skills of the engineer, the senior year includes a capstone design experience where much of the previous study is culminated. Through this two-semester design course sequence, students are required to integrate design and analytical problem-solving skills together with communication skills in a team environment. Students expecting to graduate from Mississippi State University with a bachelor of science degree in electrical engineering, in addition to satisfactorily completing the EE curriculum requirements, must meet the following minimum GPA requirements for graduation: • make an overall C average on all hours scheduled and rescheduled at all institutions attended, including MSU (2.00 or better cumulative GPA) • make a C average on all hours scheduled and rescheduled at MSU (2.00 or better MSU GPA) • earn at least a 2.00 cumulative grade point average on all courses scheduled and rescheduled (average on all attempts) at MSU that are applied toward meeting degree requirements • earn at least a 2.5/4.0 average on all hours with ECE or CSE course prefixes at all institutions attended, including MSU, that are applied toward meeting degree requirements The electrical engineering program is accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org.	electrical engineering consists of a strong background in mathematics, physical sciences, computer programming, social sciences, fine arts, humanities, and personal communication skills. Computers are used extensively throughout the curriculum, and students are expected to become proficient in higher-order programming languages and several application software tools. Although the concept of design is stressed throughout the program so as to emphasize the problem-solving skills of the engineer, the senior year includes a capstone design experience where much of the previous study is culminated. Through this two-semester design course sequence, students are required to integrate design and analytical problem-solving skills together with communication skills in a team environment. Students expecting to graduate from Mississippi State University with a bachelor of science degree in electrical engineering, in addition to satisfactorily completing the EE curriculum requirements, must meet the following minimum GPA requirements for graduation: • make an overall C average on all hours scheduled and rescheduled at all institutions attended, including MSU (2.00 or better cumulative GPA) • make a C average on all hours scheduled and rescheduled at MSU (2.00 or better MSU GPA) • earn at least a 2.00 cumulative grade point average on all courses scheduled and rescheduled (average on all attempts) at MSU that are applied toward meeting degree requirements • earn at least a 2.5/4.0 average on all hours with ECE or CSE course prefixes at all institutions attended, including MSU, that are applied toward meeting degree requirements The electrical engineering program is accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org.
The electrical engineering concentration allows students the flexibility to take a broad range of course in a minimum of two topic areas. Students may take a variety of courses that fit their individual interests in electrical engineering.	The electrical engineering concentration allows students the flexibility to take a broad range of course in a minimum of two topic areas. Students may take a variety of courses that fit their individual interests in electrical engineering.

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Fine Arts: see General Education courses	3	Fine Arts: see General Education courses	3
Natural Sciences		Natural Sciences	

see Major Core		see Major Core	
Math see Major Core		Math see Major Core	
Humanities see General Education courses	6	Humanities see General Education courses	6
Social/Behavioral Sciences see General Education courses	6	Social/Behavioral Sciences see General Education courses	6
Major Core Courses		Major Core Courses	
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MA 1713 Calculus I	3	MA 1713 Calculus I	3
MA 1723 Calculus II	3	MA 1723 Calculus II	3
MA 2733 Calculus III	3	MA 2733 Calculus III	3
MA 2743 Calculus IV	3	MA 2743 Calculus IV	3
MA 3113 Introduction to Linear Algebra	3	MA 3113 Introduction to Linear Algebra	3
MA 3253 Differential Equations I	3	MA 3253 Differential Equations I	3
IE 4613 Engineering Statistics I	3	IE 4613 Engineering Statistics I	3
CH 1213 Chemistry I	3	CH 1213 Chemistry I	3
CH 1211 Investigations in Chemistry I	1	CH 1211 Investigations in Chemistry I	1
PH 2213 Physics I	3	PH 2213 Physics I	3
PH 2223 Physics II	3	PH 2223 Physics II	3
Engineering Topics (64h)		Engineering Topics (64h)	
CSE 1284 Introduction to Computer Programming	4	CSE 1284 Introduction to Computer Programming	4
CSE 1384 Intermediate Computer Programming	4	CSE 1384 Intermediate Computer Programming	4
CSE 2383 Data Structures and Analysis of Algorithms	3	CSE 2383 Data Structures and Analysis of Algorithms	3
ECE 1013 Introduction to ECE Design I	3	**ECE 1013 Foundations in ECE**	3
ECE 1022 Introduction to ECE Design II	2	**ECE 1022 Foundations in Design**	2
ECE 3423 Circuits I	3	ECE 3423 Circuits I	3
ECE 3421 Circuits I Lab	1	ECE 3421 Circuits I Lab	1
ECE 3433 Circuits II	3	ECE 3433 Circuits II	3
ECE 3244 Electronics I	4	ECE 3244 Electronics I	4
ECE 3443 Signals and Systems	3	ECE 3443 Signals and Systems	3
ECE 3313 Electromagnetics I	3	ECE 3313 Electromagnetics I	3
ECE 3323 Electromagnetics II	3	ECE 3323 Electromagnetics II	3
ECE 3614 Fundamentals of Energy Systems	4	ECE 3614 Fundamentals of Energy Systems	4
ECE 4512 EE Design I	2	**ECE 4512 Capstone Design I**	2
ECE 4522 EE Design II	2	**ECE 4522 Capstone Design II**	2
ECE 3714 Digital Devices and Logic Design	4	ECE 3714 Digital Devices and Logic Design	4
ECE 3724 Microprocessors	4	ECE 3724 Microprocessors	4
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Engineering Science elective (3h)	3	Engineering Science elective (3h)	3
Professional Enrichment elective (3h)	3	Professional Enrichment elective (3h)	3
Oral Communication Requirement		Oral Communication Requirement	

Fulfilled in ECE 1013, ECE 1022, ECE 4512, ECE 4522, and GE 3513 Writing Requirement GE 3513 Technical Writing Computer Literacy Fulfilled in Engineering Topics courses	 3	Fulfilled in ECE 1013, ECE 1022, ECE 4512, ECE 4522, and GE 3513 Writing Requirement GE 3513 Technical Writing Computer Literacy Fulfilled in Engineering Topics courses	 3
Concentration Courses Power and Energy Engineering (6h) ECE 4613 Power Transmission Systems ECE 4633 Power Distribution Systems Power and Energy Electives (6h) Choose from: ECE 4643 Power Systems Relaying & Control ECE 4653 Power Electronics ECE 4663 Insulation Coordination in Electric Power Systems ECE 4673 Fundamentals of High Voltage Engineering (see advisor for list of additional approved elective courses)	 3 3 6	Concentration Courses Power and Energy Engineering (6h) ECE 4613 Power Transmission Systems ECE 4633 Power Distribution Systems Power and Energy Electives (6h) Choose from: ECE 4643 Power Systems Relaying & Control ECE 4653 Power Electronics ECE 4663 Insulation Coordination in Electric Power Systems ECE 4673 Fundamentals of High Voltage Engineering (see advisor for list of additional approved elective courses)	 3 3 6
Total Hours	128	Total Hours	128

3. JUSTIFICATION AND STUDENT LEARNING OUTCOMES

By renaming our two first-year courses and our two senior-level design courses, we are clarifying the courses' content and focus-areas. These changes will add clarification to our advising practices for the first-year courses. The changes related to merging and renaming our senior design courses will improve student course selection processes since most of our student teams include both EE and CPE majors.

By updating the concentration name, we are fixing a typo that occurred in an earlier degree modification request in order to align the concentration name with the industry standard naming convention for the concentration area.

As a result of this degree program modification, there are no changes to the student learning outcomes. The EE student learning outcomes are as follows:

1. an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics

2. an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
3. an ability to communicate effectively with a range of audiences
4. an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
5. an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
6. an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
7. an ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

- Will this program change meet local, state, regional, and national educational and cultural needs? **Yes**
- Will this program change result in duplication in the System? **No**
- Will this program change/advance student diversity within the discipline? **No**
- Will this program change result in an increase in the potential placement of graduates in MS, the Southeast, and the U.S.? **No**
- Will this program change result in an increase in the potential salaries of graduates in MS, the Southeast, and the U.S.? **No**

4. SUPPORT

See letters of support from ECE Department.

5. PROPOSED 4-LETTER ABBREVIATION

No changes

6. EFFECTIVE DATE

Fall 2022

MISSISSIPPI STATE UNIVERSITY
JAMES WORTH BAGLEY COLLEGE OF ENGINEERING

DEPARTMENT OF
ELECTRICAL AND COMPUTER ENGINEERING
Undergraduate Program Committee

February 22, 2022

TO: James W. Bagley College of Engineering Committee on Courses and Curricula &
Mississippi State University University Committee on Courses and Curricula

FROM: Undergraduate Program Committee, Department of Electrical & Computer Engineering

RE: New course additions

The undergraduate committee has reviewed the proposed course modifications and additions for the below courses.

- ECE 1013 – name change “Introduction to Design I" to "Foundations in ECE”
- ECE 1022 – name change “Introduction to Design II" to "Foundations in Design”
- ECE 4512 – name change “EE Design I” to “Capstone Design I”
- ECE 4522 – name change “EE Design II” to “Capstone Design II”
- ECE 4913 – name change “Feedback Control Systems I" to "Feedback Control Systems”
- ECE 4923 – name change “Feedback Control Systems II" to "Digital Control Systems”
- ECE 4753 / 6753 – course modification / reactivation
- ECE 4793 / 6793 – course addition
- ECE 4683 / 6683 – course addition

We offer our unanimous support for these changes and the related degree program modifications to update ECE 1013, 1022, 4512, and 4522 in the curriculum tables. Please contact us if there are any questions or concerns.

Jean Mohammadi-Aragh
Digitally signed by Jean Mohammadi-Aragh
Date: 2022.02.22 16:31:02 -06'00'

Jean Mohammadi-Aragh
Chair, ECE Undergraduate Committee
Assistant Professor

Digitally signed by Randolph F. Follett
Date: 2022.02.22 17:12:32 -06'00'

Randy Follett
Member, ECE Undergraduate Committee
Associate Professor

Ryan B Green
Digitally signed by Ryan B Green
Date: 2022.02.23 10:01:28 -06'00'

Ryan Green
Member, ECE Undergraduate Committee
Assistant Professor

Dr. Ali Cafer Gurbuz
Digitally signed by Dr. Ali Cafer Gurbuz
Date: 2022.02.23 13:25:44 -06'00'

Ali Gurbuz
Member, ECE Undergraduate Committee
Assistant Professor

Umar Iqbal
Digitally signed by Umar Iqbal
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Umar Iqbal
Member, ECE Undergraduate Committee
Assistant Clinical Professor

Jane Moorhead
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Date: 2022.02.23 13:38:46 -06'00'

Jane Moorhead
Member, ECE Undergraduate Committee
Instructor