MISSISSIPPI STATE UNIVERSITY

UNIVERSITY COMMITTEE ON COURSES AND CURRICULA

A MEMORANDUM

DATE: March 6, 2020

TO: UCCC Members

FROM: Dr. Dana Pomykal Franz, Chair

SUBJECT: March 20, 2020 Meeting

The agenda and proposals for the meeting on **Friday, March 20, 2020 beginning at 1:30 p.m.** are enclosed. The meeting will be held in **Room 324 of the Student Union**. Please contact the UCCC office if you are unable to attend.

The minutes from the February 21, 2020 UCCC meeting will be sent to you in a separate email.

Thank you.

Enclosures: Course/Curriculum Proposals

Post Office Box 5268 • Starkville, MS 39762 • Office: (662) 325-9410 • Fax: (662) 325-1846

AGENDA
UNIVERSITY COMMITTEE ON COURSES AND CURRICULA
March 20, 2020

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

AGRICULTURE AND LIFE SCIENCES

Addition	AEC 2223	Introduction to Sustainability Economics
Addition	AEC 2631	Environmental Economics & Sustainability
Addition +Online/Distance	BCH 4903/6903	Plant Biochemistry and Molecular Biology

ARTS & SCIENCES

Addition	BIO 4993/6993	Community Ecology
+Online/Distance	CO 4803/6803	Research in Public Relations and Advertising
Addition	FL 4113/6113	Ancient Greece and Rome in Film
+Online/Distance	FL 4143/6143	Classical Mythology
Addition	FLL 4113/6113	The Roman Historians
Addition	FLL 4223/6223	Lyric Poetry
Modification	GR 4423/6423	Weather Forecasting I
Modification	GR 4433/6433	Weather Forecasting II
Addition	GR 4563/6563	Aviation Meteorology
Addition +Gen. Ed.	MA 1103	College Algebra Lined Lab – Corequisite Model
+Online/Distance	PPA 8133	City and County Management
Addition	PS 4523/6523	Democracy and Inequality

BUSINESS

+Online/Distance	MGT 3323	Entrepreneurship
+Online/Distance	MGT 4613	Cross-Cultural Management
+Online/Distance	MKT 4313/6313	Physical Distribution Management

EDUCATION

Addition	MU 2881	Trombone Troupe
Modification	TECH 8213	Content and Methods of Teaching in Career and Technology Education
Modification	TECH 8233	Analysis of Workforce Education Programs and Survey Research in Workforce Development
Modification	TECH 8243	Research Problems in Instructional Systems and Workforce
Modification	TECH 8263	Philosophy and Administration of Career and Technology Education
Modification	TECH 8273	Contemporary Issues in Curriculum Planning in ISWD
Modification	TECH 8443	Theory of Multimedia Learning
Modification	TECH 8523	Project Management in Instructional Design
Modification	TECH 8533	Evaluation and Assessment in Instructional Systems & Technology
Modification	TECH 8543	Multimedia Design I
Modification	TECH 8623	Instructional Design I
Modification	TECH 8643	Multimedia Design II

Modification	TECH 8693	Multiple Perspectives on Instructional Systems and Technology
Modification	TECH 8703	Trends and Issues in Instructional Systems
Modification	TECH 8713	Research in Instructional Systems & Workforce Development
Modification	TECH 8723	Instructional Design II
Modification	TECH 8743	Interactive Media
Modification	TECH 8753	Technology Issues for School Administrators
Modification	TECH 8773	Teaching and Training with Multimedia
Modification	TECH 8793	Directed Project and Portfolio Development
Modification	TECH 8813	Foundations of Distance Education
Modification	TECH 8823	Design, Delivery, & Management of Distance Education
Modification	TECH 8843	Foundations of Instructional Systems and Technology
Modification	TECH 8853	Learning Technologies in Distance Education
Modification	TECH 8863	Grant Writing Essentials
Modification	TECH 9213	Foundations, Trends and Issues in Workforce Development, Technology and Leadership Education
Modification	TECH 9913	Dissertation Seminar

ENGINEERING

Modification +Online/Distance	ASE 3123	Aircraft Flight Dynamics

FOREST RESOURCES

Modification	SBP 1001	Undergraduate Seminar
Modification +Online/Distance	SBP 3123	Biomass to Bioproducts
Modification	SBP 6023 (Split level with SBP 4023)	Lignocellulosic Biomass Chemistry
Modification +Online/Distance	SBP 6153 (Split level with SBP 4153)	Biomass Products Manufacturing
Modification +Online/Distance	SBP 6213 (Split level with SBP 4213)	Deterioration and Preservation of Biomaterials
Modification	SBP 6243 (Split level with SBP 4243)	Sustainable Bioproducts

VETERINARY SCIENCE

Modification	CVM 5842	Clinical Pharmacology

4. Degree proposals by college/school

ACADEMIC AFFAIRS

Addition	Certificate (Graduate & Undergraduate)	Geospatial and Remote Sensing Certificate

AGRICULTURE AND LIFE SCIENCES

Modification	BS	Human Development and Family Science

BUSINESS

+Distance	Minor	Business Administration

EDUCATION

Modification	PhD	Instructional Systems & Workforce Development
+Distance	PhD	Instructional Systems & Workforce Development

ENGINEERING

+Online/Distance	PhD	Engineering/Chemical Engineering
+Online/Distance	MS	Chemical Engineering
Name Change	MS	Industrial and Systems Engineering

FOREST RESOURCES

Modification	BS	Sustainable Bioproducts

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: Academic Affairs **Department: Interdepartmental**

Contact Person: John Rodgers **Mail Stop: 9537** **E-mail: jcr100@msstate.edu**

Nature of Change: Addition of New Certificate **Date Initiated: Feb 25, 2020**

Effective Date: Jun 1, 2020

Current Degree Program Name: N/A

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

New Degree Program Name: Geospatial and Remote Sensing Certificate

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

Provost & Executive Vice President
FEB 25 2020
RECEIVED
DOC.# 41705

Summary of Proposed Changes:

The proposal seeks to create a Geospatial and Remote Sensing certificate at both the undergraduate and graduate levels and for Campus 1 and Campus 5 students. A similar certificate was available to MSU students prior to 2016. However, due to concerns of Gainful Employment federal regulations, the university wanted the certificate to be converted into a minor degree. The minor was approved in 2016. During this conversion, the certificate was deleted. Because of increasing demand for certificate programs and because relaxation of the Gainful Employment requirements ent, the University wishes to bring the certificate back. The benefit of the certificate is it would allow non degree-seeking students the opportunity to enroll at MSU.

Approved:	Date:
John C Rodgers III Department Head	Feb 25, 2020
Chair, College or School Curriculum Committee	
Peter L. Ryan Dean of College or School	February 25, 2020
Chair, University Committee on Courses and Curricula	
Chair, Graduate Council(if applicable)	
Chair, Deans Council	

1. Catalog Description

Proposed New Degree Description	
Degree: Geospatial and Remote Sensing Certificate	
Geospatial technology refers to the acquisition and analysis of spatial data. Mississippi State University has achieved a national reputation in both theoretical and applied geospatial research spanning across many fields, including agriculture, engineering, forestry, wildlife and fisheries, the social sciences, and the geosciences. MSU faculty involved in geospatial research have developed several course offerings and students in these programs have benefited from this coursework. For example, in Civil and Environmental Engineering, remote sensing and GIS techniques became potential and necessary tools to support decision making for applications in environmental and structural site investigations, hydrologic and water resources analysis, terrain mapping and transportation network analysis, landslide studies, town planning and urban development, among others. Students in Plant and Soil Science who complete the Geospatial certificate have a much greater chance of finding a career in the Precision Agriculture arena and generally have a higher starting salary than those who don't have the extra training. Forestry is highly dependent on utilizing spatial technologies for remote sensing and geographical information systems (GIS). These tools are used for classifying and inventorying forest types across landscapes as well as monitoring current forest health conditions and land use change. GIS systems form the informational core of large timberland investment firm. Geospatial technologies are used extensively in the Geosciences to model spatial patterns across the earth, atmosphere, and biosphere and to model the human impact on these systems. It is essential that Geosciences students have a background in GIS and remote sensing to be successful. These are just a few examples for how geospatial technology courses benefit MSU students. The Geospatial and Remote Sensing Certificate allows any MSU students from across the University to receive recognition for mastering geospatial coursework. Both undergraduate and graduate certificate degrees are available for both the on-campus and distance education learners. The certificate comprises 15 hours of course work in four different areas: geographic information systems (3 credit hours), remote sensing (3 credit hours), advanced geospatial course work (3 credit hours), and geospatial applications (6 credit hours). The successful completion of the GRSC will give students the foundation to utilize geospatial technologies within their field and it will provide the opportunity to promote their geospatial mastery to potential employers or potential graduate programs.	
Proposed Curriculum Outline	Required Hours
Geographic Information Systems (GIS) Requirement, Choose one of the following: • FO4471+4472/FO6471+6472 GIS for Natural Resource Management • GR 4303/6303 Principles of GIS	3 hrs

• WFA 4253/6253 Application of Spatial Technologies to Wildlife and Fisheries Management	
Remote Sensing Requirement, Choose one of the following: • FO 4453/6453 Remote Sensing Applications • GR 4333/6333 Remote Sensing of the Physical Environment • ECE 4423/6423, ABE 4483/6483, PSS 4483/6483 Introduction to Remote Sensing	3 hrs
Advanced Geospatial Coursework, Choose one of the following: • CE 8503 Data Analysis for CEE • FO 4313/6313 Spatial Technologies in Natural Resources Management • FO 8313 Spatial Statistics • GO 8353 Ecological Modeling in Natural Resources • FO 8173 Advanced Spatial Technologies • GR 4313/6313 Advanced GIS • GR 4343/6363 Advanced Remote Sensing • GR 8303 Advanced Geodatabase Systems • GR 8563 GIS Research Applications	3 hrs
Geospatial Applications Choose at least two of the following to equal six credit hours. Courses must be different from the ones taken from the above categories. A course may not be used to satisfy more than one requirement. • ABE 3513 The Global Positioning System and Geographic Information Systems in Agriculture and Engineering • ECE 3163 Signals and Systems • ECE 4413 Digital Signal Processing • ECE 4433/6433 Introduction to Radar	6 hrs

• ECE 8473 Digital Image Processing • ECE 8333 Radar Signal Processing • FO 4313/6313 Spatial Technologies in Natural Resources Management • FO 8173 Advanced Spatial Management • FO 8313 Spatial Statistics • FO 8353 Ecological Modeling • GR 3303 Survey of Geospatial Technologies • GR 4313/6313 Advanced GIS • GR 4323/6323 Cartographic Sciences • GR 4343/6343 Advanced Remote Sensing • GR 4353/6353 Geodatabase Design • GR 4363/6363 GIS Programming • GR 8303 Advanced Geodatabase Design • GR 8563 GIS Research Applications • PSS 4411/6411, ECE 4411/6411, FO 4411/6411, GR 4411/6411 Remote Sensing Seminar • PSS 4373/6373 Geospatial Agronomic Management	
Total Hours	15
Other Requirements: • The Graduate GRSC must include all courses at the 6000-level or higher • Students must earn a "C" grade or higher in all course work • The director of the GRSC will evaluate transcripts and make recommendations for awarding the certificate. • Given its interdisciplinary nature, the home department for the GRSC will be Academic Affairs in the Office of the Provost.	

2. Curriculum Outline: all courses that will be used in the GRSC are already approved by UCCC. Yet there are courses that are currently in the UCCC proposal stage that may be added at a later date.

3. Student Learning Outcomes and Assessment

- Expected Outcome 1, Geographic Information Systems: Student will be able to understand the nature of geospatial data, understand map projection and basic

geomatics, list the different types of GIS data, describe and implement fundamental vector and raster analyses, and apply landscape pattern analysis to solving spatial problems.
    - Assessment: Students will complete final exams in their GIS course. 70% of the students will score 80% or higher on the final exam (100 point scale).
- Expected Outcome 2, Remote Sensing: Students will be able to explain the principles of remote sensing and be able to apply remote sensing technologies to solving spatial problems at multiple scales
    - Assessment: Students will complete the final exams in their remote sensing electives. 70% of the students will score 80% or higher on the final exam.
- Expected Outcome 3, Advanced Geospatial Elective: Student will be able to implement spatial analyses, design and evaluate spatial models, acquire spatial data, and develop research ideas to solving spatial problems.
    - Assessment: 70% of the students will score 80% or higher on their final (or last of the semester) research project or final (or last of the semester) laboratory exercise.
- Expected Outcome 4, Geospatial Applications: Student will be able to use GIS and Remote Sensing technologies to solve applied geospatial problems.
    - Assessment: student will complete a final exam or submit research projects within each of the geospatial elective courses. The last exam or the last research project submitted during the semester will be used to demonstrate comprehension of the course concepts. 70% of the students will score 80% or higher on their last research project of the semester.

Distance Learning Courses:

All courses that are offered through distance education will include the following actions to deter academic misconduct.

- Develop large question banks. Exams will be constructed by randomly selecting questions from a pool in such a manner that students will have unique and individual exams, but they will each be tested at the same level of difficulty and their learning will be assessed over the same concepts. Exams will also 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 tie=out and submit automatically, and unanswered questions will not receive credit. Thus, the distance learner will be constrained to take exams under the same set of circumstances as on-campus students.
- On-line proctoring. Distance education courses will implement current and future university on-line proctoring standards and protocols.

4. Support – see attached letter of support.

5. Proposed 4-Letter Abbreviation: GRSC

6. Effective Date: June 1, 2020.

MISSISSIPPI STATE UNIVERSITY

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

February 7, 2020

College of Arts and Sciences and the University Courses and Curriculum Committees

Mississippi State University

RE: Addition of the Certificate in GIS

Dear Curriculum Committee,

The Department of Geosciences Curriculum Committee has met and discussed the merits of the reinstatement of the GIS and Remote Sensing Certificate. We agree that this certificate program is beneficial for programs around the university as well as within our department and we fully support inclusion of our geospatial and remote sensing courses in the certificate program.

Respectfully,

Andrew Mercer (Committee Chair)

Barrett Gutter (Committee Member)

Rinat Gabitov (Committee Member)

Shrinidhi Ambinakudige (Committee Member)

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

MISSISSIPPI STATE UNIVERSITY

COLLEGE OF AGRICULTURE AND LIFE SCIENCES
Agricultural & Biological Engineering
P.O. Box 9632
130 Creelman Street
Mississippi State, MS 39762
P. 662.325.3282
F. 662.325.3853
www.abe.msstate.edu

Date: February 14, 2020

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

Dear Dr. Dana Franz
UCCC Chair

Department of Agricultural and Biological Engineering would like to support the proposal to create a Geospatial and Remote Sensing certificate (GSRC) program at MSU. Following members of the ABE teaching faculty have supported to approve "GRSC" program proposal with the inclusion of our ABE 3513 as an required elective course.

Sincerely,

Dr. Wes Burger
Interim-Department Head

Dr. Filip To, Professor

Dr. Steve Elder, Professor

Dr. Joel Pac, Associate Professor 2/13/20

Dr. Fei Yu, Associate Professor

Dr. Prem Parajuli, Associate Professor 2/12/2020

Dr. Ganesh Bora, Associate Professor

MISSISSIPPI STATE UNIVERSITY

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Dr. Anna Linhoss, Associate Professor

Dr. LaShan Simpson, Associate Professor

Dr. Yang Zhao, Assistant Professor

Dr. Lauren Priddy, Assistant Professor

Dr. Daniel Chesser, Assistant Professor

Dr. John Linhoss, Assistant Ext. Professor

Dr. Raj Prabhu, Associate Professor

MISSISSIPPI STATE UNIVERSITY™
JAMES WORTH BAGLEY
COLLEGE OF ENGINEERING

DEPARTMENT OF ELECTRICAL
& COMPUTER ENGINEERING

James E. Fowler
Interim Department Head
Billie J. Ball Professor
fowler@ece.msstate.edu

February 17, 2020

To Whom It May Concern:

The Department of Electrical and Computing Engineering has evaluated the proposal for reinstating the Geospatial and Remote Sensing certificate. The department supports the inclusion of the courses listed below within the proposed certificate:

- ECE 4423/6423 Introduction to Remote Sensing
- ECE 3163 Signals and Systems
- ECE 4413/6413 Digital Signal Processing
- ECE 4433/6433 Introduction to Radar
- ECE 8473 Digital Image Processing
- ECE 8333 Radar Signal Processing

If you have any questions, please do not hesitate to contact me.

Sincerely,

James E. Fowler
Interim Department Head
Billie J. Ball Professor

MISSISSIPPI STATE UNIVERSITY.

DEPARTMENT OF FORESTRY
P. O. Box 9681
Mississippi State, MS 39762
P. 662.325.2949
cfr.msstate.edu

February 20, 2020

Dr. John Rodgers
Professor and Head
Department of Geosciences
Mississippi State, MS 39762

Dear Dr. Rodgers:

On behalf of the Department of Forestry, please find this letter in support of the Department of Geosciences' proposed "Geospatial and Remote Sensing Certificate" program. I emailed your information to our forestry Undergraduate Curriculum Committee on 2/17/20 to solicit their review and comment. The faculty and student members voiced unanimous support for your certificate program. As a fellow department head within the university, I wish you luck in in growing your enrollment while simultaneously helping our program. I sincerely hope you receive administrative approval for your newly proposed "Geospatial and Remote Sensing Certificate" program. Please let me know if I can be of any further assistance.

Yours truly,

Donald L. Grebner
Professor and Department Head

MISSISSIPPI STATE UNIVERSITY
JAMES WORTH BAGLEY COLLEGE OF ENGINEERING

DEPARTMENT OF CIVIL & ENVIRONMENTAL ENGINEERING

Dr. Dennis D. Truax, P.E., DEE, D.WRE, F.ASCE, F.NSPE
James T. White Endowed Chair, Department Head and Professor
662.325.7187; truax@cee.msstate.edu

20 February 2020

Dr. John Rodgers
Professor and Head
Department of Geosciences

Subject: Geospatial and Remote Sensing Certificate

Dear Dr. Rodgers,

As we both know, Dr. John J. Ramirez-Avila has been representing my department in your efforts to develop and reinstitute the subject certificate. He has updated me on the progress and the commitments of my department in supporting this program. I understand that your hope is to have this established by June 2020 and are currently completing documents to submit the UCCC by March 5.

I am writing at this time to provide a letter of support for the subject certificate. We have no objection to the inclusion of courses offered by our department to support the certificate. At this time, this would represent CE 8503 - Data Analysis though it would eventually include a class that is pending review and approval by UCCC entitled GIS in Water Resources.

Good luck with the proposal, and let Dr. Ramirez-Avila know if you need anything else from us to make your proposal a success.

Best regards,

Dennis D. Truax, Ph.D., P.E., DEE, D.WRE, F.ASCE, F.NSPE
James T. White Endowed Chair, Department Head, and Professor

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

February 13, 2020

John Rogers
Professor and Department Head
Mailstop 9537
Hilbun Hall, Rm 200A
Mississippi State, MS 39762

Dear Dr. Rogers:

The PSS Courses and Curriculum Committee discussed the proposed certificate in Geospatial and Remote Sensing. The committee found the certificate does not represent a duplication of effort with programs offered in Plant and Soil Sciences.

The PSS Courses and Curriculum Committee sees merit in the certificate and fully supports the development of the interdepartmental Geospatial and Remote Sensing Certificate. PSS recommends considering adding the following courses to the Geospatial Applications options of the certificate.

PSS 2543 Precision Agriculture I
PSS 4/6543 Precision Agriculture II
PSS 4/6383 Ag Remote Sensing I
PSS 4/6393 Ag Remote Sensing II

Sincerely,

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

PSS Courses and Curriculum Committee:
Michael Cox
Cole Etheredge
William Kingery
David Lang
Fred Musser
Dan Reynolds
Barry Stewart
Cindy Williams

c: Darrin Dodds, Dept. Head, PSS

Appendix 16: Intent to Offer, Modify, or Delete Certificate* Program
(Submit Appendix 16 in both PDF and Word Document Formats)

Institution:

Date of Implementation:

August, 2020 (reactivation)

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

45.0701; 8029

CIP & Sequence codes: IHL Active Program Inventory

Total Credit Hours:

15

Program Title as will Appear on Academic Program Inventory:

Geospatial And Remote Sensing

☒ **Offer** ☐ **Modify** ☐ **Delete**

Responsible Academic Unit(s):

Division of Academic Affairs

Institutional Contact: Dr. John Rodgers
Phone:662-325-1393
Email:

Vocational Certificate:
Yes
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 Geospatial and remote sensing certificate comprises 15 credit hours in different geospatial fields, including GIS (3 hours), remote sensing (3 hours), advanced geospatial (3 hours) and geospatial applications (6 hours).

John C Rodgers III
Institutional Contact Signature

2/25/2020
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: Agriculture and Life Sciences **Department:** School of Human Sciences

Contact Person: Joe D. Wilmoth **Mail Stop:** 9745 **E-mail:** Joe.Wilmoth@msstate.edu

Nature of Change: Modification **Date Initiated:** 11/18/19 **Effective Date:** Fall 20

Current Degree Program Name: Human Development and Family Science

Major: Human Development and Family Science **Concentration:**

New Degree Program Name: No Change

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

Summary of Proposed Changes:

Move HDFS 1813 from concentration requirement to gen ed social/behavioral sciences and change requirement for computer literacy.

Approved:	**Date:**
Donna J. Peterson **Department Head**	for Michael E. Newman 2/14/2020
J. Com Fag **Chair, College or School Curriculum Committee**	2/14/2020
Dean of College or School	2/17/2020
Chair, University Committee on Courses and Curricula	
Chair, Graduate Council (if applicable)	
Chair, Deans Council	

CURRICULUM OUTLINE

CURRENT Degree Description	PROPOSED Degree Description
Degree: Human Development and Family Science Major: Human Development and Family Science Concentration: Child Development	Degree: Human Development and Family Science Major: Human Development and Family Science Concentration: Child Development
This program offers an interdisciplinary lifespan approach to the study of children, youth, and families. It encompasses specialty areas in preschool teaching, childcare, youth development, family science, child life, and family and consumer sciences teacher education. Students develop an awareness of trends, issues and public policy affecting families and analyze factors that influence cognitive, emotional, social and physical development in the contexts of culture and family. Graduates enter diverse public and private sectors that focus on enabling children, youth, and families to function effectively in today's complex society. Specific course work is required to specialize in each area or meet Class A teacher licensure requirements for family and consumer sciences in the state of Mississippi. Specific course work is also required to specialize in preschool education, youth development, or family science. A grade of "C" or better is required for all major courses (Human Development and Family Science courses).	This program offers an interdisciplinary lifespan approach to the study of children, youth, and families. It encompasses specialty areas in preschool teaching, childcare, youth development, family science, child life and family and consumer sciences teacher education. Students develop an awareness of trends, issues and public policy affecting families and analyze factors that influence cognitive, emotional, social and physical development in the contexts of culture and family. Graduates enter diverse public and private sectors that focus on enabling children, youth, and families to function effectively in today's complex society. Specific course work is required to specialize in each area or meet Class A teacher licensure requirements for family and consumer sciences in the state of Mississippi. Specific course work is also required to specialize in preschool education, youth development, or family science. A grade of "C" or better is required for all major courses (Human Development and Family Science courses).
The child development concentration explores the growth and development of children (conception until adolescence) within the family system and sociocultural milieu. This coursework prepares students to be become competent early care and education professionals, parent educators, child advocates, and early interventionists within the public, private, and non-profit sectors. Students learn real-world application through lab experiences at the Child Development and Family Studies Center and internships in settings that align with the students' career goals. PreK-K teaching candidates must complete a PreK-K Teacher Candidacy Internship under the supervision of a licensed teacher. To be eligible for PreK-K teaching licensure in Mississippi, students must pass the Praxis Core or have a cumulative ACT score of at least 21; have a GPA of at least 2.75; and pass the Praxis II Early Childhood Principles of Teaching and Learning (5621) and the Praxis II Child Development (5024).	The child development concentration explores the growth and development of children (conception until adolescence) within the family system and sociocultural milieu. This coursework prepares students to be become competent early care and education professionals, parent educators, child advocates, and early interventionists within the public, private, and non-profit sectors. Students learn real-world application through lab experiences at the Child Development and Family Studies Center and internships in settings that align with the students' career goals. PreK-K teaching candidates must complete a PreK-K Teacher Candidacy Internship under the supervision of a licensed teacher. To be eligible for PreK-K teaching licensure in Mississippi, students must pass the Praxis Core or have a cumulative ACT score of at least 21; have a GPA of at least 2.75; and pass the Praxis II Early Childhood Principles of Teaching and Learning (5621) and the Praxis II Child Development (5024).

CURRENT CURRICULUM OUTLINE	Required Hours	**PROPOSED CURRICULUM OUTLINE**	Required Hours
EN 1103 English Comp I EN 1113 English Comp II	6	EN 1103 English Comp I EN 1113 English Comp II	6
Fine Arts (General Education):	3	Fine Arts (General Education):	3
Natural Sciences (2 labs required from Gen Ed)	9	Natural Sciences (2 labs required from Gen Ed)	9

Extra Science (if appropriate) HS 2293 Individual and Family Nutrition required for FCS Education Select from Gen Ed courses for Child Development, Child Life, Youth Development, and Family Science		Extra Science (if appropriate) HS 2293 Individual and Family Nutrition required for FCS Education Select from Gen Ed courses for Child Development, Youth Development, and Family Science	
Math (General Education):	6	Math (General Education):	6
Humanities (General Education):	6	Humanities (General Education):	6
Social/Behavioral Sciences (Gen Ed): *HDFS 1813 Devel through Lifespan is required for FCS Education* EPY 3543 Psychology of Adolescence is required for FCS Education	6	Social/Behavioral Sciences (Gen Ed): **HDFS 1813 Devel through Lifespan is required for all HDFS students** EPY 3543 Psychology of Adolescence is required for FCS Education	6
General Education Hours	36	General Education Hours	36
Major Core Courses HS 1701 Survey of Human Sciences HDFS 2813 Child Development HDFS 3303 Consumer Economics HDFS 4333 Families, Legislation, & Public Policy HDFS 4424 Teaching Methods in Ag & HS HS 4701 Internship Placement Seminar HS 4702 Research and Application in HS HDFS 4803 Parenting HDFS 4853 The Family: An Ecological Perspective HDFS 4883 Risk, Resilience, & Preventive Interventions Writing Competency met by: AELC 3203 Prof Writing ANR Hum Sci Writing OR EDF 3413 Writing for Thinking OR EPY 3513 Writing for Behavioral Sciences OR MGT 3213 Organizational Communication		Major Core Courses HS 1701 Survey of Human Sciences HDFS 2813 Child Development HDFS 3303 Consumer Economics HDFS 4333 Families, Legislation, & Public Policy HDFS 4424 Teaching Methods in Ag & HS HS 4701 Internship Placement Seminar HS 4702 Research and Application in HS HDFS 4803 Parenting HDFS 4853 The Family: An Ecological Perspective HDFS 4883 Risk, Resilience, & Preventive Interventions Writing Competency met by: AELC 3203 Prof Writing ANR Hum Sci OR EDF 3413 Writing for Thinking OR EPY 3513 Writing for Behavioral Sciences OR MGT 3213 Organizational Communication	
Major Core Hours	29	Major Core Hours	29
Child Development Concentration *HDFS 1813 Devel through Lifespan* HDFS 2803 Prenatal & Infant Development HDFS 3803 Creat & Play in Yng Child HDFS 3813 Lifespan Theory HDFS 3823 Methods & Materials ECEP HDFS 3843 Guiding Child Behavior HDFS 4760 Child Development Internship or HDFS 4740 PreK-K Teacher Candidacy		Child Development Concentration HDFS 2803 Prenatal & Infant Development HDFS 3803 Creat & Play in Yng Child HDFS 3813 Lifespan Theory HDFS 3823 Methods & Materials ECEP HDFS 3843 Guiding Child Behavior **HDFS 3853 Lang & Literacy in Early Years** HDFS 4760 Child Development Internship or HDFS 4740 PreK-K Teacher Candidacy	

Internship (12 hours) HDFS 4823 Dev & Admin of Child Ser Prog HS 2283 Child Health & Nutrition *EDE 3233 Teaching Children's Literature* EDX 3213 Psy & Ed of Exc Child & Youth CO 1003 Fundamentals of Public Speaking OR CO 1013 Introduction to Communication Computer Literacy *(3 hours)* satisfied by *TKT 1273 Computer Applications OR BIS 1012* COE 4013 Facilitative Skills Dev *8* hours electives		Internship (12 hours) HDFS 4823 Dev & Admin of Child Ser Prog HS 2283 Child Health & Nutrition EDX 3213 Psy & Ed of Exc Child & Youth CO 1003 Fundamentals of Public Speaking OR CO 1013 Introduction to Communication Computer Literacy satisfied by **technology requirements in major core courses** COE 4013 Facilitative Skills Dev **14** hours electives	
	59	Concentration Hours	59
Total Hours	124	Total Hours	124

CURRENT Degree Description	PROPOSED Degree Description
Degree: Human Development and Family Science Major: Human Development and Family Science Concentration: Child Life	Degree: Human Development and Family Science Major: Human Development and Family Science Concentration: Child Life
This program offers an interdisciplinary lifespan approach to the study of children, youth, and families. It encompasses specialty areas in preschool teaching, childcare, youth development, family science, child life, and family and consumer sciences teacher education. Students develop an awareness of trends, issues and public policy affecting families and analyze factors that influence cognitive, emotional, social, and physical development in the contexts of culture and family. Graduates enter diverse public, non-profit, and private sectors that focus on enabling children, youth, and families to function effectively in today's complex society. Specific course work is required to specialize in each area or meet Class A teacher licensure requirements for family and consumer sciences in the state of Mississippi. Specific course work is also required to specialize in child life, preschool education, youth development, or family science. A grade of "C" or better is required for all major courses (*Human Sciences* courses).	This program offers an interdisciplinary lifespan approach to the study of children, youth, and families. It encompasses specialty areas in preschool teaching, childcare, youth development, family science, child life, and family and consumer sciences teacher education. Students develop an awareness of trends, issues and public policy affecting families and analyze factors that influence cognitive, emotional, social, and physical development in the contexts of culture and family. Graduates enter diverse public, non-profit, and private sectors that focus on enabling children, youth, and families to function effectively in today's complex society. Specific course work is required to specialize in each area or meet Class A teacher licensure requirements for family and consumer sciences in the state of Mississippi. Specific course work is also required to specialize in child life, preschool education, youth development, or family science. A grade of "C" or better is required for all major courses (**Human Development and Family Science** courses).
A concentration in child life provides the student with an overview of the role of the child life specialist working with children and their families in a health	A concentration in child life provides the student with an overview of the role of the child life specialist working with children and their families in a health care setting.

care setting. The primary emphases of the child life concentration are on student demonstration of knowledge, skills, and abilities required to assume the responsibilities of a child life professional. This includes involvement in the assessment of clients; planning and delivering child life services to patients including medical play, pre-procedural teaching, use of distractions, etc.; and evaluating the effectiveness of the interventions and plan.		The primary emphases of the child life concentration are on student demonstration of knowledge, skills, and abilities required to assume the responsibilities of a child life professional. This includes involvement in the assessment of clients; planning and delivering child life services to patients including medical play, pre-procedural teaching, use of distractions, etc.; and evaluating the effectiveness of the interventions and plan.	
CURRENT CURRICULUM OUTLINE	Required Hours	**PROPOSED CURRICULUM OUTLINE**	Required Hours
EN 1103 English Comp I EN 1113 English Comp II	6	EN 1103 English Comp I EN 1113 English Comp II	6
Fine Arts (General Education):	3	Fine Arts (General Education):	3
Natural Sciences (2 labs required from Gen Ed)	9	Natural Sciences (2 labs required from Gen Ed)	9
Extra Science (if appropriate) HS 2293 Individual and Family Nutrition required for FCS Education Select from Gen Ed courses for Child Development, Youth Development, and Family Science		Extra Science (if appropriate) HS 2293 Individual and Family Nutrition required for FCS Education Select from Gen Ed courses for Child Development, Youth Development, and Family Science	
Math (General Education):	6	Math (General Education):	6
Humanities (General Education):	6	Humanities (General Education):	6
Social/Behavioral Sciences (Gen Ed): *HDFS 1813 Devel through Lifespan is required for FCS Education* EPY 3543 Psychology of Adolescence is required for FCS Education	6	Social/Behavioral Sciences (Gen Ed): **HDFS 1813 Devel through Lifespan is required for all HDFS students** EPY 3543 Psychology of Adolescence is required for FCS Education	6
General Education Hours	36	General Education Hours	36
Major Core Courses HS 1701 Survey of Human Sciences *HDFS 1813 Devel through Lifespan* HDFS 2813 Child Development HDFS 3303 Consumer Economics HDFS 4333 Families, Legislation, & Public Policy HDFS 4424 Teaching Methods in Ag & HS HS 4701 Internship Placement Seminar HS 4702 Research and Application in HS HDFS 4803 Parenting HDFS 4853 The Family: An Ecological Perspective HDFS 4883 Risk, Resilience, & Preventive Interventions Writing Competency met by: AELC 3203 Prof Writing ANR Hum Sci OR		Major Core Courses HS 1701 Survey of Human Sciences HDFS 2813 Child Development HDFS 3303 Consumer Economics HDFS 4333 Families, Legislation, & Public Policy HDFS 4424 Teaching Methods in Ag & HS HS 4701 Internship Placement Seminar HS 4702 Research and Application in HS HDFS 4803 Parenting HDFS 4853 The Family: An Ecological Perspective HDFS 4883 Risk, Resilience, & Preventive Interventions Writing Competency met by: AELC 3203 Prof Writing ANR Hum Sci OR EDF 3413 Writing for Thinking OR EPY 3513 Writing for Behavioral Sciences	

EDF 3413 Writing for Thinking OR EPY 3513 Writing for Behavioral Sciences OR MGT 3213 Organizational Communication		OR MGT 3213 Organizational Communication	
Major Core Hours	29	Major Core Hours	29
Concentration Courses *HDFS 1813 Devel through Lifespan* HDFS 2803 Prenatal & Infant Development HDFS 3803 Creat & Play in Yng Child HDFS 3813 Lifespan Theory HDFS 3823 Methods & Materials ECEP HDFS 3843 Guiding Child Behavior HDFS 4770 Child Life Internship OR HDFS 4760 Child Development Internship OR HDFS 4740 PreK-K Teacher Candidacy Internship (12 hours) HDFS 4823 Dev & Admin of Child Ser Prog HDFS 4832 Child Life Clinical HDFS 4833 The Hospitalized Child *EDE 3233 Teaching Children's Literature* EDX 3213 Psy & Ed of Exc Child & Youth COE 4013 Facilitative Skills Dev CO 1003 Fundamentals of Public Speaking OR CO 1013 Introduction to Communication Computer Literacy *(3 hours)* satisfied by *TKT 1273 Computer Applications OR BIS 1012 Introduction to Business Computer Systems* *6* hours electives		Concentration Courses HDFS 2283 Child Health & Nutrition HDFS 2803 Prenatal & Infant Development HDFS 3803 Creat & Play in Yng Child HDFS 3813 Lifespan Theory HDFS 3823 Methods & Materials ECEP HDFS 3843 Guiding Child Behavior **HDFS 3853 Lang & Literacy in Early Years** HDFS 4770 Child Life Internship OR HDFS 4760 Child Development Internship OR HDFS 4740 PreK-K Teacher Candidacy Internship (12 hours) HDFS 4823 Dev & Admin of Child Ser Prog HDFS 4832 Child Life Clinical HDFS 4833 The Hospitalized Child EDX 3213 Psy & Ed of Exc Child & Youth COE 4013 Facilitative Skills Dev CO 1003 Fundamentals of Public Speaking OR CO 1013 Introduction to Communication Computer Literacy satisfied by **technology requirements in major core courses** **9** hours electives	
Concentration Hours	59	Concentration Hours	59
Total Hours	124	Total Hours	124

CURRENT Degree Description	PROPOSED Degree Description
Degree: Human Development and Family Science Major: Human Development and Family Science Concentration: Youth Development	Degree: Human Development and Family Science Major: Human Development and Family Science Concentration: Youth Development
This program offers an interdisciplinary lifespan approach to the study of children, youth, and families.	This program offers an interdisciplinary lifespan approach to the study of children, youth, and families. It

It encompasses specialty areas in preschool teaching, childcare, youth development, family science, child life and family and consumer sciences teacher education. Students develop an awareness of trends, issues and public policy affecting families and analyze factors that influence cognitive, emotional, social, and physical development in the contexts of culture and family. Graduates enter diverse public, non-profit, and private sectors that focus on enabling children, youth, and families to function effectively in today's complex society. Specific course work is required to specialize in each area or meet Class A teacher licensure requirements for family and consumer sciences in the state of Mississippi. Specific course work is also required to specialize in preschool education, youth development, or family science. A grade of "C" or better is required for all major courses (Human Development and Family Science courses).	encompasses specialty areas in preschool teaching, childcare, youth development, family science, child life and family and consumer sciences teacher education. Students develop an awareness of trends, issues and public policy affecting families and analyze factors that influence cognitive, emotional, social, and physical development in the contexts of culture and family. Graduates enter diverse public, non-profit, and private sectors that focus on enabling children, youth, and families to function effectively in today's complex society. Specific course work is required to specialize in each area or meet Class A teacher licensure requirements for family and consumer sciences in the state of Mississippi. Specific course work is also required to specialize in preschool education, youth development, or family science. A grade of "C" or better is required for all major courses (Human Development and Family Science courses).
The Youth Development curriculum prepares students to understand and work effectively with children and adolescents, ages 10-18, in a variety of settings. The program provides students with a comprehensive view of the needs and developmental characteristics of youths, as well as the challenges facing today's youths. Emphasis is placed on understanding how youth development does not occur in isolation but is situated in, and affected by, contexts such as relationships, family, neighborhood/community, school, culture, the economy, and society. Youth Development students gain valuable real-world experience through a required field experience course and an internship. Students are also able to develop specific areas of specialization to fit their career interests by choosing from a generous variety of focus area courses.	The Youth Development curriculum prepares students to understand and work effectively with children and adolescents, ages 10-18, in a variety of settings. The program provides students with a comprehensive view of the needs and developmental characteristics of youths, as well as the challenges facing today's youths. Emphasis is placed on understanding how youth development does not occur in isolation but is situated in, and affected by, contexts such as relationships, family, neighborhood/community, school, culture, the economy, and society. Youth Development students gain valuable real-world experience through a required field experience course and an internship. Students are also able to develop specific areas of specialization to fit their career interests by choosing from a generous variety of focus area courses.

CURRENT CURRICULUM OUTLINE	Required Hours	**PROPOSED CURRICULUM OUTLINE**	Required Hours
EN 1103 English Comp I EN 1113 English Comp II	6	EN 1103 English Comp I EN 1113 English Comp II	6
Fine Arts (General Education):	3	Fine Arts (General Education):	3
Natural Sciences (2 labs required from Gen Ed)	9	Natural Sciences (2 labs required from Gen Ed)	9
Extra Science (if appropriate) HS 2293 Individual and Family Nutrition required for FCS Education Select from Gen Ed courses for Child Development, Youth Development, and Family Science		Extra Science (if appropriate) HS 2293 Individual and Family Nutrition required for FCS Education Select from Gen Ed courses for Child Development, Youth Development, and Family Science	
Math (General Education):	6	Math (General Education):	6
Humanities (General Education):	6	Humanities (General Education):	6

Social/Behavioral Sciences (Gen Ed): *HDFS 1813 Devel through Lifespan is required for FCS Education* EPY 3543 Psychology of Adolescence is required for FCS Education	6	Social/Behavioral Sciences (Gen Ed): **HDFS 1813 Devel through Lifespan is required for all HDFS students** EPY 3543 Psychology of Adolescence is required for FCS Education	6
General Education Hours	36	General Education Hours	36
Major Core Courses HS 1701 Survey of Human Sciences HDFS 2813 Child Development HDFS 3303 Consumer Economics HDFS 4333 Families, Legislation, & Public Policy HDFS 4424 Teaching Methods in Ag & HS HS 4701 Internship Placement Seminar HS 4702 Research and Application in HS HDFS 4803 Parenting HDFS 4853 The Family: An Ecological Perspective HDFS 4883 Risk, Resilience, & Preventive Interventions Writing Competency met by: AELC 3203 Prof Writing ANR Hum Sci OR EDF 3413 Writing for Thinking OR EPY 3513 Writing for Behavioral Sciences OR MGT 3213 Organizational Communication		Major Core Courses HS 1701 Survey of Human Sciences HDFS 2813 Child Development HDFS 3303 Consumer Economics HDFS 4333 Families, Legislation, & Public Policy HDFS 4424 Teaching Methods in Ag & HS HS 4701 Internship Placement Seminar HS 4702 Research and Application in HS HDFS 4803 Parenting HDFS 4853 The Family: An Ecological Perspective HDFS 4883 Risk, Resilience, & Preventive Interventions Writing Competency met by: AELC 3203 Prof Writing ANR Hum Sci OR EDF 3413 Writing for Thinking OR EPY 3513 Writing for Behavioral Sciences OR MGT 3213 Organizational Communication	
Major Core Hours	29	Major Core Hours	29
Concentration Courses *HDFS 1813 Devel through Lifespan* HDFS 3000 Field Experience (3 hours) HDFS 3813 Lifespan Theory HDFS 4780 Youth Development Internship (12 hours) HDFS 4873 Positive Youth Development *HDFS 4883 Risk, Resilience, & Preventive Interventions* PSY 4223 Drug Use and Abuse OR SW 4533 Substance Abuse and Addictions in Social Work Services CO 1003 Fundamentals of Public Speaking OR CO 1013 Introduction to Communication Computer Literacy (3 hours) satisfied by *TKT 1273 Computer Applications* *OR BIS 1012*		Concentration Courses HDFS 3000 Field Experience (3 hours) HDFS 3813 Lifespan Theory HDFS 4780 Youth Development Internship (12 hours) HDFS 4873 Positive Youth Development PSY 4223 Drug Use and Abuse OR SW 4533 Substance Abuse and Addictions in Social Work Services CO 1003 Fundamentals of Public Speaking OR CO 1013 Introduction to Communication Computer Literacy satisfied by **technology requirements in major core courses** Choose three of the following (9 hours): AELC 4403 Development of Youth	

Choose three of the following (9 hours): AELC 4403 Development of Youth Programs PSY 3413 Human Sexual Behavior EDX 3213 Psy & Ed of Exc Child & Youth COE 4013 Facilitative Skills Dev EPY 3543 Psychology of Adolescence Choose 15 hours from the following: HDFS 3833 Human Dev. in the Context of Leisure & Rec. HDFS 3673 Environments for Special Needs EDX 4423 Teaching the Disadvantaged Child EPY 3503 Principles of Educational Psychology, EPY 3553 Giftedness/Creativity EPY 4053 Psych & Education of Ment Retarded SO 4233 Juvenile Delinquency SO 3313 Deviant Behavior SO 3503 Violence in the U.S. SO 3603 Criminology SO 4333 Sociology of Sport SO 3213 Intro to Social Research SO 2203 Cultural and Racial Minorities PE 3033 Basketball/Football Officiating PE 3133 Adaptive Physical Education PE 3183 Psychology of Sport & Exercise KI 2213 Emergency Healthcare PE 3422 Coaching Football PE 3432 Coaching Basketball PE 3452 Coaching Softball and Baseball PE 3433 General Safety Methods MGT 3213 Organizational Communications MGT 3114 Prin of Mgt & Prod MGT 3513 Intro to Human Res Mgt MGT 3813 Organizational Behavior MGT 4563 Staffing in Organizations MKT 3013 Principles in Marketing MKT 3213 Retailing MKT 4113 Personal Selling MKT 4123 Advertising *5* hours electives		Programs PSY 3413 Human Sexual Behavior EDX 3213 Psy & Ed of Exc Child & Youth COE 4013 Facilitative Skills Dev EPY 3543 Psychology of Adolescence **Choose 15 hours from the following:** HDFS 3833 Human Dev. in the Context of Leisure & Rec. HDFS 3673 Environments for Special Needs EDX 4423 Teaching the Disadvantaged Child EPY 3503 Principles of Educational Psychology, EPY 3553 Giftedness/Creativity EPY 4053 Psych & Education of Ment Retarded SO 4233 Juvenile Delinquency SO 3313 Deviant Behavior SO 3503 Violence in the U.S. SO 3603 Criminology SO 4333 Sociology of Sport SO 3213 Intro to Social Research SO 2203 Cultural and Racial Minorities PE 3033 Basketball/Football Officiating PE 3133 Adaptive Physical Education PE 3183 Psychology of Sport & Exercise KI 2213 Emergency Healthcare PE 3422 Coaching Football PE 3432 Coaching Basketball PE 3452 Coaching Softball and Baseball PE 3433 General Safety Methods MGT 3213 Organizational Communications MGT 3114 Prin of Mgt & Prod MGT 3513 Intro to Human Res Mgt MGT 3813 Organizational Behavior MGT 4563 Staffing in Organizations MKT 3013 Principles in Marketing MKT 3213 Retailing MKT 4113 Personal Selling MKT 4123 Advertising **8** hours electives	
Concentration Hours	59	Concentration Hours	59
Total Hours	124	Total Hours	124

CURRENT Degree Description	PROPOSED Degree Description
Degree: Human Development and Family Science Major: Human Development and Family Science Concentration: Family Science	Degree: Human Development and Family Science Major: Human Development and Family Science Concentration: Family Science
This program offers an interdisciplinary lifespan approach to the study of children, youth, and families. It encompasses specialty areas in preschool teaching, childcare, youth development, family science, child life, and family and consumer sciences teacher education. Students develop an awareness of trends, issues and public policy affecting families and analyze factors that influence cognitive, emotional, social, and physical development in the contexts of culture and family. Graduates enter diverse public, non-profit, and private sectors that focus on enabling children, youth, and families to function effectively in today's complex society. Specific course work is required to specialize in each area or meet Class A teacher licensure requirements for family and consumer sciences in the state of Mississippi. Specific course work is also required to specialize in preschool education, youth development, or family science. A grade of "C" or better is required for all major courses (Human Development and Family Science courses).	This program offers an interdisciplinary lifespan approach to the study of children, youth, and families. It encompasses specialty areas in preschool teaching, childcare, youth development, family science, child life, and family and consumer sciences teacher education. Students develop an awareness of trends, issues and public policy affecting families and analyze factors that influence cognitive, emotional, social, and physical development in the contexts of culture and family. Graduates enter diverse public, non-profit, and private sectors that focus on enabling children, youth, and families to function effectively in today's complex society. Specific course work is required to specialize in each area or meet Class A teacher licensure requirements for family and consumer sciences in the state of Mississippi. Specific course work is also required to specialize in preschool education, youth development, or family science. A grade of "C" or better is required for all major courses (Human Development and Family Science courses).
The Family Science program helps students discover, verify, and apply knowledge about the family. Family Science students gain valuable real-world experience through a required field experience course and an internship, and graduates are able to receive provisional certification through the National Council on Family Relations as Certified Family Life Educators, recognizing their competence in a broad range of ten family-related content areas. They are prepared to address societal issues including economics, education, work-family issues, parenting, sexuality, gender, substance abuse, domestic violence, unemployment, debt, and child abuse within the context of the family. Graduates can work in a variety of governmental, non-profit, religious, and private agencies.	The Family Science program helps students discover, verify, and apply knowledge about the family. Family Science students gain valuable real-world experience through a required field experience course and an internship, and graduates are able to receive provisional certification through the National Council on Family Relations as Certified Family Life Educators, recognizing their competence in a broad range of ten family-related content areas. They are prepared to address societal issues including economics, education, work-family issues, parenting, sexuality, gender, substance abuse, domestic violence, unemployment, debt, and child abuse within the context of the family. Graduates can work in a variety of governmental, non-profit, religious, and private agencies.

CURRENT CURRICULUM OUTLINE	Required Hours	**PROPOSED CURRICULUM OUTLINE**	Required Hours
EN 1103 English Comp I En 1113 English Comp II	6	EN 1103 English Comp I EN 1113 English Comp II	6
Fine Arts (General Education):	3	Fine Arts (General Education):	3
Natural Sciences (2 labs required from Gen Ed)	9	Natural Sciences (2 labs required from Gen Ed)	9
Extra Science (if appropriate)		Extra Science (if appropriate)	

HS 2293 Individual and Family Nutrition required for FCS Education Select from Gen Ed courses for Child Development, Youth Development, and Family Science		HS 2293 Individual and Family Nutrition required for FCS Education Select from Gen Ed courses for Child Development, Youth Development, and Family Science	
Math (General Education):	6	Math (General Education):	6
Humanities (General Education):	6	Humanities (General Education):	6
Social/Behavioral Sciences (Gen Ed): *HDFS 1813 Devel through Lifespan is required for FCS Education* EPY 3543 Psychology of Adolescence is required for FCS Education	6	Social/Behavioral Sciences (Gen Ed): **HDFS 1813 Devel through Lifespan is required for all HDFS students** EPY 3543 Psychology of Adolescence is required for FCS Education	6
General Education Hours	36	General Education Hours	36
Major Core Courses HS 1701 Survey of Human Sciences HDFS 2813 Child Development HDFS 3303 Consumer Economics HDFS 4333 Families, Legislation, & Public Policy HDFS 4424 Teaching Methods in Ag & HS HS 4701 Internship Placement Seminar HS 4702 Research and Application in HS HDFS 4803 Parenting HDFS 4853 The Family: An Ecological Perspective HDFS 4883 Risk, Resilience, & Preventive Interventions Writing Competency met by: AELC 3203 Prof Writing ANR Hum Sci OR EDF 3413 Writing for Thinking OR EPY 3513 Writing for Behavioral Sciences OR MGT 3213 Organizational Communication		Major Core Courses HS 1701 Survey of Human Sciences HDFS 2813 Child Development HDFS 3303 Consumer Economics HDFS 4333 Families, Legislation, & Public Policy HDFS 4424 Teaching Methods in Ag & HS HS 4701 Internship Placement Seminar HS 4702 Research and Application in HS HDFS 4803 Parenting HDFS 4853 The Family: An Ecological Perspective HDFS 4883 Risk, Resilience, & Preventive Interventions Writing Competency met by: AELC 3203 Prof Writing ANR Hum Sci OR EDF 3413 Writing for Thinking OR EPY 3513 Writing for Behavioral Sciences OR MGT 3213 Organizational Communication	
Major Core Hours	29	Major Core Courses	29
Concentration Courses *HDFS 1813 Devel through Lifespan* HDFS 3000 Field Experience (3 hours) HDFS 3813 Lifespan Theory HDFS 4313 Family Resource Management HDFS 4403 Intro to Gerontology HDFS 4790 Family Science Internship (12		Concentration Courses HDFS 3000 Field Experience (3 hours) HDFS 3813 Lifespan Theory HDFS 4313 Family Resource Management HDFS 4403 Intro to Gerontology HDFS 4790 Family Science Internship (12 hours)	

hours) HDFS 4813 Adult Development: The Middle Years HDFS 4843 Family Interaction HDFS 4873 Positive Youth Development *HDFS 4883 Risk, Resilience, & Preventive Interventions* HS 3673 Environments for Special Needs COE 4013 Facilitative Skills Dev PSY 3413 Human Sexual Behavior PSY 4223 Drug Use and Abuse OR SW 4533 Substance Abuse and Addictions in Social Work Services CO 1003 Fundamentals of Public Speaking OR CO 1013 Introduction to Communication Computer Literacy (3 hours) satisfied by *TKT 1273 Computer Applications OR BIS 1012* *5* hours electives		HDFS 4813 Adult Development: The Middle Years HDFS 4843 Family Interaction HDFS 4873 Positive Youth Development HS 3673 Environments for Special Needs COE 4013 Facilitative Skills Dev PSY 3413 Human Sexual Behavior PSY 4223 Drug Use and Abuse OR SW 4533 Substance Abuse and Addictions in Social Work Services CO 1003 Fundamentals of Public Speaking OR CO 1013 Introduction to Communication Computer Literacy (3 hours) satisfied by **technology requirements in major core courses** **8** hours electives	
Concentration Hours	59	Concentration Hours	59
Total Hours	124	Total Hours	124

CURRENT Degree Description	PROPOSED Degree Description
Degree: Human Development and Family Science Major: Human Development and Family Science Concentration: Family and Consumer Sciences Teacher Education	Degree: Human Development and Family Science Major: Human Development and Family Science Concentration: Family and Consumer Sciences Teacher Education
This program offers an interdisciplinary lifespan approach to the study of children, youth, and families. It encompasses specialty areas in preschool teaching, childcare, youth development, family science, child life, and family and consumer sciences teacher education. Students develop an awareness of trends, issues and public policy affecting families and analyze factors that influence cognitive, emotional, social, and physical development in the contexts of culture and family. Graduates enter diverse public, non-profit, and private sectors that focus on enabling children, youth, and families to function effectively in today's complex society. Specific course work is required to specialize in each area or meet Class A teacher licensure requirements for family and consumer sciences in the state of Mississippi. Specific course work is also required to specialize in preschool education, youth development, or Family Science. A grade of "C" or better is required for all major courses (Human Development and Family Science courses).	This program offers an interdisciplinary lifespan approach to the study of children, youth, and families. It encompasses specialty areas in preschool teaching, childcare, youth development, family science, child life, and family and consumer sciences teacher education. Students develop an awareness of trends, issues and public policy affecting families and analyze factors that influence cognitive, emotional, social, and physical development in the contexts of culture and family. Graduates enter diverse public, non-profit, and private sectors that focus on enabling children, youth, and families to function effectively in today's complex society. Specific course work is required to specialize in each area or meet Class A teacher licensure requirements for family and consumer sciences in the state of Mississippi. Specific course work is also required to specialize in preschool education, youth development, or Family Science. A grade of "C" or better is required for all major courses (Human Development and Family Science courses).

The Family and Consumer Sciences teacher education program at Mississippi State University is NCATE accredited. Students must conform to the policies on teacher education, as explained under "Teacher Licensure" elsewhere in this catalog. Following is a list of courses taught in selected Mississippi high schools and vo-tech centers: family dynamics, resource management, nutrition and wellness, family and individual health, personal development, and child development. Family and Consumer Sciences teachers can also teach in high school Occupational Programs (such as food production, childcare, and clothing production). Some additional on-the-job training is required to teach these courses. Completion of a Bachelor of Science in Human Development and Family Science (Family and Consumer Sciences Education emphasis) degree from the School of Human Sciences at Mississippi State University leads to licensure to teach these courses.		The Family and Consumer Sciences teacher education program at Mississippi State University is NCATE accredited. Students must conform to the policies on teacher education, as explained under "Teacher Licensure" elsewhere in this catalog. Following is a list of courses taught in selected Mississippi high schools and vo-tech centers: family dynamics, resource management, nutrition and wellness, family and individual health, personal development, and child development. Family and Consumer Sciences teachers can also teach in high school Occupational Programs (such as food production, childcare, and clothing production). Some additional on-the-job training is required to teach these courses. Completion of a Bachelor of Science in Human Development and Family Science (Family and Consumer Sciences Education emphasis) degree from the School of Human Sciences at Mississippi State University leads to licensure to teach these courses.	
CURRENT CURRICULUM OUTLINE	Required Hours	**PROPOSED CURRICULUM OUTLINE**	Required Hours
EN 1103 English Comp I EN 1113 English Comp II	6	EN 1103 English Comp I EN 1113 English Comp II	6
Fine Arts (General Education):	3	Fine Arts (General Education):	3
Natural Sciences (2 labs required from Gen Ed) *BIO 1004 Anatomy & Physiology (with lab) required for Concentration*	9	Natural Sciences (2 labs required from Gen Ed)	9
Extra Science (if appropriate) HS 2293 Individual and Family Nutrition required for FCS Education Select from Gen Ed courses for Child Development, Youth Development, and Family Science		Extra Science (if appropriate) HS 2293 Individual and Family Nutrition required for FCS Education Select from Gen Ed courses for Child Development, Youth Development, and Family Science	
Math (General Education):	6	Math (General Education):	6
Humanities (General Education):	6	Humanities (General Education):	6
Social/Behavioral Sciences (Gen Ed): *HDFS 1813 Indiv and Family Dev through the Lifespan is required for FCS Education* PSY 3543 Psychology of Adolescence required for FCS Education	6	Social/Behavioral Sciences (Gen Ed): **HDFS 1813 Devel through Lifespan is required for all HDFS students** EPY 3543 Psychology of Adolescence is required for FCS Education	6
General Education Hours	36	General Education Hours	36

Major Core Courses HS 1701 Survey of Human Sciences HDFS 2813 Child Development HDFS 3303 Consumer Economics HDFS 4333 Families, Legislation, & Public Policy HDFS 4424 Teaching Methods in Ag & HS HS 4701 Internship Placement Seminar HS 4702 Research and Application in HS HDFS 4803 Parenting HDFS 4853 The Family: An Ecological Perspective HDFS 4883 Risk, Resilience, & Preventive Interventions Writing Competency met by: AELC 3203 Prof Writing ANR Hum Sci OR EDF 3413 Writing for Thinking OR EPY 3513 Writing for Behavioral Sciences OR MGT 3213 Organizational Communication		Major Core Courses HS 1701 Survey of Human Sciences HDFS 2813 Child Development HDFS 3303 Consumer Economics HDFS 4333 Families, Legislation, & Public Policy HDFS 4424 Teaching Methods in Ag & HS HS 4701 Internship Placement Seminar HS 4702 Research and Application in HS HDFS 4803 Parenting HDFS 4853 The Family: An Ecological Perspective HDFS 4883 Risk, Resilience, & Preventive Interventions Writing Competency met by: AELC 3203 Prof Writing ANR Hum Sci OR EDF 3413 Writing for Thinking OR EPY 3513 Writing for Behavioral Sciences OR MGT 3213 Organizational Communication	
Major Core Hours	29	Major Core Hours	29

Concentration Courses EDF 3333 Social Foundations of Education EDF 4243 Planning for Diversity of Learners EDS 3411 Practicum in Secondary Ed EDS 4873 Seminar in Managing Secondary Class EDX 3213 Psych & Ed of Excep Child & Youth EPY 3143 Human Dev & Learning Strategies in Ed EPY 3253 Evaluating Learning FDM 1533 Apparel Design I HDFS 2803 Prenatal and Infant Development HDFS 3000 Field Experience (1 hour) HDFS 4313 Family Resource Management HDFS 4462 Curriculum in Human Sciences HDFS 4886 Teaching Internship in Vocat. Human Sci. HDFS 4896 Teaching Internship in Vocat. Human Sci HS 2203 Science of Food Preparation HS 2283 Child Health and Nutrition HS 2603 Interior Design Fundamentals KI 1803 Health Trends and Topics PSY 3413 Human Sexual Behavior Computer Literacy *(3 hours)* satisfied by *successful completion of HS 3303* 1 hour elective		Concentration Courses EDF 3333 Social Foundations of Education EDF 4243 Planning for Diversity of Learners EDS 3411 Practicum in Secondary Ed EDS 4873 Seminar in Managing Secondary Class EDX 3213 Psych & Ed of Excep Child & Youth EPY 3143 Human Dev & Learning Strategies in Ed EPY 3253 Evaluating Learning FDM 1533 Apparel Design I HDFS 2803 Prenatal and Infant Development HDFS 3000 Field Experience (1 hour) HDFS 4313 Family Resource Management HDFS 4462 Curriculum in Human Sciences HDFS 4886 Teaching Internship in Vocat. Human Sci. HDFS 4896 Teaching Internship in Vocat. Human Sci HS 2203 Science of Food Preparation HS 2283 Child Health and Nutrition HS 2603 Interior Design Fundamentals KI 1803 Health Trends and Topics PSY 3413 Human Sexual Behavior Computer Literacy satisfied by **technology requirements in major core courses** 1 hour elective	
Concentration Hours	59	Concentration Hours	59
Total Hours	124	Total Hours	124

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 Business **Department:** Distance Learning

Contact Person: Dr. Kevin Rogers **Mail Stop:** 9588
E-mail: kevin.rogers@msstate.edu

Nature of Change: Approval of an existing Minor in Business Administration for non-business majors to be offered through Distance Education (Campus 5)

Date Initiated: 1/28/2020 **Effective Date:** Summer 2020

Current Degree Program Name: Minor in Business Administration

Major: n/a **Concentration:** n/a

New Degree Program Name: Minor in Business Administration (no change)

Major: n/a **Concentration:** n/a

Summary of Proposed Changes:

1) The required twelve hours that must be taken at the MSU main campus in Starkville will be amended to allow for those minimum twelve hours to be completed online, as well.
2) The minor in business administration will now be offered both to on-campus non-business majors and online non-business majors
3) Total hours needed to complete the minor are now 21 rather than 21 or 22.

Approved:	Date:
Ken Rogers Department Head	1/29/20
Jane Mark Chair, College or School Curriculum Committee	2/19/20
Ken Rogers Dean of College or School	2/19/20
Chair, University Committee on Courses and Curricula	
Chair, Graduate Council (if applicable)	
Chair, Deans Council	

MINOR MODIFICATION PROPOSAL

Proposal for Approval of an Existing Minor to be offered through Distance Education (Campus 5)
Minor in Business Administration for Non-Business Majors

New information is written in **bold**

CURRENT Minor Description	PROPOSED Minor Description
Degree: Minor in Business Administration	Degree: Minor in Business Administration
Catalog Description: A minor in Business Administration will help non-business students prepare for entrance into the world of business. Students will become familiar with basic concepts and techniques necessary for analyzing business environments, making sound business decisions and planning one's career.	Catalog Description: A minor in Business Administration will help non-business students prepare for entrance into the world of business. Students will become familiar with basic concepts and techniques necessary for analyzing business environments, making sound business decisions and planning one's career.
Requirements: 1. Twelve (12) hours must be taken at the MSU main campus in Starkville. 2. You must meet the required 2.50 MSU AND Overall GPA. Only one D is accepted in the minor courses. 3. Complete the Request to Add a Minor in the COB Academic Advising Center (106 McCool Hall) or online - www.business.msstate.edu/curstu/undergrad/advising/mi nors/index.php 4. Follow the course requirements and pre-requisites. No course substitutions are allowed. 5. COB enforces pre-requisites due to its prestigious AACSB accreditation. Consider pre-requisites when choosing a minor course. 6. In order to ensure recognition for a minor, include the minor on the application for your degree. The minor and major must be declared simultaneously. 7. The minor will be recorded on the transcript but does not appear on the diploma.	Requirements: 1. Twelve (12) hours must be taken at the MSU main campus in Starkville **or via MSU's online course delivery module.** 2. You must meet the required 2.50 MSU AND Overall GPA. Only one D is accepted in the minor courses. 3. Complete the Request to Add a Minor in the COB Academic Advising Center (106 McCool Hall) or online - www.business.msstate.edu/curstu/undergrad/advising/minors/index.php 4. Follow the course requirements and pre-requisites. No course substitutions are allowed. 5. COB enforces pre-requisites due to its prestigious AACSB accreditation. Consider pre-requisites when choosing a minor course. 6. In order to ensure recognition for a minor, include the minor on the application for your degree. The minor and major must be declared simultaneously. 7. The minor will be recorded on the transcript but does not appear on the diploma.

CURRENT CURRICULUM OUTLINE Choose Any 7 of the following, totaling 21/*22* hours	Required Hours	PROPOSED CURRICULUM OUTLINE Choose Any 7 of the following, totaling **21** hours	Required Hours
BL 2413 Legal Environment of Business	3	BL 2413 Legal Environment of Business	3
ACC 2013 Financial Accounting	3	ACC 2013 Financial Accounting	3
ACC 2023 Managerial Accounting	3	ACC 2023 Managerial Accounting	3
EC 2113 Macroeconomics	3	EC 2113 Macroeconomics	3
EC 2123 Microeconomics	3	EC 2123 Microeconomics	3
FIN 3123 Financial Management	3	FIN 3123 Financial Management	3
MKT 3013 Principles of Marketing	3	MKT 3013 Principles of Marketing	3
MGT 311*4* Principles of Management	*4*	MGT 311**3** Principles of Management	**3**
BIS 3233 Management Information Systems	3	BIS 3233 Management Information Systems	3
BQA 2113 Business Statistical Methods I	3	BQA 2113 Business Statistical Methods I	3
BQA 3123 Business Statistical Methods II	3	BQA 3123 Business Statistical Methods II	3

Total Required Hours	21/22	Total Required Hours	**21**

3. JUSTIFICATION FOR DISTANCE LEARNING OFFERING

The College of Business currently offers a minor in business administration for non-business majors. The minor requires the completion of seven business courses, totaling 21 credit hours of coursework. All of the business courses that are available to choose from to meet this requirement are offered both via the Starkville campus and online as part of our online Bachelor of Business Administration program. We have heard from online students who are interested in adding a business minor to their program of study but are unable to do so due to all business minors currently being limited to on-campus students. It is the summation of the College of Business that since all of the required courses for the minor in Business Administration are already being offered online that online students should be able to pursue this minor as a supplement to their already declared online major degree program.

In addition, the total number of hours for the minor was 21-22 since one of the options was MGT 3114. Since that course has recently been modified to the three hour MGT 3113, the minor is now exactly 21 hours.

4. TARGET AUDIENCE

Students enrolled in online degree programs who wish to broaden their education as well as expand their competitiveness in the job market with a minor in business. The addition of this minor to our online program offerings will allow these students to achieve this goal without having to enroll as on-campus students in addition to their online pursuits.

5. LEARNING OUTCOMES (no change from current minor)

Upon completion of the minor in Business Administration students will be able to:

- Understand basic concepts and terminology of business
- Employ basic analytical techniques and apply them toward business decision making
- Satisfy course prerequisites for the MBA program

6. EFFECTIVE DATE

Summer 2020

7. CONTACT PERSON

Dr. Kevin Rogers, Associate Dean of the College of Business
Phone: 662-325-1982
Email: kevin.rogers@msstate.edu

8. SUPPORT

A letter of support is provided by the College of Business Curriculum Committee.

MISSISSIPPI STATE UNIVERSITY

COLLEGE OF BUSINESS
Office of the Dean

P.O. Box 5288
114 McCool Hall
Mississippi State, MS 39762

P. 662.325.2580
F. 662.325.2410
www.business.msstate.edu

Date: February 19, 2020

To: University Committee on Courses and Curricula

From: College of Business Curriculum Committee

Subject: Letter of Support for Business Administration minor

We support the proposed changes to the Business Administration minor.

Signed:

Randall Campbell, Professor of Economics

Laura Marler, Associate Professor of Management

Rob Moore, Professor of Marketing

see attached

Yingge Qu, Assistant Professor of Marketing

Brad Trinkle, Associate Professor of Accounting

Rogers, Kevin

From: Qu, Yingge
Sent: Friday, February 21, 2020 10:39 AM
To: Rogers, Kevin
Subject: RE: curriculum committee - minor proposal support

Hello, Dr. Roger,

I support the proposed changes of BA minor. Thank you for the confirmation.

Yingge

From: Rogers, Kevin <KRogers@business.msstate.edu>
Sent: Friday, February 21, 2020 10:11 AM
To: Qu, Yingge <yqu@meridian.msstate.edu>
Subject: curriculum committee - minor proposal support

Yingge,
When we approved the changes to the Business Administration minor at our meeting Wednesday, I forgot about the letter of support that needs to go with the proposal. Can you please reply and confirm your support of this proposed change and I will then include that with our documents?
Thanks,
Kevin

Kevin Rogers
Paul and Mary Jo Karre Associate Dean
Professor of Economics
Mississippi State University
PO Box 5288
Mississippi State, MS 39762
kevin.rogers@msstate.edu
662-325-2580

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 or School: Education **Department:** Instructional Systems & Workforce Development

Contact Person: Chien Yu **Phone:** 325-7260 **E-mail:** cyu@colled.msstate.edu

Nature of Change: Degree Modification

Date Initiated: 10/30/19 **Effective Date:** Upon approval

Current Degree Program Name: Ph.D. in Instructional Systems & Workforce Development

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

New Degree Program Name: N/A

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

Summary of Proposed Changes:

We are requesting to modify the research requirements:

- Adding EPY 6214 Educational and Psychological Statistics to the Research requirement.
- Removing a list of research course options for selection.
- Specifying the research courses as requirement.
- Prefix change from TKT to TECH

Approved: **Date:**

Department Head — 11/14/19

Chair, College or School Curriculum Committee — 2/11/20

Dean of College or School — 2/11/20

Chair, University Committee on Courses and Curricula

Chair, Graduate Council (if applicable)

Chair, Deans Council

Proposal to modify Doctor of Philosophy in Instructional Systems and Workforce Development

1. CATALOG DESCRIPTION
   See the attached table

2. CURRICULUM OUTLINE
   See the attached table.

3. JUSTIFICATION AND STUDENT LEARNING OUTCOMES
   For this proposed modification, students will be required to take 14 hours of EPY and EDF research and statistics courses, and two research courses directly related to research methods and practices in Instructional Systems and Workforce Development (a total of 20 hours). The faculty support these changes that will allow students to carefully develop their program of study for their research agenda and enhance the doctoral program and experience to achieve their career goals in the field.

4. SUPPORT
   Letter of support from graduate program faculty is attached.

5. PROPOSED 4-LETTER ABBREVIATION
   No Change

6. EFFECTIVE DATE
   The effective date for this change is Summer 2020.

GRADUATE DEGREE MODIFICATION OUTLINE FORM

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

CURRENT Degree Description	PROPOSED Degree Description
Degree: Ph.D. Major: Instructional Systems & Workforce Development Concentrations: N/A	Degree: Ph.D. Major: Instructional Systems & Workforce Development Concentrations: N/A
The Doctor of Philosophy in Instructional Systems and Workforce Development (ISWD) is located within the College of Education and is designed to provide students with knowledge of instructional technology, research design methodologies to conduct research, foundations of education, and postsecondary education. Each student is assigned a major professor and a committee. A formal program of study is developed by the student with the advice and concurrence of the student's major professor and other committee members no later than the student's second semester of enrollment. A minimum of 90 semester hours of post-baccalaureate credit is necessary to meet the ISWD doctoral degree. In order for the program to reflect students' content areas in research and foundation levels, students *must* take two required research and statistics courses and two required foundations courses from the Department of Instructional Systems and Workforce Development (ISWD). The hours taken in these required classes will serve to meet the requirements for Research, Foundations, and Postsecondary and will not be reflective of the 24-30 hours needed to complete the Technology requirements. Two-thirds or more of the hours on the doctoral program of study, exclusive of dissertation credits, must be in 8000-9000 level courses or their equivalent. Approved 7000 Directed Individual Study courses count toward this requirement. Ordinarily no more than 6 semester hours of graduate credit earned in DIS courses or 6 semester hours of special problem courses may be included on the student's approved program of study. No more than 9 semester hours of a combination of DIS and special problem courses may be included on the student's approved program of study. Twenty hours of dissertation research, written and oral preliminary examinations, a dissertation, and an oral examination in defense of the dissertation are required. *Research and Statistics Requirement. ..... 19 hours* Foundation Courses ..... 6 hours Postsecondary .....3 hours Approved Technology Electives* ..... 24-30 hours Approved Free Electives .....12-18 hours Dissertation..... 20 hours	The Doctor of Philosophy in Instructional Systems and Workforce Development (ISWD) is located within the College of Education and is designed to provide students with knowledge of instructional technology, research design methodologies to conduct research, foundations of education, and postsecondary education. Each student is assigned a major professor and a committee. A formal program of study is developed by the student with the advice and concurrence of the student's major professor and other committee members no later than the student's second semester of enrollment. A minimum of 90 semester hours of post-baccalaureate credit is necessary to meet the ISWD doctoral degree. In order for the program to reflect students' content areas in research and foundation levels, students **are required to** take two required research and statistics courses and two required foundations courses from the Department of Instructional Systems and Workforce Development (ISWD). The hours taken in these required classes will serve to meet the requirements for Research, Foundations, and Postsecondary and will not be reflective of the 24-30 hours needed to complete the Technology requirements. Two-thirds or more of the hours on the doctoral program of study, exclusive of dissertation credits, must be in 8000-9000 level courses or their equivalent. Approved 7000 Directed Individual Study courses count toward this requirement. Ordinarily no more than 6 semester hours of graduate credit earned in DIS courses or 6 semester hours of special problem courses may be included on the student's approved program of study. No more than 9 semester hours of a combination of DIS and special problem courses may be included on the student's approved program of study. Twenty hours of dissertation research, written and oral preliminary examinations, a dissertation, and an oral examination in defense of the dissertation are required. **Research and Statistics Requirement. ..... 20 hours** Foundation Courses ..... 6 hours Postsecondary .....3 hours Approved Technology Electives* ..... 24-30 hours Approved Free Electives .....12-18 hours Dissertation..... 20 hours

*A technology elective is any 6000, 7000, 8000 or 9000-level course with a *TKB/TKI/TKT prefix* that is not included in the required courses. If a student takes more than the required number of courses in research, foundations, or postsecondary, those courses will be classified as an approved free elective. Minor courses are optional. All department requirements must be completed, and all College of Education requirement courses must be completed to satisfy degree requirements prior to graduation.	*A technology elective is any 6000, 7000, 8000 or 9000-level course with a **TECH/TKT prefix** that is not included in the required courses. If a student takes more than the required number of courses in research, foundations, or postsecondary, those courses will be classified as an approved free elective. Minor courses are optional. All department requirements must be completed, and all College of Education requirement courses must be completed to satisfy degree requirements prior to graduation.

CURRENT CURRICULUM OUTLINE	Required Hours	PROPOSED CURRICULUM OUTLINE	Required Hours
College Required Courses **EPY 8214 Advanced Educational and Psychological statistics.....4 hours *Select <u>three</u> from the following:* *EPY 9213 Advanced Analysis of Educational Research.....3 hours* EDF 9373 Educational Research Design.....3 hours *EPY 9263 Applied Research Seminar.....3 hours* *EDF 9443 Single-Subject Research Design for Education.....3 hours* EDF 9453 Introduction to Qualitative Research in Education.....3 hours *EDF 9463 Qualitative Data Collection.....3 hours* *EDF 9473 Qualitative Data Analysis.....3 hours* ** Prerequisite for this class is EPY 6214 Educational and Psychological Statistics or equivalent prerequisite. *This prerequisite does not count toward the 90 hours for the Ph.D.*	13	College Required Courses **EPY 6214 Educational and Psychological Statistics.....4 hours** **EPY 8214 Advanced Educational and Psychological statistics.....4 hours EDF 9373 Educational Research Design.....3 hours EDF 9453 Introduction to Qualitative Research in Education.....3 hours ** Prerequisite for this class is EPY 6214 Educational and Psychological Statistics or equivalent prerequisite.	**14**
TKT 8243 Research Problems in Technology and Workforce Development.....3 hours *TKT 8713 Research in Instructional Systems and Workforce Development.....3 hours*	6	**TECH 8243 Research Problems in Technology and Workforce Development.....3 hours** **TECH 8713 Research in Instructional Systems and Workforce Development.....3 hours**	6
Foundation Courses: Select any <u>two</u> of the following: *TKT 9213 Foundation of Workforce/Technology Education and Adult Learning Theories.....3 hours*	6	Foundation Courses: Select any <u>two</u> of the following: **TECH 9213 Foundation of Workforce/Technology Education and Adult Learning Theories.....3 hours**	6

TKT 8273 Contemporary Issues in Curriculum Planning m ISWD....3 hours *TKT 6263 Issues of Diversity in Work and Educational Environments.....3 hours* Postsecondary Courses: Select one of the following: *TKT 8263 Philosophy and Administration of Teaching Career and Technical Education.....3 hours* *TKT 8213 Content and Methods of Teaching Career and Technical Education.....3 hours* *TKT 8233 Analysis of Workforce Programs and Survey Research....3 hours* Approved Technology Electives.....24-30 hours Approved Free Electives.....12-18 hours Dissertation: *TKT 9000 Dissertation Research.* Hours and credits to be arranged; minimum of 20 hours required for degree.	3 24-30 12-18 20	**TECH 8273 Contemporary Issues in Curriculum Planning m ISWD.3 hours** **TECH 6263 Issues of Diversity in Work and Educational Environments.3 hours** Postsecondary Courses: Select one of the following: **TECH 8263 Philosophy and Administration of Teaching Career and Technical Education.....3 hours** **TECH 8213 Content and Methods of Teaching Career and Technical Education.....3 hours** **TECH 8233 Analysis of Workforce Programs and Survey Research.3 hours** Approved Technology Electives.....24-30 hours Approved Free Electives.....12-18 hours Dissertation: **TECH 9000 Dissertation Research.** Hours and credits to be arranged; minimum of 20 hours required for degree.	3 24-30 12-18 20
Concentration 1. N/A		Concentration 1. N/A	
Concentration 2. N/A		Concentration 2. N/A	
Total Hours	90	Total Hours	90

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

To: Box Council and UCCC

From: Dr. Chien Yu, Graduate Program Coordinator

Date: October 30, 2019

Subject: Support of Proposal to Modify the Doctor of Philosophy in Instructional Systems and Workforce Development

The graduate faculty members in the Department of Instructional Systems and Workforce Development support the recommendations stated in this degree modification proposal.

Dr. James Adams	11/5/19 Date
Dr. Joanne Beriswill	11/14/19 Date
Dr. Pamela Bracey	11/13/19 Date
Dr. Gregory Francom	11/12/19 Date
Dr. Sang Joon Lee	11/13/2019 Date
Dr. Mabel CPO Okojie	11/12/2019 Date
Dr. Swapnil Patole	11/12/19 Date
Dr. Yan Sun	11/12/2019 Date
Dr. John Wyatt	11/14/19 Date
Dr. Wei-Chieh Wayne Yu	11/11/2019 Date
Dr. Chien Yu	10/30/2019 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, along with all required copies, to UCCC, Garner Hall, Room 279, Mail Stop 9702.

College or School: Education **Department:** Instructional Systems & Workforce Development

Contact Person: Chien Yu **Phone:** 325-7260 **E-mail:** cyu@colled.msstate.edu

Nature of Change: Distance Approval **Date Initiated:** 10/30/19 **Effective Date:** Summer 2020

Current Degree Program Name: Ph.D. in Instructional Systems and Workforce Development

Major: **Concentration:** N/A

Summary of Proposed Changes:

We are requesting that the Ph.D. in Instructional Systems and Workforce Development degree be approved as an online degree.

Approved:	*Date:*
Department Head	11-14-19
Chair, College or School Curriculum Committee	2/11/20
Dean of College or School	2/11/20
Chair, University Committee on Courses and Curricula	
Chair, Graduate Council (if applicable)	
Chair, Deans Council	

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

Institution:

Date of Initial Program Approval:	Date of Implementation:	Cost of Implementation:
10/30/2019	Upon Approval	Minimal

Program Title as Appears on Academic Program Inventory, Diploma, and Transcript:	Six Digit CIP Code:
Ph.D. in Instructional Systems & Workforce Development	131303

Degree(s) to be Awarded:	Credit Hour Requirements:
Ph.D.	90 Hours (after BA)

Percentage of Program Completed by Distance Learning:	Percentage of Program Requiring Campus Visit:
100%	0%

Will students be allowed to mix on-campus and distance learning courses within this program?	Yes
Will this program require separate admission from those offered on-campus?	Yes
Will this program have different fees or tuition rates from those offered on-campus?	Yes

Responsible Academic Unit(s):	Institutional Contact:
Instructional Systems and Workforce Development	Dr. Chien Yu, Graduate Coordinator

Number of Students Expected to Enroll in First Six Years:		Number of Graduates Expected in First Six Years:	
Year One	3	Year One	0
Year Two	5	Year Two	0
Year Three	5	Year Three	0
Year Four	5	Year Four	3
Year Five	6	Year Five	5
Year Six	6	Year Six	7
Total	30	Total	15

Program Summary:

The Ph.D. degree requires 90 credit hours of coursework above the baccalaureate degree. Students are required to meet the content area in Research, Foundations, and Postsecondary, and 24-30 hours in Technology, in addition to 12-18 hours of general electives. Two-thirds or more of the hours on the doctoral program of study, exclusive of dissertation credits, must be in 8000-9000 level courses or their equivalent. Twenty hours of dissertation research, written and oral preliminary examinations, a dissertation, and an oral examination in defense of the dissertation are required. Distance fees may apply.

Institutional Executive Officer Signature _____ Date _____

DEGREE APPROVAL FOR DISTANCE EDUCATION (Campus 5)

PROPOSAL

Ph.D. degree in Instructional Systems and Workforce Development

1. CATALOG DESCRIPTION

Current Bulletin:

The Doctor of Philosophy in Instructional Systems and Workforce Development (ISWD) is located within the College of Education and is designed to provide students with knowledge of instructional technology, research design methodologies to conduct research, foundations of education, and postsecondary education.

Each student is assigned a major professor and a committee. A formal program of study is developed by the student with the advice and concurrence of the student's major professor and other committee members no later than the student's second semester of enrollment.

A minimum of 90 semester hours of post-baccalaureate credit is necessary to meet the ISWD doctoral degree. In order for the program to reflect students' content areas in research and foundation levels, students are required to take two required research and statistics courses and two required foundations courses from the Department of Instructional Systems and Workforce Development (ISWD). The hours taken in these required classes will serve to meet the requirements for Research, Foundations, and Postsecondary and will not be reflective of the 24-30 hours needed to complete the Technology requirements. Two-thirds or more of the hours on the doctoral program of study, exclusive of dissertation credits, must be in 8000-9000 level courses or their equivalent. Approved 7000 Directed Individual Study courses count toward this requirement. Ordinarily no more than 6 semester hours of graduate credit earned in DIS courses or 6 semester hours of special problem courses may be included on the student's approved program of study. No more than 9 semester hours of a combination of DIS and special problem courses may be included on the student's approved program of study. Twenty hours of dissertation research, written and oral preliminary examinations, a dissertation, and an oral examination in defense of the dissertation are required.

Research and Statistics Requirement. ..... 20 hours
Foundation Courses ..... 6 hours
Postsecondary .....3 hours
Approved Technology Electives* ..... 24-30 hours
Approved Free Electives .....12-18 hours
Dissertation..... 20 hours

*A technology elective is any 6000, 7000, 8000 or 9000-level course with a TECH/TKT prefix that is not included in the required courses. If a student takes more than the required number of courses in research, foundations, or postsecondary, those courses will be classified as an approved free elective.

Minor courses are optional. All department requirements must be completed, and all College of Education requirement courses must be completed to satisfy degree requirements prior to graduation.

Proposed in Campus 5 Degree:

The Doctor of Philosophy in Instructional Systems and Workforce Development (ISWD) is located within the College of Education and is designed to provide students with knowledge of instructional technology, research design methodologies to conduct research, foundations of education, and postsecondary education.

Each student is assigned a major professor and a committee. A formal program of study is developed by the student with the advice and concurrence of the student's major professor and other committee members no later than the student's second semester of enrollment.

A minimum of 90 semester hours of post-baccalaureate credit is necessary to meet the ISWD doctoral degree. In order for the program to reflect students' content areas in research and foundation levels, students are required to take two required research and statistics courses and two required foundations courses from the Department of Instructional Systems and Workforce Development (ISWD). The hours taken in these required classes will serve to meet the requirements for Research, Foundations, and Postsecondary and will not be reflective of the 24-30 hours needed to complete the Technology requirements. Two-thirds or more of the hours on the doctoral program of study, exclusive of dissertation credits, must be in 8000-9000 level courses or their equivalent. Approved 7000 Directed Individual Study courses count toward this requirement. Ordinarily no more than 6 semester hours of graduate credit earned in DIS courses or 6 semester hours of special problem courses may be included on the student's approved program of study. No more than 9 semester hours of a combination of DIS and special problem courses may be included on the student's approved program of study. Twenty hours of dissertation research, written and oral preliminary examinations, a dissertation, and an oral examination in defense of the dissertation are required.

Research and Statistics Requirement. ..... 20 hours
Foundation Courses ..... 6 hours
Postsecondary .....3 hours
Approved Technology Electives* ..... 24-30 hours
Approved Free Electives .....12-18 hours
Dissertation..... 20 hours

*A technology elective is any 6000, 7000, 8000 or 9000-level course with a TECH/TKT prefix that is not included in the required courses. If a student takes more than the required number of courses in research, foundations, or postsecondary, those courses will be classified as an approved free elective.

Minor courses are optional. All department requirements must be completed, and all College of Education requirement courses must be completed to satisfy degree requirements prior to graduation.

2. CURRICULUM OUTLINE

CURRENT **Campus 1** Degree Description	PROPOSED **Campus 5** Degree Description
Degree: Ph.D. Major: Instructional Systems & Workforce Development Concentrations: N/A	Degree: Ph.D. Major: Instructional Systems & Workforce Development Concentrations: N/A
The Doctor of Philosophy in Instructional Systems and Workforce Development (ISWD) is located within the College of Education and is designed to provide students with knowledge of instructional technology, research	The Doctor of Philosophy in Instructional Systems and Workforce Development (ISWD) is located within the College of Education and is designed to provide students with knowledge of instructional technology, research

design methodologies to conduct research, foundations of education, and postsecondary education. Each student is assigned a major professor and a committee. A formal program of study is developed by the student with the advice and concurrence of the student's major professor and other committee members no later than the student's second semester of enrollment. A minimum of 90 semester hours of post-baccalaureate credit is necessary to meet the ISWD doctoral degree. In order for the program to reflect students' content areas in research and foundation levels, students are required to take two required research and statistics courses and two required foundations courses from the Department of Instructional Systems and Workforce Development (ISWD). The hours taken in these required classes will serve to meet the requirements for Research, Foundations, and Postsecondary and will not be reflective of the 24-30 hours needed to complete the Technology requirements. Two-thirds or more of the hours on the doctoral program of study, exclusive of dissertation credits, must be in 8000-9000 level courses or their equivalent. Approved 7000 Directed Individual Study courses count toward this requirement. Ordinarily no more than 6 semester hours of graduate credit earned in DIS courses or 6 semester hours of special problem courses may be included on the student's approved program of study. No more than 9 semester hours of a combination of DIS and special problem courses may be included on the student's approved program of study. Twenty hours of dissertation research, written and oral preliminary examinations, a dissertation, and an oral examination in defense of the dissertation are required. Research and Statistics Requirement. ..... 20 hours Foundation Courses ..... 6 hours Postsecondary .....3 hours Approved Technology Electives* ..... 24-30 hours Approved Free Electives .....12-18 hours Dissertation..... 20 hours *A technology elective is any 6000, 7000, 8000 or 9000-level course with a TECH/TKT prefix that is not included in the required courses. If a student takes more than the required number of courses in research, foundations, or postsecondary, those courses will be classified as an approved free elective. Minor courses are optional. All department requirements must be completed, and all College of Education requirement courses must be completed to satisfy degree requirements prior to graduation.	design methodologies to conduct research, foundations of education, and postsecondary education. Each student is assigned a major professor and a committee. A formal program of study is developed by the student with the advice and concurrence of the student's major professor and other committee members no later than the student's second semester of enrollment. A minimum of 90 semester hours of post-baccalaureate credit is necessary to meet the ISWD doctoral degree. In order for the program to reflect students' content areas in research and foundation levels, students are required to take two required research and statistics courses and two required foundations courses from the Department of Instructional Systems and Workforce Development (ISWD). The hours taken in these required classes will serve to meet the requirements for Research, Foundations, and Postsecondary and will not be reflective of the 24-30 hours needed to complete the Technology requirements. Two-thirds or more of the hours on the doctoral program of study, exclusive of dissertation credits, must be in 8000-9000 level courses or their equivalent. Approved 7000 Directed Individual Study courses count toward this requirement. Ordinarily no more than 6 semester hours of graduate credit earned in DIS courses or 6 semester hours of special problem courses may be included on the student's approved program of study. No more than 9 semester hours of a combination of DIS and special problem courses may be included on the student's approved program of study. Twenty hours of dissertation research, written and oral preliminary examinations, a dissertation, and an oral examination in defense of the dissertation are required. Research and Statistics Requirement. ..... 20 hours Foundation Courses ..... 6 hours Postsecondary .....3 hours Approved Technology Electives* ..... 24-30 hours Approved Free Electives .....12-18 hours Dissertation..... 20 hours *A technology elective is any 6000, 7000, 8000 or 9000-level course with a TECH/TKT prefix that is not included in the required courses. If a student takes more than the required number of courses in research, foundations, or postsecondary, those courses will be classified as an approved free elective. Minor courses are optional. All department requirements must be completed, and all College of Education requirement courses must be completed to satisfy degree requirements prior to graduation.
Concentrations	Concentrations

N/A		N/A	
CURRENT CURRICULUM OUTLINE	Required Hours	**PROPOSED CURRICULUM OUTLINE**	Required Hours
College Required Courses EDF 9373 Educational Research Design.....3 hours EDF 9453 Introduction to Qualitative Research in Education.....3 hours EPY 6214 Educational and Psychological Statistics.....4 hours EPY 8214 Advanced Educational and Psychological statistics.....4 hours	14 Hour	College Required Courses EDF 9373 Educational Research Design.....3 hours EDF 9453 Introduction to Qualitative Research in Education.....3 hours EPY 6214 Educational and Psychological Statistics.....4 hours EPY 8214 Advanced Educational and Psychological statistics.....4 hours	14 Hour
TECH 8243 Research Problems in Technology and Workforce Development.....3 hours TECH 8713 Research in Instructional Systems and Workforce Development.....3 hours Foundation Courses: Select any <u>two</u> of the following: TECH 9213 Foundation of Workforce/Technology Education and Adult Learning Theories.....3 hours TECH 8273 Contemporary Issues in Curriculum Planning m ISWD.....3 hours TECH 6263 Issues of Diversity in Work and Educational Environments.....3 hours Postsecondary Courses: Select <u>one</u> of the following: TECH 8263 Philosophy and Administration of Teaching Career and Technical Education.....3 hours TECH 8213 Content and Methods of Teaching Career and Technical Education.....3 hours TECH 8233 Analysis of Workforce Programs and Survey Research.3 hours	6 6 3 24-30	TECH 8243 Research Problems in Technology and Workforce Development.....3 hours TECH 8713 Research in Instructional Systems and Workforce Development.....3 hours Foundation Courses: Select any <u>two</u> of the following: TECH 9213 Foundation of Workforce/Technology Education and Adult Learning Theories.....3 hours TECH 8273 Contemporary Issues in Curriculum Planning m ISWD.....3 hours TECH 6263 Issues of Diversity in Work and Educational Environments.....3 hours Postsecondary Courses: Select <u>one</u> of the following: TECH 8263 Philosophy and Administration of Teaching Career and Technical Education.....3 hours TECH 8213 Content and Methods of Teaching Career and Technical Education.....3 hours TECH 8233 Analysis of Workforce Programs and Survey Research.3 hours Approved Technology Electives .....24-30 hours Approved Free Electives...12-18 hours	6 6 3 24-30

Approved Technology Electives .....24-30 hours Approved Free Electives…12-18 hours Dissertation: TECH 9000 Dissertation Research. Hours and credits to be arranged; minimum of 20 hours required for degree.	12-18 20	Dissertation: TECH 9000 Dissertation Research. Hours and credits to be arranged; minimum of 20 hours required for degree.	12-18 20
Concentration 1. N/A		Concentration 1. • N/A	
Concentration 2. N/A		Concentration 2. • N/A	
Total Hours	90 Hours	Total Hours	90 Hours

3. JUSTIFICATION FOR DISTANCE EDUCATION (CAMPUS 5) OFFERING

Instructional systems and technology is a growing area of study in the nation. Therefore, it is imperative that our students remain current in their field of specialization. There are several justifications for seeking approval to offer the Ph.D. degree as an online degree. First, through the years, the Department of Instructional Systems and Workforce Development (ISWD) and faculty have received many student inquires about the Ph.D. degree being offered as an online degree. These calls primarily come from non-traditional and distance students who are interested in the program, but who cannot physically enroll in face-to-face courses because of their full-time employment or other commitments. Also, it is necessary that the Ph.D. degree program remain comparable with similar programs offered in peer institutions. The addition of the online degree will make the Ph.D. degree program more competitive in terms of student recruitment and employment opportunities within the region and in the nation.

ACADEMIC MISCONDUCT

The following methods will be put in place to deter academic misconduct:

- MSU Honor Code will be discussed online and emphasized in class content.
- Exam questions will be randomly given by Canvas from the question database that is set up and saved.
- Students will be given time sensitive exams, so they have to complete the exams in a given time. If time expires, students cannot submit their answers any more. Also, new

questions will be added to the question database and /or revise to change the question set.
- Turnitin or similar programs will be used to deter and check for academic dishonesty.

TARGET AUDIENCE

The target audience will be those who are interested in pursuing a Ph.D. degree in instructional systems and workforce development, but who cannot drive to campus for the face-to-face classes because of their full-time employment or other commitments.

4. LEARNING OUTCOMES

The learning outcomes for Campus 1 and Campus 5 are identical and shown below:

- Students will demonstrate a high level of competency in the instructional design and technology core content.
- Students will demonstrate a high level of competency in workforce development.
- Students will demonstrate their knowledge and ability to apply best practices in a field-based work setting.

5. PROPOSAL SUBMISSION

IHL's *Report of Intent to Offer an Existing Degree Program by Distance Learning* form is attached.

6. EFFECTIVE DATE

Summer 2020

7. CONTACT PERSON

Chien Yu
Graduate Coordinator
662-325-7260
cyu@colled.msstate.edu

8. MASTER SCHEDULE

Summer 2020

9. SUPPORT

Letter of support is attached.

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: Ph.D. Major: Instructional Systems and Workforce Development Concentration 1: N/A Concentration 2: N/A
The Doctor of Philosophy in Instructional Systems and Workforce Development (ISWD) is located within the College of Education and is designed to provide students with knowledge of instructional technology, research design methodologies to conduct research, foundations of education, and postsecondary education. Each student is assigned a major professor and a committee. A formal program of study is developed by the student with the advice and concurrence of the student's major professor and other committee members no later than the student's second semester of enrollment. A minimum of 90 semester hours of post-baccalaureate credit is necessary to meet the ISWD doctoral degree. In order for the program to reflect students' content areas in research and foundation levels, students are required to take two required research and statistics courses and two required foundations courses from the Department of Instructional Systems and Workforce Development (ISWD). The hours taken in these required classes will serve to meet the requirements for Research, Foundations, and Postsecondary and will not be reflective of the 24-30 hours needed to complete the Technology requirements. Two-thirds or more of the hours on the doctoral program of study, exclusive of dissertation credits, must be in 8000-9000 level courses or their equivalent. Approved 7000 Directed Individual Study courses count toward this requirement. Ordinarily no more than 6 semester hours of graduate credit earned in DIS courses or 6 semester hours of special problem courses may be included on the student's approved program of study. No more than 9 semester hours of a combination of DIS and special problem courses may be included on the student's approved program of study. Twenty hours of dissertation research, written and oral preliminary examinations, a dissertation, and an oral examination in defense of the dissertation are required. Research and Statistics Requirement. ..... 20 hours Foundation Courses ..... 6 hours Postsecondary .....3 hours Approved Technology Electives* ..... 24-30 hours Approved Free Electives .....12-18 hours Dissertation..... 20 hours *A technology elective is any 6000, 7000, 8000 or 9000-level course with a TECH/TKT prefix that is not included in the required courses. If a student takes more than the required number of courses in research, foundations, or postsecondary, those courses will be classified as an approved free elective. Minor courses are optional. All department requirements must be completed, and all College of Education requirement courses must be completed to satisfy degree requirements prior to graduation.

Proposed Curriculum Outline	Required Hours
College Required Courses: RESEARCH EDF 9373 Educational Research Design.....3 hours EDF 9453 Introduction to Qualitative Research in Education.....3 hours EPY 6214 Educational and Psychological Statistics.....4 hours	14

EPY 8214 Advanced Educational and Psychological statistics.....4 hours	
TECH 8243 Research Problems in Technology and Workforce Development.....3 hours TECH 8713 Research in Instructional Systems and Workforce Development.....3 hours	6
FOUNDATION: Select any <u>two</u> of the following: TECH 9213 Foundation of Workforce/Technology Education and Adult Learning Theories.....3 hours TECH 8273 Contemporary Issues in Curricu1um Planning m ISWD...3 hours TECH 6263 Issues of Diversity in Work and Educational Environment.....3 hours	6
POSTSECONDARY: Select <u>one</u> of the following: TECH 8263 Philosophy and Administration of Teaching Career and Technical Education.....3 hours TECH 8213 Content and Methods of Teaching Career and Technical Education.....3 hours TECH 8233 Analysis of Workforce Programs and Survey Research....3 hours	3
APPROVED TECHNOLOGY ELECTIVES.....24-30 hours	24-30
APPROVED FREE ELECTIVES.....12-18 hours	12-18
DISSERTATION: TECH 9000 Dissertation Research. Hours and credits to be arranged; minimum of 20 hours required for degree.	20
Total Hours	90

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

To: Box Council and UCCC

From: Dr. Chien Yu, Graduate Program Coordinator

Date: November 15, 2019

Subject: Support of Proposal to Add the Doctor of Philosophy in Instructional Systems and Workforce Development (ISWD) Degree Online

The graduate faculty members in the Department of Instructional Systems and Workforce Development support to add the online Ph.D. degree as stated in the proposal.

Dr. James Adams	11/15/19 Date
Dr. Joanne Berkswill	11/18/19 Date
Dr. Pamela Bracey	11/19/19 Date
Dr. Gregory Francom	11/18/19 Date
Dr. Sang Joon Lee	11/18/2019 Date
Dr. Mabel CPO Okojie	11/20/2019 Date
Dr. Swapnil Patole	11/19/2019 Date
Dr. Yan Sun	11/19/2019 Date
Dr. John Wyatt	11/18/19 Date
Dr. Wei-Chieh Wayne Yu	11/19/19 Date
Dr. Chien Yu	11/19/2019 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: Engineering **Department:** Chemical Engineering

Contact Person: Neeraj Rai **Mail Stop:** 9595 **E-mail:** nr373@msstate.edu
Nature of Change: Distance Approval **Date Initiated:** 10/1/19 **Effective Date:** 8/16/20
Current Degree Program Name: Doctor of Philosophy

Major: Engineering **Concentration:** Chemical Engineering

Summary of Proposed Changes:

Award the degree via distance learning

Approved:	**Date:**
Department Head	1/24/2020
Chair, College or School Curriculum Committee	3/3/2020
Dean of College or School	3/4/2020
Chair, University Committee on Courses and Curricula	
Chair, Graduate Council(if applicable)	
Chair, Deans Council	

Degree Approval for Distance Learning (Existing Program)
PhD in Engineering, Chemical Engineering Concentration

1. CATALOG DESCRIPTION

Graduate study is offered in the Dave C. Swalm School of Chemical Engineering leading to the degree of Master of Science in Chemical Engineering. The School also cooperates in an interdisciplinary program leading to the degree of Doctor of Philosophy in Engineering with a concentration in Chemical Engineering. Prospective students are encouraged to visit the department's website (www.che.msstate.edu) to learn about faculty research interests and the graduate program.

Admission decisions are made by the graduate affairs committee (GAC) based on the applicant's academic transcripts, a personal essay (statement of purpose), research experience, letters of recommendation, and research interests. GRE scores are recommended but not required. International students must submit TOEFL/IELTS scores. Acceptable score ranges can be found in the graduate catalog. Applicants can find additional information on admission requirements and the admission procedure on the graduate school's admissions webpage.

For those applicants not possessing a BS in Chemical Engineering, admission will be considered on a case-by-case basis. If accepted, those students will be required to complete the required prerequisites and the Chemical Engineering undergraduate core curriculum:

Prerequisites

Calculus sequence plus differential equations
Calculus-based physics (one semester)

Undergraduate Core Curriculum

CHE 2114	Mass and Energy Balances	4
CHE 3113	Chemical Engineering Thermodynamics I	3
CHE 3123	Chemical Engineering Thermodynamics II	3
CHE 4113	Chemical Reactor Design	3
CHE 4313	Transport Phenomena	3

CHE 3113 can be replaced with an equivalent course in Physical Chemistry or Thermal Physics. In place of Transport Phenomena, students can take both Fluid Flow Operation (CHE 3203) and Heat Transfer Operation (CHE 3213). Equivalent courses in Fluid Mechanics and Heat Transfer will serve as a replacement for Transport Phenomena.

Graduate Affairs Committee can waive/add course pre-requisites based on student background and preparation.

MS in Chemical Engineering, and PhD in Engineering with Chemical Engineering Concentration:

The program of study of a Master of Science in Chemical Engineering degree includes completion of 31 credit hours in advanced courses in Chemical Engineering (12 hours), Mathematics & Statistics (6 hours),

and elective courses selected based on student's career goals and interests. Students in the MS program can pursue either the thesis option or the courses-only (non-thesis) option. Students develop their program of study in consultation with the Major Professor and graduate committee.

The program of study for a PhD in Engineering with Chemical Engineering concentration includes completion of 56 (post BS degree) or 33 (post MS degree) credit hours in advanced courses in Chemical Engineering (12 hours), Mathematics & Statistics (6 hours), elective courses based on student's research interests (6 hours), and significant scholarly research (20 hours), presented in the dissertation. Students develop their program of study in consultation with the Major Professor and graduate committee. Direct PhD admits would have an option to earn at MS degree upon successfully completing course work (non-thesis) and thesis (thesis-option).

At least 50% of all courses must be at the 8000 (full graduate) level. Furthermore, 50% of courses must be taken at MSU and all thesis/dissertation hours must be taken at MSU.

Academic Performance and Completion Requirements for MS and PhD students

See CHE graduate handbook for details.

2. CURRICULUM OUTLINE

Each student in the program will develop a program of study based on his/her interests and in consultation with the major professor and graduate committee. The course work consists of core-courses and electives. MS thesis and PhD students will write thesis and dissertation, respectively and a final oral thesis defense is required. For the non-thesis option, the final oral comprehensive examination is required. All requirements for the distance-learning program are identical to the Campus 1 students. The student's physical presence on the Starkville campus may be encouraged for specific activities (e.g. thesis defense or comprehensive examination), however, it is not required. Dissertation defense via WebEx has been used successfully for some Campus 1 students.

3. JUSTIFICATION FOR DISTANCE LEARNING

Distance education provides opportunity for students who are not able to attend Starkville campus to get an advanced degree in Chemical Engineering. This program will be particularly attractive to a number of chemical engineering professionals working in the State of MS and neighboring states.

a. TARGET AUDIENCE

- Chemical engineering B.S. program alumni who have participated in our B.S/M.S accelerated program.

- The army Engineer Research and Development Center (ERDC) employees carry out research projects that are rooted in the fundamentals of chemical engineering.

- Chemical engineers with B.S. degree working in chemical and automotive plants in the State of MS and US.

4. LEARNING OUTCOMES

Learning outcomes are same as for the Campus 1 students:

- Student will demonstrate addition and mastery of an advanced relevant body of knowledge in Chemical Engineering and to provide innovative solutions
- Student will demonstrate ability to communicate technical material effectively in written and oral forma
- (MS Thesis/PhD) Student will demonstrate ability to develop a concept by designing experiments, collecting/interpreting appropriate data, drawing conclusions and presenting results that advance the technical community
- Student will demonstrate ability to practice the profession of engineering at an advanced level

5. EFFECTIVE DATE

August 16, 2020

6. CONTACT PERSON

Neeraj Rai, Associate Professor and Ergon, Inc. Distinguished Professor
348 Swalm Chemical Engineering
Phone: 662-325-0790
Email: neerajrai@che.msstate.edu

7. LETTER OF SUPPORT

Letters of support from CHE department's graduate affairs committee is attached.

MISSISSIPPI STATE UNIVERSITY

BAGLEY COLLEGE OF ENGINEERING
Dave C. Swalm School of Chemical Engineering

P.O. Box 9595
323 President's Circle
Mississippi State, MS 39762

P. 662.325.0790
F. 662.325.2482
www.railab.che.msstate.edu

January 30, 2020

University Committee on Courses & Curricula
218 Garner Hall
Mailstop 9702
Mississippi State University

UCCC Committee,

Dave C Swalm School of Chemical Engineering faculty is requesting offering a PhD degree in Engineering with Chemical Engineering concentration through distance. A resolution to this effect was voted unanimously (approved) through electronic vote by the faculty on 10/31/2019. Distance component to all necessary course-work has been approved. A distance offering for seminar and research hours will be requested through UCCC.

Please don't hesitate to contact me if additional information is needed.

Sincerely,

Neeraj Rai
CHE Graduate Coordinator
Associate Professor

Santanu Kundu
CHE Graduate Affairs Committee Member
Associate Professor

Hossein Toghiani
CHE Graduate Affairs Committee Member
Professor

Dong Meng
CHE Graduate Affairs Committee Member
Assistant Professor

Yizhi Xiang
CHE Graduate Affairs Committee Member
Assistant Professor

Amin Amirlatifi
CHE Graduate Affairs Committee Member
Assistant Professor

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

Institution:

Date of Initial Program Approval:	**Date of Implementation:**	**Cost to Offer by Distance Learning:**
prior to 2000	08/16/2020	$10,000

Program Title as It Appears on Academic Program Inventory, Diploma, and Transcript:	**Six-Digit CIP Code(s) & Four-Digit Sequence Code(s):**
Engineering	140101 and 1013

CIP & Sequence codes: IHL Active Program Inventory

Degree(s) to be Awarded:	**Credit Hour Requirements:**
PhD in Engineering, Chemical Engineering Concentration	56 direct admit; 33 with MS degree

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

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

Responsible Academic Unit(s):	**Institutional Contact:** Dr. Bill Elmore, School Director **Phone:** 662-325-2480 **Email:** elmore@che.msstate.edu
Dave C. Swalm School of Chemical Engineering	

Number of Students Expected to Enroll in First Six Years:		**Number of Graduates Expected in First Six Years:**	
Year One	1	**Year One**	0
Year Two	3	**Year Two**	0
Year Three	5	**Year Three**	0
Year Four	5	**Year Four**	0
Year Five	10	**Year Five**	2
Year Six	10	**Year Six**	4
Total	34	**Total**	6

Program Summary:

The program of study for a PhD in Engineering with Chemical Engineering concentration includes advanced courses in Chemical Engineering (12 hours), Mathematics & Statistics (6 hours), elective courses based on student's research interests (6 hours), and significant scholarly research (20 hours), presented in the dissertation. Students develop their program of study in consultation with the Major Professor and the graduate committee.

_____ _____

Chief Academic Officer Signature **Date**

_____ _____

Institutional Executive Officer Signature **Date**

APPROVAL FORM FOR

DEGREE PROGRAMS

MISSISSIPPI STATE UNIVERSITY

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College: Engineering **Department:** Chemical Engineering

Contact Person: Neeraj Rai **Mail Stop:** 9595 **E-mail:** nr373@msstate.edu
Nature of Change: Distance Approval **Date Initiated:** 10/1/19 **Effective Date:** 8/16/20
Current Degree Program Name: Master of Science

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

Summary of Proposed Changes:

Award the degree via distance learning

Approved:	**Date:**
Department Head	1/24/2020
Chair, College or School Curriculum Committee	3/3/2020
Dean of College or School	3/4/2020
Chair, University Committee on Courses and Curricula	
Chair, Graduate Council(if applicable)	
Chair, Deans Council	

Degree Approval for Distance Learning (Existing Program)
M.S. in Chemical Engineering

1. CATALOG DESCRIPTION

Graduate study is offered in the Dave C. Swalm School of Chemical Engineering leading to the degree of Master of Science in Chemical Engineering. The School also cooperates in an interdisciplinary program leading to the degree of Doctor of Philosophy in Engineering with a concentration in Chemical Engineering. Prospective students are encouraged to visit the department's website (www.che.msstate.edu) to learn about faculty research interests and the graduate program.

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Academic Performance and Completion Requirements for MS and PhD students

See CHE graduate handbook for details.

2. CURRICULUM OUTLINE

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- (MS Thesis/PhD) Student will demonstrate ability to develop a concept by designing experiments, collecting/interpreting appropriate data, drawing conclusions and presenting results that advance the technical community
- Student will demonstrate ability to practice the profession of engineering at an advanced level

5. EFFECTIVE DATE

August 16, 2020

6. CONTACT PERSON

Neeraj Rai, Associate Professor and Ergon, Inc. Distinguished Professor
348 Swalm Chemical Engineering
Phone: 662-325-0790
Email: neerajrai@che.msstate.edu

7. LETTER OF SUPPORT

Letters of support from CHE department's graduate affairs committee is attached.

MISSISSIPPI STATE UNIVERSITY

BAGLEY COLLEGE OF ENGINEERING
Dave C. Swalm School of Chemical Engineering

P.O. Box 9595
323 President's Circle
Mississippi State, MS 39762

P. 662.325.0790
F. 662.325.2482
www.railab.che.msstate.edu

January 30, 2020

University Committee on Courses & Curricula
218 Garner Hall
Mailstop 9702
Mississippi State University

UCCC Committee,

Dave C Swalm School of Chemical Engineering faculty is seeking approval of offering MS degree in Chemical Engineering through distance. A resolution to this effect was voted unanimously (approved) through electronic vote by the faculty on 10/31/2019. Distance component to all necessary course-work has been approved. A distance component to Seminar course and research hours will be requested.

Please don't hesitate to contact me if additional information is needed.

Sincerely,

Neeraj Rai
CHE Graduate Coordinator
Associate Professor

Santanu Kundu
CHE Graduate Affairs Committee Member
Associate Professor

Hossein Toghiani
CHE Graduate Affairs Committee Member
Professor

Dong Meng
CHE Graduate Affairs Committee Member
Assistant Professor

Yizhi Xiang
CHE Graduate Affairs Committee Member
Assistant Professor

Amin Amirlatifi
CHE Graduate Affairs Committee Member
Assistant Professor

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(Submit Appendix 10 in both PDF and Word Document Formats)

Institution:

Date of Initial Program Approval:	**Date of Implementation:**	**Cost to Offer by Distance Learning:**
prior to 2000	08/16/2020	$10,000

Program Title as It Appears on Academic Program Inventory, Diploma, and Transcript:	**Six-Digit CIP Code(s) & Four-Digit Sequence Code(s):**
Chemical Engineering	140701 & 4119

CIP & Sequence codes: IHL Active Program Inventory

Degree(s) to be Awarded:	**Credit Hour Requirements:**
Master of Science in Chemical Engineering	31

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

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

Responsible Academic Unit(s):	**Institutional Contact:** Dr. Bill Elmore, School Director **Phone:** 662-325-2480 **Email:** elmore@che.msstate.edu
Dave C. Swalm School of Chemical Engineering	

Number of Students Expected to Enroll in First Six Years:		**Number of Graduates Expected in First Six Years:**	
Year One	2	**Year One**	0
Year Two	6	**Year Two**	0
Year Three	6	**Year Three**	2
Year Four	6	**Year Four**	5
Year Five	10	**Year Five**	6
Year Six	12	**Year Six**	10
Total	43	**Total**	23

Program Summary:

Graduate study is offered in the Dave C. Swalm School of Chemical Engineering leading to the degree of Master of Science in Chemical Engineering. The program of study of a Master of Science in Chemical Engineering degree includes advanced courses in Chemical Engineering (12 hours), Mathematics & Statistics (6 hours), and elective courses selected based on student's career goals and interests. Students develop their program of study in consultation with the Major Professor and graduate committee.

_____ _____

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

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

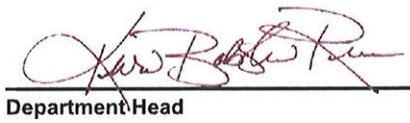
Current Degree Program Name: Master of Science in Industrial Engineering

Major: Industrial Engineering
Concentration:
1. Human Factors and Ergonomics
2. Industrial Systems
3. Operations Research
4. Management Systems Engineering
5. Manufacturing Systems

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

Major: Industrial and Systems Engineering
Concentration:
1. Human Factors and Ergonomics
2. Industrial Systems
3. Operations Research
4. Management Systems Engineering
5. Manufacturing Systems

Summary of Proposed Changes: This program educates M.S. students to prepare them for advanced industrial and systems engineering practice, research, and teaching. In the past decade, the discipline of industrial engineering has been extended to handling system-level, big-picture challenges faced by manufacturing and service enterprises. The new name will be consistent with the name of the department (ISE) and the doctorate degree (ISE).

Approved:	Date:
	1/29/2020
Department Head	
	3/3/2020
Chair, College or School Curriculum Committee	
	3/4/2020
Dean of College or School	
Chair, University Committee on Courses and Curricula	
Chair, Graduate Council(if applicable)	
Chair, Deans Council	

GRADUATE DEGREE MODIFICATION OUTLINE FORM

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

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

the graduate program in Industrial and Systems Engineering is defined as any of the following. • Failure to maintain a 3.00 average in the M.S. program or 3.30 in the Ph.D. program, • Failure of the qualifying exam (Ph.D. students only), • Failure of the preliminary exam (Ph.D. students only); • Failure of the comprehensive final exam (M.S. non-thesis option only), • Unsatisfactory evaluation of thesis or dissertation, or • A failure of the required component of the program of study. Any one of these will constitute the basis for review for possible dismissal. If the students drops six or more quality points below the required average (3.00 for M.S. or 3.30 for Ph.D.), the graduate coordinator will review the record along with the student's graduate committee and will recommend a final course of action, which will be immediate dismissal or the establishment of a probationary period in which corrective action must take place. While on probation, the student is not eligible to receive an assistantship and is required to raise his/her cumulative GPA to 3.00 for M.S. or 3.30 for Ph.D. by the end of the following semester of enrollment. During that semester, the student must enroll in 9 credit hours of coursework; Directed Individual Study courses are excluded.	
Old Concentration description: **Master of Science in Industrial Engineering with Human Factors and Ergonomics Concentration (HFE) – Thesis** Prerequisites (foundational courses) are: • MA 1713 • MA 1723 • MA 2733 • MA 2743 • IE 3123 • IE 4613/6613 IE 6773 Systems Simulation I 3 IE 6623 Engineering Statistics II 3 At least 3 HFE ISE courses 9 IE 8000 Thesis Research/ Thesis in Industrial Engineering 6	New Concentration description: With the proposed degree name change, all concentration requirements and curricula will remain unchanged.

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

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

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

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

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

Prerequisites (foundational courses) are:

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

IE 6773	Systems Simulation I	3
IE 6623	Engineering Statistics II	3
At least three HFE ISE courses		9
At least two non-HFE ISE courses		6
At least two courses from Mathematics (MA) or Statistics (ST)		6
At least one course from a supporting area (Biological Engineering [ABE], Psychology [PSY], Kinesiology [KI], Mechanical Engineering [ME], Mathematics [MA], Statistics [ST], etc.)		3
Total Hours		**30**

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

Additional requirements are:

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

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

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

Prerequisites (foundational courses) are:

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

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

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

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

4. No program can contain more than 6 hours of Directed Individual Study (IE 7000).

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

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

Prerequisites (foundational courses) are:

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

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

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

Additional requirements are:

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

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

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

Prerequisites (foundational courses) are:

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

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

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

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

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

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

Prerequisites (foundational courses) are:

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

IE 6513	Engineering Administration	3
IE 6533	Project Management	3
IE 6573	Process Improvement Engineering	3

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

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

Additional requirements are:

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

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

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

Prerequisites (foundational courses) are:

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

IE 6653	Industrial Quality Control	3
IE 8333	Production Control Systems II	3
IE 8353	Manufacturing Systems Modeling	3
IE 8000	Thesis Research/ Thesis in Industrial Engineering	6
At least two Manufacturing Systems ISE courses		6
At least two non-Manufacturing Systems ISE courses		6
Course to be selected by the student along with the academic advisor and graduate program committee		3
Total Hours		**30**

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

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

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

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

Prerequisites (foundational courses) are:

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

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

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

Additional requirements are:

1. No ISE graduate student may list ST 8114 or IE 6613 on his/her graduate program

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

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

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

Prerequisites (foundational courses) are:

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

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

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

Additional requirements are:

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

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

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

Prerequisites (foundational courses) are:

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

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

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

Additional requirements are:

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

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

CURRENT CURRICULUM OUTLINE	Required Hours	PROPOSED CURRICULUM OUTLINE	Required Hours
See above section – Concentration Description and Curriculum Outline/hours are now combined in the Graduate Catalog; therefore, outline is not repeated here.		With the proposed degree name change, all concentration requirements and curricula will remain unchanged.	

Appendix 9a: Modifications to Existing Degree Program Proposal
(Renaming)
(Submit Appendix 9a in both PDF and Word Document Formats)

Institution:

Date of Implementation:	**Present 6-Digit CIP Code(s) & 4-Digit Sequence Code(s):**	**New 6-Digit CIP Code:**
Fall Semester 2020	143501	143501

CIP & Sequence codes: IHL Active Program Inventory

Present Program Title(s) as Appear(s) on Academic Program Inventory, Diploma, and Transcript:	**New Program Title as will Appear on Academic Program Inventory, Diploma, and Transcript:**
Industrial Engineering	Industrial and Systems Engineering

Degree(s) to be Awarded:	**Credit Hour Requirements:**
M.S.	30

List any institutions within the state offering similar programs:
None

Responsible Academic Unit(s):	**Institutional Contact:** Linkan Bian **Phone:** 663-325-0570 **Email:**
Industrial and Systems Engineering	

Number of Students Enrolled in Last Six Years:		**Number of Graduates Expected in Next Six Years:**	
Year One	32	**Year One**	10
Year Two	35	**Year Two**	9
Year Three	27	**Year Three**	11
Year Four	30	**Year Four**	11
Year Five	31	**Year Five**	11
Year Six	35	**Year Six**	10
Total	190	**Total**	62

Program Summary:
This program educates M.S. students to prepare them for advanced industrial and systems engineering practice, research, and teaching. In the past decade, the discipline of industrial engineering has been extended to handling system-level, big-picture challenges faced by manufacturing and service enterprises. The new name will be consistent with the name of the department (ISE) and the doctorate degree (ISE).

_____ _____
Chief Academic Officer Signature **Date**

_____ _____
Institutional Executive Officer Signature **Date**

Institution:

1. Describe how the proposed modification fits within the mission of the institution.

   The MSU Industrial and Systems Engineering (ISE) department is Mississippi's only accredited Industrial and Systems Engineering porgram. Part of the mission of MSU-ISE is training industrial engineers and graduate students in research.

2. Is this modification unnecessarily duplicative of other programs within the System?

   No.

3. Describe the anticipated institutional impact including any research efforts associated with this program.

   We anticipate that this change will make our recruiting of graduate students who are interested in system engineering more effective. In addition, the new title is consistent with the name of the department and accurately reflects the ongoing research at ISE.

4. Are there any anticipated budget savings associated with the proposed modification?

   No budgetary savings are anticipated.

5. Are there any changes to the educational objectives of the degree program associated with the proposed modification?

   There are no changes to the educational objectives associated with the proposed modification.

6. Are there any changes to the curriculum of the degree program associated with the proposed modification?

   No curriculum changes will be associated with the proposed modificationi.

7. Describe how the proposed modification will affect program faculty.

   We anticipate that the change will allow our faculty to be more effective in recruiting highly qualified students who are interested in system-level problems.

8. Describe the evaluation process which led to the request for the proposed modification.

   The evaluation process consists of ancecdotal observations over a long period of time in which prospective students have our faculty members that they are concerned that their degree will be restricted to industrial engineering, when it is possible that their career will focus on system engineering.

MISSISSIPPI STATE UNIVERSITY
JAMES WORTH BAGLEY COLLEGE OF ENGINEERING

DEPARTMENT OF INDUSTRIAL & SYSTEMS ENGINEERING

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

January 25, 2020

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

Dear UCCC,

The Industrial and Systems Engineering (ISE) department discussed the proposal for changing the M.S. degree program name for Industrial Engineering (IE) to Industrial and Systems Engineering (ISE). This proposal will make the name of the M.S. degree program consistent with the name of the department and Ph.D. degree program. After some discussion we put this proposal to the entire ISE faculty for a vote. The result was overwhelming in favor of making this change.

Sincerely,

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

MISSISSIPPI STATE UNIVERSITY
JAMES WORTH BAGLEY COLLEGE OF ENGINEERING

DEPARTMENT OF INDUSTRIAL & SYSTEMS ENGINEERING

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

Approved:	Signature and Date:
Linkan Bian, Ph.D.	01/29/2020
Stanley Bullington, Ph.D.	S. J. Bullington 1/30/20
Reuben Burch, Ph.D.	1-29-2020
Raed Jaradat, Ph.D.	1-30-2020
Junfeng Ma, Ph.D.	Junfeng Ma 2/3/2020
Mohammad Marufuzzaman, Ph.D.	1-30-2020
Nazanin Morshedlou, Ph.D.	01/29/2020
Brian Smith, Ph.D.	B. J. Smith 1/29/2020
Lesley Strawderman, Ph.D.	1/29/2020
Wenmeng Tian, Ph.D.	1/29/2020
Haifeng Wang, Ph.D.	Haifeng Wang 1/29/2020

APPROVAL FORM FOR

DEGREE PROGRAMS

MISSISSIPPI STATE UNIVERSITY

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

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

Contact Person: Jeanie McNeel **Mail Stop:** 9820 **E-mail:** jam52@msstate.edu
Nature of Change: Degree Modification **Date Initiated:** 03/05/2020 **Effective Date:** 08/01/2020

Current Degree Program Name: B.S. Sustainable Bioproducts
Major: Sustainable Bioproducts **Concentration:** n/a

New Degree Program Name: B.S. Sustainable Bioproducts
Major: Sustainable Bioproducts **Concentration:** Business
Concentration: Science

Summary of Proposed Changes:

1. Addition of two new concentrations, Business and Science, to address the growing number of students who wish to enter forest products businesses as managers/administrators (Business) and students who wish to pursue a career in product quality control, wood science, chemical applications, or environmental science (Science).
2. Reorganization of courses to reduce material overlap and division of courses to eliminate repetitive offerings – eliminating SBP 1203 Anatomy of Wood and continuing SBP 4013 Anatomy of Wood; dividing SBP 3113 Biomaterial Physics & Mechanics into SBP 3113 Physics of Biomaterials and SBP 3133 Mechanics of Biomaterials.
3. Creating a broader group of accepted courses for General Education requirements in Social/Behavioral Sciences, Humanities, and Fine Arts.
4. Replacing chemistry requirement CH 1043/1053 Survey of Chemistry with CH 1213/1223 Chemistry I/II or CH 1234/1244 Integrated Chemistry I/II.
5. Adding BQA 2113 Business Stat Methods I as an option for statistics requirement.

Approved: **Date:**

Rubin Shmulsky Digitally signed by Rubin Shmulsky Date: 2020.03.06 10:22:10 -06'00'

Department Head

Digitally signed by Heidi Renninger Date: 2020.03.06 10:48:35 -06'00'

Chair, College or School Curriculum Committee

for R. Munn for George Hopper 3/6/20

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: Sustainable Bioproducts Concentration: n/a	Degree: Bachelor of Science Major: Sustainable Bioproducts Concentration: Business Concentration Science Concentration
Students majoring in sustainable bioproducts will develop a strong foundation in properties, manufacturing, environmental implications, sales, and trading of products derived from wood and non-wood materials that come from agricultural residues and other natural fibers. Besides structural materials, specialty chemicals such as polymers and adhesives from natural resources, and bio-based energy such as wood pellets, bio-oil and alcohols are increasingly important with respect to sustainable industrial production. In addition to utilizing timber and agricultural residues, the discipline seeks to make materials last longer and enhance sustainability via preservative treatments and improved design.	Students majoring in Sustainable Bioproducts will develop a strong foundation in the manufacturing of wood and fiber-based products, their physical and mechanical properties, environmental implications, marketing, sales, and trading of wood and composite materials composed of agricultural resides and other natural fibers. Besides structural materials, specialty chemicals such as polymers and adhesives from natural resources, and bioenergy such as bio-oils, alcohols, and pelletized fuels are increasingly important to sustainable industrial production. In addition to utilizing the state's timber and agricultural residues, the program seeks to increase the use life of wood and non-wood materials, and to enhance sustainability by use of preservative treatments and developing improved designs.
None	Business Concentration: (SBP/BUS) Advisors: Dr. Dan Seale, Franklin Center Room 218 Dr. Frank Owens, Franklin Center Room 109 Students majoring in Sustainable Bioproducts will develop a strong foundation in the manufacturing of wood and fiber-based products, their physical and mechanical properties, environmental implications, marketing, sales, and trading of wood and composite materials composed of agricultural resides and other natural fibers. Besides structural materials, specialty chemicals such as polymers and adhesives from natural resources, and bioenergy such as bio-oils, alcohols, and pelletized fuels are increasingly important to sustainable industrial production. In addition to utilizing the state's timber and agricultural residues, the program seeks to increase the use life of wood and non-wood materials, and to enhance sustainability by use of preservative treatments and developing improved designs.
	Science Concentration: (SBP/SCI) Advisors: Dr. Beth Stokes, Forest Products Lab, Building 3, Room 3206 Dr. Jason Street, Forest Products Lab, Building 5, Room 5204 Designed for students wishing to pursue a scientific research field, work for a wood products industry in research and development, or for students who intend to pursue graduate degrees in wood and biomaterials science. Students may choose to focus their elective classes on the testing of physical and mechanical properties of wood, the

		chemical protection of wood from biotic and abiotic stresses, environmental impacts and issues associated with treatment and disposal of wood and non-wood products, or development of engineered wood products including pelletized fuels, mass timber products, construction elements, engineered wood panels, and other wood and non-wood bioproducts. Across all areas of study, students receive training in sustainability, current industry practices, and the opportunity to interact with industry professionals.	
CURRENT CURRICULUM OUTLINE	Required Hours	**PROPOSED CURRICULUM OUTLINE**	Required Hours
English (Ex: EN 1103 English Comp I): EN 1103 English Composition I EN 1113 English Composition II	6	English (Ex: EN 1103 English Comp I): EN 1103 English Composition I EN 1113 English Composition II	6
Fine Arts (General Education): ARC 1013 Architectural Appreciation ART 1013 Art History I ART 1023 Art History II ART 1113 Art Appreciation CO 1503 Intro to Theater LA 1803 Landscape Arch. Appreciation MU 1103 African American Music MU 1123 American Music Appreciation PE 1323 History & Appreciation of Dance PSS 2343 Floral Design TKI 2413 History & Appreciation of Artcrafts	3	Fine Arts (General Education): **Any Gen Ed Fine Arts Course**	3
Natural Sciences (2 labs required from Gen Ed): BIO 1134 Biology I BIO 1144 Biology II CH 1043 Survey of Chemistry I CH 1053 Survey of Chemistry II CH 1051 Exp. Chemistry Laboratory	6-8	Natural Sciences (2 labs required from Gen Ed): BIO 1134 Biology I BIO 1144 Biology II *CH 1043 Survey of Chemistry I* *CH 1053 Survey of Chemistry II* *CH 1051 Exp. Chemistry Laboratory*	8
Extra Science (if appropriate) AELC 3203 Professional Writing in Ag Science	3	Extra Science (if appropriate) AELC 3203 Professional Writing in Ag Science **CH 1213 Chemistry I** **Or CH 1234 Integrated Chemistry I** **CH 1223 Chemistry II** **Or CH 1244 Integrated Chemistry II**	9-11
Math (General Education): MA 1313 College Algebra MA 1323 Trigonometry ST 2113 Intro Statistics	6-9	Math (General Education): MA 1313 College Algebra MA 1323 Trigonometry ST 2113 Intro Statistics	6-9

OR ST 3123 Intro to Statistical Inference		OR ST 3123 Intro to Statistical Inference OR **BQA 2113 Business Stat Methods I**	
Humanities (General Education): ARC 2313 History of Architecture EN 2203 Intro to Literature EN 2213/2223 English Literature EN 2243/2253 American Literature EN 2273/2283 World Literature HI 1063/1073 Early or Modern US History HI 1163/1173 World History I/II HI 1213/1223 Early or Modern Western World HI 1313/1323 East Asian Civilizations I/II PHI 1103 Intro Philosophy PHI 1123 Intro Ethics REL 1103 Intro Religion REL 3213/3223 World Religions I/II	6	Humanities (General Education): **Any Gen Ed Humanities Course**	6
Social/Behavioral Sciences (Gen Ed): AN 1103 Intro Anthropology AN 1143 Intro Cultural Anthropology AN 1543 Intro Archaeology CO 1223 Intro Communication Theory CO 1403 Intro to Mass Media EPY 2513 Human Growth & Development GR 1123 Intro to World Geography GR 2013 Cultural Geography HON 1163 Core Texts from Western Civ HON 3143 Honors Seminar in SS PS 1113 American Government PS 1313 Intro to International Relations PS 1513 Comparative Government PSY 1013 General Psychology SO 1003 Intro Sociology SO 1103 Contemporary Social Problems SO 1203 Sociology of Families	6	Social/Behavioral Sciences (Gen Ed): **Any Gen Ed Social/Behavioral Sciences Course**	6
Major Core Courses SBP 1001 First Year Seminar SBP 1103 Intro to Sustainable Bioproducts SBP 1203 Anatomy of Wood & Other Natural Materials SBP 2012 Intro to Bioproduct Industries SBP 2123 Materials & Processing SBP 3113 Biomaterial Physics & Mechanics SBP 3123 Biomass to Bioproducts SBP 4243 Sustainable Bioproducts SBP 4253 Quantitative Methods in SB SBP 4313 Bioproducts & the Environment SBP 4443 Capstone-Sustainable Bioproducts		Major Core Courses SBP 1001 First Year Seminar SBP 1103 Intro to Sustainable Bioproducts *SBP 1203 Anatomy of Wood & Other Natural Materials* SBP 2012 Intro to Bioproduct Industries SBP 2123 Materials & Processing *SBP 3113 Biomaterial Physics & Mechanics* **SBP 3113 Physics of Biomaterials** SBP 3123 Biomass to Bioproducts **SBP 4013 Anatomy of Wood & Other Natural Materials** SBP 4243 Sustainable Bioproducts SBP 4313 Bioproducts & the Environment	27

		SBP 4443 Capstone-Sustainable Bioproducts Available SBP Electives: SBP 3133 Mechanics of Biomaterials SBP 3143 Biomass Characterization & Production SBP 4023 Lignocellulosic Biomass Chemistry SBP 4113 Adhesives & Composites SBP 4123 Lumber Manufacturing SBP 4133 Biorefinery Processes SBP 4144 Biocomposite Appl Manufac SBP 4153 Biological Conversion of Biomass SBP 4213 Deterioration & Preservation of Biomaterials SBP 4253 Quantitative Methods in SBP SBP 4263 Furniture Design & Fabrication SBP 4333 Bioproducts Environ Biotech SBP 4353 Forest Products Marketing Professional Electives Any Gen Ed Course of 3000 level or higher Free Electives	 21 6 3-6
Concentration Courses n/a		Concentration Courses Business Concentration: SBP 4253 Quantitative Methods in SB SBP 4353 Forest Products Marketing AEC 2713 Intro to Food & Resource Econ EC 2113 Principles of Macroeconomics EC 2123 Principles of Microeconomics MKT 3013 Principles of Marketing FO 4113 Forest Resources Economics ~~FO 4323 Forest Resource Management~~ FO 4353 Forest Resource Law Science Concentration: SBP 3133 Mechanics of Biomaterials SBP 4023 Lignocellulosic Biomass Chemistry SBP 4113 Adhesives & Composites CH 2503 Elem Organic Chem CH 2501 Elem Organic Chem Lab BIO 3304 General Microbiology BCH 4013 Principles of Biochemistry EPP 3124 Forest Pest Management EPP 4543 Tox & Insecticide Chemistry	 24 27
Total Hours	124	Total Hours	125

MISSISSIPPI STATE
UNIVERSITY

Department of Sustainable Bioproducts

Letter of Support for Modification of Existing Sustainable Bioproducts Undergraduate degree

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

Justification for request: In 2014, the Department of Forest Products became the Department of Sustainable Bioproducts. Near that same time, this undergraduate degree was proposed and approved by MSU and the IHL. After having served the students for five years and gathering feedback from departmental constituents, the curriculum committee with the concurrence of the departmental faculty have modified the existing degree. This modification will not only be more attractive to incoming freshman and transfer students but also will better serve students enrolled in the program currently. To provide further guidance and direction to students, two concentrations are outlined. The Business concentration will prepare students for management and administration positions in industry. The Science concentration will provide an adequate foundation for students wishing to enter product quality control and environmental science positions. Appropriate modifications to courses have and are being processed through UCCC. No changes in support including personnel and material requirements are anticipated.

Effective Date: Fall 2020

Effect on other courses and programs: None

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

Mike Barnes — Robert Slaughter for Mike Barnes — Date: 3/6/2020

Hyungsuk "Thomas"Lim — Digitally signed by Hyungsuk Lim — Date: 03/05/2020

Beth Stokes — Digitally signed by Beth Stokes — Date: 03/05/2020

Jason Street — Digitally signed by Jason Street — Date: 03/05/2020