MISSISSIPPI STATE UNIVERSITY™

UNIVERSITY COMMITTEE ON COURSES AND CURRICULA

A MEMORANDUM

DATE: April 19, 2016

TO: UCCC Members

FROM: Kirk Swortzel, Chair

SUBJECT: April 28, 2016 Meeting

Enclosed are the minutes from the meeting on April 1, 2016 and the agenda and proposals for the meeting on **Thursday, April 28, 2016 beginning at 9:00 a.m.** The meeting will be held in the Trotter Room (Room 2200) of the Center for Advanced Vehicular Systems. Please contact the UCCC office if you are unable to attend.

Thank you.

Enclosures: April 1, 2016 Meeting Minutes
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
April 28, 2016

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

ACADEMIC AFFAIRS

Addition	GS 3713	History of African American Women

AGRICULTURE AND LIFE SCIENCES

Addition	ABE 2543	Precision Agriculture I
Addition	ABE 4543/6543	Precision Agriculture II
Modification	AELC 2413	Orientation to Agricultural Education, Leadership & Communications
Modification	AELC 3013	Field Experience in Agricultural Education, Leadership and Communications
Modification	AELC 3500	Internship in Agricultural Leadership
Modification	AELC 4113/6113	Methods of Teaching Agriscience
Modification	AELC 4703/6703	Experiential Learning Programs in Agriculture
Modification	AELC 4873	Professional Seminar in Agricultural Education
Modification	AELC 4886	Teaching Internship in Agricultural Education
Modification	AELC 4896	Teaching Internship in Agricultural Education
Deletion	AIS 8606	Teaching Internship in Agricultural Education
Addition	HS 2123	Product Development I
Modification	HS 2553	Introduction to Fashion Industry
Modification	HS 2593	Product Development II
Addition	HS 4363	Draping
Modification	HS 4583/6583	Fashion Entrepreneurship
Modification	HS 4711	FDM Senior Showcase
Modification	HS 4763	FDM Internship
Addition	PSS 2543	Precision Agriculture I
Addition	PSS 4543/6543	Precision Agriculture II

ARTS AND SCIENCES

Modification +Gen. Ed.	AAS 2363	Introduction to African American Literature
Modification +Gen. Ed.	AAS 3013	African American History to 1865
Modification +Gen. Ed.	AAS 3023	African American History since 1865
Addition	AAS 3713	History of African American Women
Modification +Gen. Ed.	EN 2363	Introduction to African American Literature

Addition	EN 4743/6743	British Literature and Culture of the Romantic Period
Addition	GR 4643/6643	Physical Climatology
Addition	GS 3713	History of African American Women
Modification +Gen. Ed.	HI 3013	African American History to 1865
Modification +Gen. Ed.	HI 3023	African American History since 1865
Addition	HI 3713	History of African American Women
Addition	HI 8983	Introduction to Public History

BUSINESS

Modification	ACC 3053	Accounting Information Systems II
Addition +Distance	BQA 4413/6413	Business Forecasting and Predictive Analytics

4. Degree proposals by college/school

AGRICULTURE AND LIFE SCIENCES

Addition	Certificate	Plant & Soil Sciences/Precision Agriculture
Addition	Certificate	Agricultural and Biological Engineering/Precision Agriculture

BUSINESS

Addition	Grad. Minor	Business/ Business Analytics
Modification	Minor	Business/Business Information Systems

University Committee on Courses and Curricula
Mississippi State University
April 1, 2016

Present:	Tracey Baham, Russell Carr, Mike Cox, Amy Crumpton, Dana Franz, Robert Harland, Christina Hillesheim, Trey Howell, Brenda Kirkland, Sundar Krishnan, Pat Matthes, Qingmin Meng, Lynda Moore, Rob Moore, Bob Otondo, Emily Owen, Tommy Parker, Andy Perkins, Lynn Reinschmiedt, John Riggins, Barry Stewart, Pam Sullivan, Kirk Swortzel, Jenny Turner, Robert Wolverton, Chien Yu
Excused:	Amy Adkerson, Shrinidhi Ambinakudige, Robert Frey, Kevin Hunt, John Rigsby, Arnelle Woods
Absent:	Skip Jack, Kelly Moser, Tom White
Guests:	Jamie Dyer, Meggan Franks, Mark Janus, Lindsey Peterson, Heidi Renninger, Joe Wilmoth

Swortzel called the meeting to order at 1:30 p.m. on Friday, April 1, 2016 in Room 324 of the Student Union. Swortzel announced a letter of nonsupport for AN 2103 Nutritional Anthropology was received after the February 19, 2016 meeting, and the last UCCC meeting of the academic year is schedule for Thursday, April 28, 2016 in the Trotter Room of the Center for Advanced Vehicular Systems. The meeting time will be announced when the agenda is published.

Carr moved to approve the February 19, 2016 minutes. Otondo seconded the motion. The February 19, 2016 minutes were approved unanimously.

Carr moved to approve the addition of FO 3213 Tree Physiology. Perkins seconded the motion. Committee members noticed there are prerequisites listed in the syllabus but are not listed in the course description in the proposal, and it is not clear how the 5 percent of the grade for attendance is determined. Riggins moved to pass the proposal contingent upon the above concerns being addressed. Crumpton seconded the motion. The motion to pass FO 3213 contingent upon the above concerns being addressed was approved unanimously.

Perkins moved to approve the addition of GE 1501 Engineering Design Competition. Riggins seconded the motion. The motion to approve GE 1501 was approved unanimously.

Perkins moved to approve the addition of GE 1911 Introduction to Engineering. Carr seconded the motion. Committee members discussed the prerequisite requirements. The motion to approve GE 1911 was approved unanimously.

Perkins moved to approve the modification of the Master of Science in Aerospace Engineering

(Campus 1 & Campus 5). Carr seconded the motion. The motion to approve the modification of the MS in Aerospace Engineering (Campus 1 & Campus 5) was approved unanimously.

Stewart moved to approve the addition of FHN 8263 Nutritional Genomics. Riggins seconded the motion. The motion to approve the addition of FHN 8263 Nutritional Genomics was approved unanimously.

Stewart moved to bring back to the table the modification and addition of Maymester for HS 4832 Child Life Clinical. Carr seconded the motion. The proposal was tabled at the February 19, 2016 meeting due to questions about when the course would be offered. Swortzel clarified the course will be offered fall semester and Maymester. Cox moved to approve the modification and addition of Maymester for HS 4832. Franz seconded the motion. The motion to modify and approve the addition of Maymester for HS 4832 was approved with one committee member abstaining.

Carr moved to approve the addition of AN 8313 Paleopathology: Ancient Disease. Cox seconded the motion. The motion to approve the addition of AN 8313 was approved unanimously.

Carr moved to approve the addition of CRM 4153, SLCE 4153, and SO 4153 Mentoring for At-Risk Youths. Otondo seconded the motion. Dr. Lindsey Peterson and Dr. Meggan Franks appeared in support of the proposals. Committee members pointed out that the number of lecture and practicum hours in the course description need to be revised, and the method of instruction in the three cross listed courses need to be the same. Franz moved to pass CRM 4153, SLCE 4153, and SO 4153 contingent upon the above concerns being addressed. Crumpton seconded the motion. The motion to pass CRM 4153, SLCE 4153, and SO 4153 contingent was approved unanimously.

Franz moved to CRM 4453 and SO 4453 Power, War, and Peace. Crumpton seconded the motion. Committee members pointed out the outlines and syllabi are inconsistent concerning the curriculum that is being taught, and the attendance policy needs to be clarified and in compliance with AOP 12.09. Crumpton moved to pass CRM 4453 and SO 4453 contingent upon the above concerns being addressed. Harland seconded the motion. The motion to pass CRM 4453 and SO 4453 was approved unanimously.

Franz moved to approve the addition of GR 4553/6553 Computer Methods in Meteorology. Kirkland seconded the motion. Committee members discussed how graduate students would earn their grade for leadership. Committee members were concerned there was no attendance or assignment make-up policy in the syllabus. Franz moved to pass GR 4553/6553 contingent upon the above concern being addressed. Riggins seconded the motion. The motion to approve GR 4553/6553 contingent was approved unanimously.

Crumpton moved to approve the addition of PS 4613/6613 Civil Wars and Intra-State Conflicts. Otondo seconded the motion. Committee members discussed the syllabus does not have an attendance policy, and it is difficult to determine from AOP 12.09 and AOP 13.03 whether an attendance policy is required to be in the syllabus. One committee member pointed out the syllabus template on the MSU Center of Teaching and Learning website does not have an attendance policy. Another committee member asked if this is an issue for the Faculty Senate to address. Committee members strongly suggested the faculty member include an attendance policy in the syllabus. The motion to approve passed unanimously.

Franz moved to approve the modification of SO 1203 Sociology of Families. Carr seconded the motion. Committee members pointed out the exam dates on the syllabus need to be updated. The motion to approve passed unanimously.

Carr moved to approve the modification of SO 4804 Social Research Practice. Crumpton seconded the motion. Committee members were concerned there is no credit for the lab in the grading scale. Committee members also pointed since the modification is changing the course from a three hour credit course to a four hour credit course, there also needs to be a degree modification proposed indicating the change in the course number and the credit hours. Franz moved to pass SO 4804 contingent upon the above concerns being addressed. Otondo seconded the motion. The motion to pass SO 4804 contingent was approved unanimously.

Carr moved to approve the addition of SO 8313 Political Sociology. Crumpton seconded the motion. The motion to approve SO 8313 passed unanimously.

Carr moved to adjourn. Crumpton seconded the motion. The motion to adjourn was approved unanimously. The meeting was adjourned at 3:40 p.m.

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: Agriculture & Life Sciences **Department:** Plant & Soil Sciences

Contact Person: Mike Phillips **Mail Stop:** 9555 **E-mail:** jmp657@msstate.edu

Nature of Change: Add New Certificate **Date:** 2/22/2016

Program will be offered at: Starkville (Campus 1)

Current Degree Program Name: **Effective Date:** 08/16/2016

Major: **Concentration:**

New Degree Program Name: Certificate

Major: Precision Agriculture **Concentration:**

Summary of Proposed Changes:

A certificate program in Plant & Soil Sciences and Ag. & Bioengineering is proposed for undergraduate and graduate students. This certification program will complement the MSU PSS/ABE crop production and ag. engineering majors, research, and other majors taught across College of Agriculture and Life Sciences (CALS) departments. This certificate will feature emerging technologies in decision-based agricultural planning and implementation. The certificate requires a minimum of 16 hours with at least 10-12 credit hours specific to Precision Agriculture coursework and six additional hours of electives or optional courses.

Department Head	3/7/16
Chair, College or School Curriculum Committee	4/8/16
Dean of College or School	4/11/16
Chair, University Committee on Courses and Curricula	
Chair, Graduate Council (if applicable)	
Chair, Deans Council	

☐ **SACS Letter Sent**

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

Contact Person: Jonathan W. Pote **Mail Stop:** 9632 **E-mail:** jpote@abe.msstate.edu

Nature of Change: Add New Certificate **Date:** 4/07/2016

Program will be offered at: Starkville (Campus 1)

Current Degree Program Name: **Effective Date:** 08/16/2016

Major: **Concentration:**

New Degree Program Name: Certificate

Major: Precision Agriculture **Concentration:**

Summary of Proposed Changes:

A certificate program in Plant & Soil Sciences and Agricultural and Biological Engineering is proposed for undergraduate and graduate students. This certification program will complement the MSU PSS/ABE crop production and ag. engineering majors, research, and other majors taught across College of Agriculture and Life Sciences (CALS) departments. This certificate will feature emerging technologies in decision-based agricultural planning and implementation. The certificate requires a minimum of 16 hours with at least 10-12 credit hours specific to Precision Agriculture coursework and six additional hours of electives or optional courses.

Department Head	4/7/16
Chair, College or School Curriculum Committee	4/8/16
Dean of College or School	4/11/16
Chair, University Committee on Courses and Curricula	
Chair, Graduate Council (if applicable)	
Chair, Deans Council	

☐ **SACS Letter Sent**

PROPOSAL FOR ADDITION OF CERTIFICATE PROGRAM
Certificate: PSS/ABE Certificate in Precision Agriculture

Contacts: Dr. Mike Cox, msc15@msstate.edu
Dr. Joel Paz, jpaz@abe.msstate.edu

1. CATALOG DESCRIPTION

There is a need to train students in the broad array of precision agriculture technologies. This certificate program complements the MSU PSS/ABE crop production and Ag. Engineering majors, research and other majors taught across College of Agriculture and Life Sciences (CALS) departments. This certificate features emerging technologies in decision-based agricultural planning and implementation. The certificate requires a minimum of 16 hours with at least 10 credit hours specific to Precision Agriculture coursework and six additional hours of electives or optional courses. This certificate is available at the undergraduate and graduate level.

2. CURRICULUM OUTLINE

Two new courses are proposed to develop the Precision Agriculture Certificate.

To obtain a Precision Agriculture Certificate, students are required to complete the following 16 hours:

PSS/ABE 2543	Precision Agriculture I	3
PSS/ABE 4543/6543	Precision Agriculture II	3
ECE/FO/GR/PSS 4411/6411	Remote Sensing Seminar	1
ABE/PSS 4000/7000	Directed Individual Study (hours and project approved by the certificate faculty committee)	3

Choose from one of the following options to complete a minimum of 16 hours:

Option 1: choose from the following: 6-8

ABE/ECE/PSS 4483/6483	Introduction to Remote Sensing
ABE 3513	GPS/GIS in Agriculture and Engineering
FO 4471/6471	GIS natural Resource Management OR
FO 4472/6472	GIS natural Resource Management
PSS 4373/6373	Geospatial Agronomic Management
GR 4303/6303	Principles of GIS
GR 3303	Survey of Geospatial Technologies

Option 2: (Community/Junior College AGT courses) 6-8

- any **FOUR** technical courses from the following in a Precision Agriculture Technology Concentration with the Postsecondary Agriculture Business and Management Technology program

AGT 1163	Introduction to Spatial Information Systems
AGT 2154	Geographic Information Systems I

AGT 1254	GPS Data Collection
AGT 2164	Variable Rate Technology
AGT 1354	Remote Sensing
AGT 2474	Site Specific Pest Management

OR Completion of the UAV Training Program coursework at Hinds Community College

Option 3 – Discipline Specific Electives 6-8

ABE 3413	Bioinstrumentation
ABE 4163/6163	Machinery for Agro-Ecosystems
ABE 4263/6263	Soil and Water Management
ABE 4844/6844	Sustainable Communities
ABE 6423	Bioinstrumentation II
AEC 3413	Introduction to Food Marketing
AEC 3513	Food and Fiber Production
AEC 4113/6113	Agribusiness Firm Management
AEC 4133/6133	Food Markets and Prices
AEC 4343/6343	Advanced Farm Management
BIO 4214	Plant Physiology
EPP 3124	Forest Pest Management
EPP 4163/6163	Plant Disease Management
EPP 4214/6214	Diseases of Crops
EPP 4234/6234	Field Crop Insects
EPP 4263/6263	Principles of Insect Pest Management
FIN 3123	Financial Management
PSS 3301	Soils Laboratory
PSS 3303	Soils
PSS 3133	Introduction to Weed Science
PSS 4113/6113	Agricultural Crop Physiology
PSS 4313/6313	Soil Fertility
PSS 4333/6333	Soil Conservation and Land Use
PSS 4343/6343	Controlled Environment Agriculture
PSS 4813/6813	Herb Tech
PSS 4823/6823	Turf Weed Management

3. STUDENT LEARNING OUTCOMES AND ASSESSMENT

Students training in agriculture and biological engineering, agribusiness and economics, agriculture information sciences, agronomy, animal and dairy sciences, biochemistry and entomology, environmental science, horticulture, landscape architecture, and poultry sciences will benefit from obtaining additional training in precision agriculture. The agriculture industry recruits and employs personnel trained in many areas and would benefit from employees with additional technology competencies. The Precision Agriculture Certificate will provide graduates enhanced employment opportunities in agriculture.

EXPECTED LEARNING OUTCOMES

Students completing the Precision Agriculture certificate are expected to:

1. possess a comprehensive knowledge of data formats, types and structures,
2. work independently to create farm production scenarios from planning to harvesting stages,
3. integrate agriculture technology content knowledge within their chosen major, and
4. understand and incorporate advancing technologies into standardized workflows.

4. SUPPORT

An additional Precision Agriculture instructor has been approved to be hired to implement the core certificate coursework.
Letters of support are attached to the UCCC new course submissions (PSS/ABE 3543 and PSS/ABE 4543/6543).

Elective/Optional Course Descriptions:

ABE 3413: Bioinstrumentation (3 credits)
(Prerequisite: PH 2223 or equivalent). Two hours lecture. Two hours laboratory. Applied circuit analysis, electrodes and transducers, stress and strain, temperature measurements, human physiology, digital and programmable instrumentation.

ABE 3513: GPS/GIS in Agriculture and Engineering (3 credits)
(Prerequisite: MA 1313 and MA 1323, or equivalent). Two hours lecture. Four hours laboratory. Basic theory and hands-on application of global positioning system (GPS) technology/hardware, and geographic information systems (GIS) software, for precise positioning in agriculture and engineering.

ABE 4163/6163: Machinery for Agro-Ecosystems (3 credits)
(Prerequisites: ABE 2173 or consent of instructor). Two hours lecture. Two hours laboratory. Selection, sizing and operation machine systems using cost analysis and systems techniques. Emphasis on agricultural machines used in farming; tillage, planting, harvesting, conveying agricultural materials.

ABE 4263/6263: Soil and Water Management (3 credits)
(Prerequisite: ABE 2873. Students with credit in ABE 2263 will not receive credit in this course). Two hours lecture . Three hours laboratory. Introduction to soil and water management principles; elementary hydrology, basic fundamentals of erosion control, surface and subsurface drainage, and water control for irrigation.

ABE/ECE/PSS 4483/6483: Introduction to Remote Sensing (3 credits; Fall only)
(Prerequisite: Senior or graduate standing, or consent or instructor). Three hours lecture. Electromagnetic interactions, passive sensors, multispectral and hyperspectral optical sensors, active sensors, imaging radar, SAR Lidar, digital image processing, natural resource applications.

ABE 4844/6844: Sustainable Communities (4 credits)
Three hours lecture. Two hours laboratory/studio. Theory and practices that minimize resource use and pollutant production in the human landscape (same as LA 4844/6844).

ABE 6423: Bioinstrumentation II (3 credits)
(Prerequisite: ABE 3413 or graduate standing). Two hours lecture. Two hours laboratory. Theory; application of automated measuring and control systems in biological sciences. Includes design/use of transducer interfaces; electronic signal conditioning; data logging; microprocessor based systems.

AEC 3413: Introduction to Food Marketing (3 credits)
(Prerequisites: AEC 2713 or EC 2123). Three hours lecture. Describes the principles, functions, agencies, and methods of farm and food product and input marketing.

AEC 3513: Food and Fiber Production (3 credits)

(Prerequisite: AEC 3113). Three hours lecture. Economic principles applied to food and fiber production situations with emphasis on firm-level decision analysis.

AEC 4113/6113: Agribusiness Firm Management (3 credits)
(Prerequisites: EC 3123 or EC 3333). Three hours lecture. Examination and study of the organization, management, and operation of agricultural business with special reference to the application of managerial principles for effective decision-making.

AEC 4133/6133: Food Markets and Prices (3 credits)
(Prerequisites: AEC 3113 and EC 3123). Three hours lecture. Application of economic theory to agricultural prices and agricultural markets in price estimation, discovery, and determination. Emphasis on marketing management and pricing in agricultural firms.

AEC 4343/6343: Advanced Farm Management (3 credits)
(Prerequisites: Senior standing, EC 3123, and AEC 4523). Three hours lecture. Techniques and procedures for decision making in farm business as related to determination of optimum enterprise choice and resource combination in both static and dynamic frameworks.

FIN 3123: Financial Management (3 credits)
(Prerequisites: EC 2123, ACC 2013, and BQA 2113). Three hours lecture. Study of objectives, tools, methods, and problems of financial management; financial analysis, planning, control, sources/uses of funds, capital budgeting decisions and working capital.

EPP 3124: Forest Pest Management (4 credits)
Three hours lecture. Three hours laboratory. Study of the biology, damage, survey techniques, and control of forest diseases and insects. Pest management in southern forests will be emphasized. Fall semester.

EPP 4163/6163: Plant Disease Management (3 credits)
(Prerequisite: EPP 4113/6113 or consent of instructor). Two hours lecture. Three hours laboratory. Techniques and fundamentals of plant disease management. Disease dynamics related to management, avoidance, exclusion, eradication of pathogens; principles of plant protection, spraying techniques; biological control. Spring semester.

EPP 4214/6214: Diseases of Crops (4 credits)
(Prerequisites: EPP 3113 or 3124). Three hours lecture. Two hours laboratory. Fundamentals and practical aspects of identification and control of selected diseases of crop plants grown in the southern U.S. Spring semester.

EPP 4234/6234: Field Crop Insects (4 credits)
(Prerequisite: EPP 2213 or 4154). Three hours lecture. Two hours laboratory. Fall semester. Recognition, biology, distribution, damage, economic importance and methods of control of insect pests of agronomic and horticultural crops.

EPP 4263/6234: Principles of Insect Pest Management (3 credits)
Two hours lecture. Two hours laboratory. Discussion of pest management concepts, insect control methods, sampling, and pest management systems. Laboratory involves sampling, calibration and other exercises related to pest management.

FO 4472/4471 or FO 6472/6471: GIS natural Resource Management (3 credits; Fall only)
(Prerequisite: Junior standing; Co-requisite: FO 4471/6471). Two hours lecture. Introduction to geographic information systems (GIS) with emphasis on collection, encoding, storage, retrieval, and analysis of spatial data for use in management of natural resources.
(Prerequisite: Junior standing; Co-requisite: FO 4471/6471). Three hours laboratory. Computer laboratory exercises that stress development, management, and use of digital geographical data for management of natural resources.

PSS 3303/3301: Soils and Soils Laboratory (4 credits)
(Prerequisite: One semester (preferably two) of inorganic chemistry, CH 1043.) Three hours lecture. General treatment of all phases of the subject including lime and fertilizers.
(Prerequisite: Prior credit for/or current enrollment in PSS 3303.) Two hours laboratory. General treatment of selected phases of the subject matter.

PSS 3133: Introduction to Weed Science (3 credits)
(Prerequisites: BIO 2113; CH 1213 or CH 1053). Three hours lecture. Managing weeds; basic weed biology; methods of controlling weeds, introductory herbicide technology, weed control systems, and the fate of herbicides in the environment

PSS 4313/6313: Soil Fertility (3 credits)
(Prerequisites: PSS 3303 and Junior standing). Three hours lecture. Fundamentals and concepts of soil fertility; sources and responses of crops to plant nutrients; soil fertility evaluation and maintenance through fertilization.

PSS 4113/6113: Agricultural Crop Physiology (3 credits)
Three hours lecture. Online course. Physiology of agricultural plants, including water relations, respiration, photosynthesis and growth and development.

PSS 4333/6333: Soil Conservation and Land Use (3 credits)
(Prerequisite: PSS 3303). Two hours lecture . Three hours laboratory. Soil identification, topographic relationships and soil-water resources; their characteristics, quality, suitability, and management; conservation practices; using soil maps to determine land use.

PSS 4343/4341 or PSS 6343/6341: Controlled Environment Agriculture (4 credits)
(Prerequisites: BIO 2113 and PSS 3303; Co-requisite for horticulture majors: PSS 4341). Three hours lecture. Online Course. A detailed review and explanation of principles and practices of controlled environments operation and management.
(Co-requisite: PSS 4343 for horticulture majors). Two hours laboratory. Online course. An experiential study of the principles and practices of controlled environments operation and management.

PROPOSAL FOR ADDITION OF CERTIFICATE PROGRAM
Certificate: PSS/ABE Certificate in Precision Agriculture

Contacts: Dr. Mike Cox, msc15@msstate.edu
Dr. Joel Paz, jpaz@abe.msstate.edu

1. CATALOG DESCRIPTION

There is a need to train students in the broad array of precision agriculture technologies. This certificate program complements the MSU PSS/ABE crop production and Ag. Engineering majors, research and other majors taught across College of Agriculture and Life Sciences (CALS) departments. This certificate features emerging technologies in decision-based agricultural planning and implementation. The certificate requires a minimum of 16 hours with at least 10 credit hours specific to Precision Agriculture coursework and six additional hours of electives or optional courses. This certificate is available at the undergraduate and graduate level.

2. CURRICULUM OUTLINE

Two new courses are proposed to develop the Precision Agriculture Certificate.

To obtain a Precision Agriculture Certificate, students are required to complete the following 16 hours:

PSS/ABE 2543	Precision Agriculture I	3
PSS/ABE 4543/6543	Precision Agriculture II	3
ECE/FO/GR/PSS 4411/6411	Remote Sensing Seminar	1
ABE/PSS 4000/7000	Directed Individual Study (hours and project approved by the certificate faculty committee)	3

Choose from one of the following options to complete a minimum of 16 hours:

Option 1: choose from the following: 6-8

ABE/ECE/PSS 4483/6483	Introduction to Remote Sensing
ABE 3513	GPS/GIS in Agriculture and Engineering
FO 4471/6471	GIS natural Resource Management OR
FO 4472/6472	GIS natural Resource Management
PSS 4373/6373	Geospatial Agronomic Management
GR 4303/6303	Principles of GIS
GR 3303	Survey of Geospatial Technologies

Option 2: (Community/Junior College AGT courses) 6-8

- any **FOUR** technical courses from the following in a Precision Agriculture Technology Concentration with the Postsecondary Agriculture Business and Management Technology program

AGT 1163	Introduction to Spatial Information Systems
AGT 2154	Geographic Information Systems I

AGT 1254	GPS Data Collection
AGT 2164	Variable Rate Technology
AGT 1354	Remote Sensing
AGT 2474	Site Specific Pest Management

OR Completion of the UAV Training Program coursework at Hinds Community College

Option 3 – Discipline Specific Electives 6-8

ABE 3413	Bioinstrumentation
ABE 4163/6163	Machinery for Agro-Ecosystems
ABE 4263/6263	Soil and Water Management
ABE 4844/6844	Sustainable Communities
ABE 6423	Bioinstrumentation II
AEC 3413	Introduction to Food Marketing
AEC 3513	Food and Fiber Production
AEC 4113/6113	Agribusiness Firm Management
AEC 4133/6133	Food Markets and Prices
AEC 4343/6343	Advanced Farm Management
BIO 4214	Plant Physiology
EPP 3124	Forest Pest Management
EPP 4163/6163	Plant Disease Management
EPP 4214/6214	Diseases of Crops
EPP 4234/6234	Field Crop Insects
EPP 4263/6263	Principles of Insect Pest Management
FIN 3123	Financial Management
PSS 3301	Soils Laboratory
PSS 3303	Soils
PSS 3133	Introduction to Weed Science
PSS 4113/6113	Agricultural Crop Physiology
PSS 4313/6313	Soil Fertility
PSS 4333/6333	Soil Conservation and Land Use
PSS 4343/6343	Controlled Environment Agriculture
PSS 4813/6813	Herb Tech
PSS 4823/6823	Turf Weed Management

3. STUDENT LEARNING OUTCOMES AND ASSESSMENT

Students training in agriculture and biological engineering, agribusiness and economics, agriculture information sciences, agronomy, animal and dairy sciences, biochemistry and entomology, environmental science, horticulture, landscape architecture, and poultry sciences will benefit from obtaining additional training in precision agriculture. The agriculture industry recruits and employs personnel trained in many areas and would benefit from employees with additional technology competencies. The Precision Agriculture Certificate will provide graduates enhanced employment opportunities in agriculture.

EXPECTED LEARNING OUTCOMES

Students completing the Precision Agriculture certificate are expected to:

1. possess a comprehensive knowledge of data formats, types and structures,
2. work independently to create farm production scenarios from planning to harvesting stages,
3. integrate agriculture technology content knowledge within their chosen major, and
4. understand and incorporate advancing technologies into standardized workflows.

4. SUPPORT

An additional Precision Agriculture instructor has been approved to be hired to implement the core certificate coursework.
Letters of support are attached to the UCCC new course submissions (PSS/ABE 3543 and PSS/ABE 4543/6543).

Elective/Optional Course Descriptions:

ABE 3413: Bioinstrumentation (3 credits)
(Prerequisite: PH 2223 or equivalent). Two hours lecture. Two hours laboratory. Applied circuit analysis, electrodes and transducers, stress and strain, temperature measurements, human physiology, digital and programmable instrumentation.

ABE 3513: GPS/GIS in Agriculture and Engineering (3 credits)
(Prerequisite: MA 1313 and MA 1323, or equivalent). Two hours lecture. Four hours laboratory. Basic theory and hands-on application of global positioning system (GPS) technology/hardware, and geographic information systems (GIS) software, for precise positioning in agriculture and engineering.

ABE 4163/6163: Machinery for Agro-Ecosystems (3 credits)
(Prerequisites: ABE 2173 or consent of instructor). Two hours lecture. Two hours laboratory. Selection, sizing and operation machine systems using cost analysis and systems techniques. Emphasis on agricultural machines used in farming; tillage, planting, harvesting, conveying agricultural materials.

ABE 4263/6263: Soil and Water Management (3 credits)
(Prerequisite: ABE 2873. Students with credit in ABE 2263 will not receive credit in this course). Two hours lecture . Three hours laboratory. Introduction to soil and water management principles; elementary hydrology, basic fundamentals of erosion control, surface and subsurface drainage, and water control for irrigation.

ABE/ECE/PSS 4483/6483: Introduction to Remote Sensing (3 credits; Fall only)
(Prerequisite: Senior or graduate standing, or consent or instructor). Three hours lecture. Electromagnetic interactions, passive sensors, multispectral and hyperspectral optical sensors, active sensors, imaging radar, SAR Lidar, digital image processing, natural resource applications.

ABE 4844/6844: Sustainable Communities (4 credits)
Three hours lecture. Two hours laboratory/studio. Theory and practices that minimize resource use and pollutant production in the human landscape (same as LA 4844/6844).

ABE 6423: Bioinstrumentation II (3 credits)
(Prerequisite: ABE 3413 or graduate standing). Two hours lecture. Two hours laboratory. Theory; application of automated measuring and control systems in biological sciences. Includes design/use of transducer interfaces; electronic signal conditioning; data logging; microprocessor based systems.

AEC 3413: Introduction to Food Marketing (3 credits)
(Prerequisites: AEC 2713 or EC 2123). Three hours lecture. Describes the principles, functions, agencies, and methods of farm and food product and input marketing.

AEC 3513: Food and Fiber Production (3 credits)

(Prerequisite: AEC 3113). Three hours lecture. Economic principles applied to food and fiber production situations with emphasis on firm-level decision analysis.

AEC 4113/6113: Agribusiness Firm Management (3 credits)
(Prerequisites: EC 3123 or EC 3333). Three hours lecture. Examination and study of the organization, management, and operation of agricultural business with special reference to the application of managerial principles for effective decision-making.

AEC 4133/6133: Food Markets and Prices (3 credits)
(Prerequisites: AEC 3113 and EC 3123). Three hours lecture. Application of economic theory to agricultural prices and agricultural markets in price estimation, discovery, and determination. Emphasis on marketing management and pricing in agricultural firms.

AEC 4343/6343: Advanced Farm Management (3 credits)
(Prerequisites: Senior standing, EC 3123, and AEC 4523). Three hours lecture. Techniques and procedures for decision making in farm business as related to determination of optimum enterprise choice and resource combination in both static and dynamic frameworks.

FIN 3123: Financial Management (3 credits)
(Prerequisites: EC 2123, ACC 2013, and BQA 2113). Three hours lecture. Study of objectives, tools, methods, and problems of financial management; financial analysis, planning, control, sources/uses of funds, capital budgeting decisions and working capital.

EPP 3124: Forest Pest Management (4 credits)
Three hours lecture. Three hours laboratory. Study of the biology, damage, survey techniques, and control of forest diseases and insects. Pest management in southern forests will be emphasized. Fall semester.

EPP 4163/6163: Plant Disease Management (3 credits)
(Prerequisite: EPP 4113/6113 or consent of instructor). Two hours lecture. Three hours laboratory. Techniques and fundamentals of plant disease management. Disease dynamics related to management, avoidance, exclusion, eradication of pathogens; principles of plant protection, spraying techniques; biological control. Spring semester.

EPP 4214/6214: Diseases of Crops (4 credits)
(Prerequisites: EPP 3113 or 3124). Three hours lecture. Two hours laboratory. Fundamentals and practical aspects of identification and control of selected diseases of crop plants grown in the southern U.S. Spring semester.

EPP 4234/6234: Field Crop Insects (4 credits)
(Prerequisite: EPP 2213 or 4154). Three hours lecture. Two hours laboratory. Fall semester. Recognition, biology, distribution, damage, economic importance and methods of control of insect pests of agronomic and horticultural crops.

EPP 4263/6234: Principles of Insect Pest Management (3 credits)
Two hours lecture. Two hours laboratory. Discussion of pest management concepts, insect control methods, sampling, and pest management systems. Laboratory involves sampling, calibration and other exercises related to pest management.

FO 4472/4471 or FO 6472/6471: GIS natural Resource Management (3 credits; Fall only)
(Prerequisite: Junior standing; Co-requisite: FO 4471/6471). Two hours lecture. Introduction to geographic information systems (GIS) with emphasis on collection, encoding, storage, retrieval, and analysis of spatial data for use in management of natural resources.
(Prerequisite: Junior standing; Co-requisite: FO 4471/6471). Three hours laboratory. Computer laboratory exercises that stress development, management, and use of digital geographical data for management of natural resources.

PSS 3303/3301: Soils and Soils Laboratory (4 credits)
(Prerequisite: One semester (preferably two) of inorganic chemistry, CH 1043.) Three hours lecture. General treatment of all phases of the subject including lime and fertilizers.
(Prerequisite: Prior credit for/or current enrollment in PSS 3303.) Two hours laboratory. General treatment of selected phases of the subject matter.

PSS 3133: Introduction to Weed Science (3 credits)
(Prerequisites: BIO 2113; CH 1213 or CH 1053). Three hours lecture. Managing weeds; basic weed biology; methods of controlling weeds, introductory herbicide technology, weed control systems, and the fate of herbicides in the environment

PSS 4313/6313: Soil Fertility (3 credits)
(Prerequisites: PSS 3303 and Junior standing). Three hours lecture. Fundamentals and concepts of soil fertility; sources and responses of crops to plant nutrients; soil fertility evaluation and maintenance through fertilization.

PSS 4113/6113: Agricultural Crop Physiology (3 credits)
Three hours lecture. Online course. Physiology of agricultural plants, including water relations, respiration, photosynthesis and growth and development.

PSS 4333/6333: Soil Conservation and Land Use (3 credits)
(Prerequisite: PSS 3303). Two hours lecture . Three hours laboratory. Soil identification, topographic relationships and soil-water resources; their characteristics, quality, suitability, and management; conservation practices; using soil maps to determine land use.

PSS 4343/4341 or PSS 6343/6341: Controlled Environment Agriculture (4 credits)
(Prerequisites: BIO 2113 and PSS 3303; Co-requisite for horticulture majors: PSS 4341). Three hours lecture. Online Course. A detailed review and explanation of principles and practices of controlled environments operation and management.
(Co-requisite: PSS 4343 for horticulture majors). Two hours laboratory. Online course. An experiential study of the principles and practices of controlled environments operation and management.

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: Business **Department:** Dean's Office

Contact Person: Robert Crossler **Mail Stop:** 9581 **E-mail:** rob.crossler@msstate.edu

Nature of Change: Add **Date Initiated:** 02/25/2016 **Effective Date:** 08/15/2016

Degree to be offered at: Campus 1

Current Degree Program Name: N/A

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

New Degree Program Name: Graduate Minor in Business Analytics

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

Summary of Proposed Changes:

The graduate minor requires students to complete 9 graduate credit hours, comprised of 6 required graduate credit hours and 3 elective graduate credit hours. The following 6 required graduate credit hours listed below:

- **BIS 8413 Data Analytics**
- **BQA 6413 Business Forecasting and Predictive Analytics**

And 3 graduate credit hours from the elective credit hours listed below:

- **ACC 8043 Fraud Examination**
- **BIS 8313 Advanced Database Design Administration**
- **EC 6643 Econ Forecasting & Anal**

Approved:	*Date:*
Department Head	2/29/16
Chair, College or School Curriculum Committee	4/1/2016
Dean of College or School	4-11-16
Chair, University Committee on Courses and Curricula	
Chair, Graduate Council (if applicable)	
Chair, Deans Council	

☐ IHL Action Required

☐ SACS Letter Sent

New Minor Proposal
Graduate Minor in Business Analytics

1. CATALOG DESCRIPTION

See below in curriculum outline table

2. CURRICULUM OUTLINE

PROPOSED NEW DEGREE DESCRIPTION	
Minor: Business Analytics The College of Business offers a minor in Business Analytics to help MSU students prepare for careers in analytics across business disciplines. This minor offers interdisciplinary coursework in information systems, business quantitative analysis, and accounting. Each course in the minor goes beyond traditional business courses by focusing aspects of the learning on important nuances associated with a successful analytics career. The graduate business analytics minor is available to any MSU student, regardless of major. The Minor in Business Analytics is primarily designed to complement the Masters of Business Administration, Masters of Science in Information Systems, Masters of Public Accountancy, and Masters of Taxation. The graduate minor requires students to complete 9 graduate credit hours, comprised of 6 required credit hours and 3 elective credit hours, listed below*. Students interested in the Data Analytics Minor should contact the COB's Graduate Studies in Business in 200 McCool Hall. *Some of these courses require meeting prerequisites, which would increase the number of credit hours required.	
PROPOSED CURRICULUM OUTLINE	6 Required Hours
BIS 8413 Data Analytics	3
BQA 6413 Business Forecasting and Predictive Analytics	3
	3 Elective Hours
ACC 8043 Fraud Examination	3
BIS 8313 Advanced Database Design Administration	3
EC 6643 Econ Forecasting & Anal	3
Total Hours	9

3. STUDENT LEARNING OUTCOMES AND ASSESSMENT

Students completing the Business Analytics Minor will be able to:

- Demonstrate an understanding of the central theories and policies concerning business analytics
- Utilize business analytics tools such as SQL and R
- Utilize business analytics methods
- Demonstrate an ability to analyze business analytics results
- Demonstrate an ability to apply business analytics in a real-world business context

Learning outcomes will be assessed by direct measures embedded in course assignments. Students in the minor will also be prepared to compete in university-level business analytics competitions. These

competitions are judged by business analytics professionals. Their feedback will supplement the direct measures in overall program assessment.

4. SUPPORT
   See attached.

5. PROPOSED 4-LETTER ABBREVIATION
   BSA

6. PROPOSED SEMESTER EFFECTIVE
   Fall 2016

MISSISSIPPI STATE UNIVERSITY

Department of Management and Information Systems
College of Business

To: University Committee on Courses and Curricula

From: College of Business Curriculum Committee

Date: April 1, 2016

The Curriculum Committee of the College of Business has reviewed the proposed addition of the Graduate Minor in Business Analytics. The proposal was approved unanimously at the Committee's regular meeting on April 1, 2016.

The Committee appreciates your consideration of this proposal. If you have any questions, or need any additional information, please contact Dr. Robert Otondo at rotondo@business.msstate.edu.

Thank you for your time in considering this request.

Robert Otondo

Dr. Robert Otondo, Chair

302 McCool Hall • Box 9581 • Mississippi State, MS 39762 • (662)325-3928 • (662)325-8651 Fax • http://business.msstate.edu

AACSB ACCREDITED

MISSISSIPPI STATE UNIVERSITY

Distributed Analytics and Security Institute

Box 9627
Mississippi State, MS 39762
2 Research Boulevard
Starkville, MS 39759

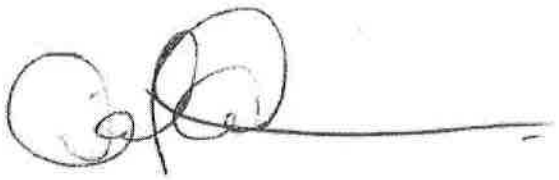
February 26, 2016

SUBJECT: Letter of Support for Business Analytics Minor

To Whom It May Concern:

The Management and Information Systems Department of the College of Business has shared their proposal to create a Business Analytics Minor. As the Director of the Distributed Analytics and Security Institute, a university research institute with the mission of supporting analytics efforts across Mississippi State University, we wholeheartedly support the creation of this minor. The students pursuing this minor will be positioned in the workforce as graduates who can effect great change in the industry, and their preparation in this critical discipline will make them valuable employees as well as great ambassadors for Mississippi State University.

Sincerely,



David A. Dampier, PhD
Professor of Computer Science and Engineering
Director, Distributed Analytics and Security Institute

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: Business **Department:** Management & Information Systems

Contact Person: Robert Otondo **Mail Stop:** 9581 **E-mail:** rotondo@business.msstate

Nature of Change: Modification **Date:** Fall 2016

Program will be offered at: Starkville (Campus 1)

Current Degree Program Name: Minor **Effective Date:** Spring 2016

Major: Business Information Systems **Concentration:**

New Degree Program Name: Select One

Major: **Concentration:**

Summary of Proposed Changes:

Updates to parallel changes in BIS BBA major approved in AY 2014-2015. These changes include:

1. Replace BIS 1733 as a required class with BIS 1523.
2. Replace BIS 1753 as a required class with BIS 2523.
3. Reflect change to BIS 4523 course title (approved AY 2014-2015).
4. Re-state minimum GPA requirement of 3.00 explicitly in Catalog Description.

Department Head

Robert Otondo 4/1/2016
Chair, College or School Curriculum Committee

4-11-16
Dean of College or School

Chair, University Committee on Courses and Curricula

Chair, Graduate Council (if applicable)

Chair, Deans Council

☐ SACS Letter Sent

PROPOSAL TO MODIFY

Minor in Business Information Systems

This request includes four modifications to the BIS minor curriculum:

1. Replace BIS 1733 as a required class with BIS 1523.
2. Replace BIS 1753 as a required class with BIS 2523.
3. Reflect change to BIS 4523 course title (approved AY 2014-2015).
4. Re-state minimum GPA requirement of 3.00 explicitly in Catalog Description

1. Catalog Description

The current and proposed Catalog Descriptions are available below in Item 2, Curriculum Outline.

2. Curriculum Outline

CURRENT Degree Description		**PROPOSED Degree Description**	
Minor: Business Information Systems		Minor: Business Information Systems	
A BIS minor is offered to both Business and Non-Business students. A minor in BIS is attained by taking the following required courses: BIS *1733* and BIS *1753*, and three of the following elective courses: BIS 3523, BIS 3753, BIS 4113, BIS 4513, BIS 4523, BIS 4533, BIS 4753, and BIS 4763. Students interested in this minor should contact a BIS advisor.		A BIS minor is offered to both Business and Non-Business students. A minor in BIS is attained by taking the following required courses: BIS **1523** and BIS **2523**, and three of the following elective courses: BIS 3523, BIS 3753, BIS 4113, BIS 4513, BIS 4523, BIS 4533, BIS 4753, and BIS 4763. Students interested in this minor should contact a BIS advisor. **Note: A minimum GPA of 3.00 is required in the 15 hours of the minor.**	
CURRENT CURRICULUM OUTLINE	Req. Hrs.	PROPOSED CURRICULUM OUTLINE	Req. Hrs.
MINOR CORE COURSES Required Minor Classes (6 hours) *BIS 1733 Visual Basic Applications*[1] *BIS 1753 Intro to Business COBOL*[1] Elective Minor Classes (9 hours) BIS 3523 Advanced Languages I BIS 3753 Business Database Systems BIS 4113 BIS Security Management BIS 4513 Microcomputers and Networks BIS 4523 *Advanced Languages II*[2] BIS 4533 Decision Support Systems BIS 4753 Structured Systems Analysis BIS 4763 BIS Senior Seminar	15	MINOR CORE COURSES Required Minor Classes (6 hours) **BIS 1523 Web Development I** **BIS 2523 Web Development II** Elective Minor Classes (9 hours) BIS 3523 Advanced Languages I BIS 3753 Business Database Systems BIS 4113 BIS Security Management BIS 4513 Microcomputers and Networks BIS 4523 **Bus Programming with COBOL**[2] BIS 4533 Decision Support Systems BIS 4753 Structured Systems Analysis BIS 4763 BIS Senior Seminar	15
Total Hours	15	Total Hours	15

[1] BIS 1733 and BIS 1753 are no longer required major or minor courses, but will not be deleted from the catalog at this time.

[2] The course name for BIS 4523 was modified from "Advanced Languages II" to "Business Programming with COBOL" in AY2014-2015.

3. Justification

In AY 2014-2015, modifications to the BIS BBA Major were approved to enhance our ability to provide a strong educational background for those students whose primary interest is in information systems and technologies. We believe that the modifications described in this proposal not only align the BIS minor to changes made to the BIS major in AY 2014-2015, but also afford non-BIS students the opportunity to augment their major classes with an enhanced background in BIS.

Learning outcomes:

No changes are proposed. We will retain the learning outcomes proposed in March 2012:

"Students who minor in BIS will demonstrate business knowledge including:

- Key concepts and theories related to structured programming and problem solving
- Business process analysis and design, process, modeling, systems design
- Analysis and design of database, telecommunications, and related systems
- Ethical and social responsibilities of IT developers
- In-depth understanding of requirements to ensure the security and privacy of information resources within the organization
- Working effectively with individuals and teams
- Analyzing technology choices, feasibility analysis"

The changes in this degree modification proposal will help improve the BIS Minor Degree Program in several ways.

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

We believe the proposed changes will help meet several educational and cultural needs that were previously approved in modifications to the BIS major in AY 2014-2015. First, requiring popular Web development content in 1000-level classes (i.e., BIS 1523 and BIS 2523) should create more interest in the BIS minor in lower-division students. In turn, this move should help MSU meet local, state, regional, and national needs for more STEM students and graduates. Second, the offering electives in COBOL and object-oriented programming should help meet the need for graduates with a more rigorous background in these areas.

b. Will this program change result in duplication in the System?

No. The changes described in this proposal mirror those in the BIS BBA Major Degree proposal that was passed in AY 2014-2015.

c. Will this program change, alter, or advance student diversity within the discipline?

We do not foresee that the proposed changes will increase nor decrease student diversity in the BIS minor.

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

We believe that that the proposed changes will increase the potential placement of students with a BIS minor because such students will receive training in the technical skills demanded by many industries.

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

We believe the proposed changes will help increase potential salaries for MSU graduates given the increased need for job applicants with greater IT skills.

4. Support

A letter of support from the Department of Management and Information Systems is attached, signed by the department head and the IS faculty. The courses will be taught by existing faculty, and no further resources are needed at this time

5. Proposed 4-Letter Abbreviation

No change

6. Effective Date

Fall 2016

MISSISSIPPI STATE UNIVERSITY

Department of Management and Information Systems
College of Business

To: University Committee on Courses and Curricula

From: BIS Faculty, Management & Information Systems Department

Date: February 10, 2016

The BIS faculty have reviewed the proposed modification to the BIS undergraduate minor. The proposed changes will update the minor so that it is consistent with changes to the BIS undergraduate major that were approved in AY 2014-2015.

We support this proposal, and appreciate your consideration of it. If you have any questions, or need any additional information, please contact Dr. Robert Otondo at rotondo@business.msstate.edu.

Thank you for your time in considering this request.

Dr. James J. Chrisman, Department Head

Dr. Robert E. Crossler

Dr. Kent Marett

Dr. Robert Otondo

Dr. Rodney Pearson

Dr. Gary Templeton

Dr. Merrill Warkentin

Mr. Steve Canfield

302 McCool Hall • Box 9581 • Mississippi State, MS 39762 • (662)325-3928 • (662)325-8651 Fax • http://business.msstate.edu