MISSISSIPPI STATE UNIVERSITY ™

UNIVERSITY COMMITTEE ON
COURSES AND CURRICULA

A MEMORANDUM

DATE: March 9, 2017

TO: UCCC Members

FROM: Dr. Dana Pomykal Franz, Chair

SUBJECT: March 24, 2017 Meeting

Enclosed are the minutes from the meeting on February 17, 2017 and the agenda and proposals for the meeting on Friday, **March 24, 2017 beginning at 1:30 p.m.**   The meeting will be held in Room 324 of the Student Union. Please contact the UCCC office if you are unable to attend.

Thank you.

Enclosures: February 17, 2017 Meeting Minutes
             Course/Curriculum Proposals

AGENDA
UNIVERSITY COMMITTEE ON COURSES AND CURRICULA
March 24, 2017

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

AGRICULTURE AND LIFE SCIENCES

Addition	BIO 2513	Animal Diversity

ARTS AND SCIENCES

Addition	GG 8743	Basin Analysis
Addition	PSY 8813	Psychological Sciences Teaching Practicum
Modification	SO 4403/6403	Sociology of Gender and Sexuality

BUSINESS

+Distance	ACC 2013	Principles of Financial Accounting
Modification	EC 8323	Economic Analysis of Developing Nations
Addition	EC 8473	Public Choice
+Distance	MGT 3114	Principles of Management and Production

EDUCATION

Modification	EPY 8293	Cognitive and Affective Development (Tabled at Nov. 18, 2016 meeting)
Addition +Distance	TKB 4573/6573	Data Networks II

ENGINEERING

Addition	CSE 4253/6253	Secure Software Engineering (Tabled at Jan. 20, 2017 meeting)
Addition	CSE 4753/6753	Introduction to Cyber Operations (Tabled at Jan. 20, 2017 meeting)
Addition	CSE 4763/6763	Cyber Law (Tabled at Jan. 20, 2017 meeting)

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

ARTS & SCIENCES

Modification	Ph.D.	Applied Psychology (Tabled at Feb. 17, 2017 meeting)
Modification	Ph.D.	Sociology
Modification	MS	Sociology

ENGINEERING

Addition	BS	Engineering: Cyber Security and Operations (Tabled at Jan. 20, 2017 meeting)

University Committee on Courses and Curricula
Mississippi State University
February 17, 2017

Present: Amy Adkerson, Tracey Baham, Randy Campbell, Russell Carr, Mike Cox, Amy Crumpton, Dana Franz, Seamus Freyne, Charles Freeman, Trey Howell, Brenda Kirkland, Lynda Moore, Rob Moore, Erika Niemann, Greg Olsen, Emily Owen, Tommy Parker, Andy Perkins, Tommy Phillips, John Rigsby, Barry Stewart, Pam Sullivan, Jenny Turner, Robert Wolverton, Chien Yu

Proxies: Hope Durst for Susan Seal, Bob Wolverton for Pat Matthes

Excused: Shrinidhi Ambinakudige, Madelyn Barr, Robert Harland, Kevin Hunt, Qingmin Meng, Kelly Moser

Absent: Ben Emmich

Guests: Kevin Armstrong, Richard Damms, Marita Gootee, Torri Jones, Jamie Larson, Dominic Lippillo, Allison Pearson, Peter Ryan, Joe Wilmoth

Franz called the meeting to order at 1:25 p.m. on Friday, February 17, 2017 in room 324 of the Student Union. Crumpton moved to approve the January 20, 2017 UCCC meeting minutes. Niemann seconded the motion. The minutes were approved unanimously.

The UCCC Office received one nomination for UCCC Chairperson for 2017-2018, and the nomination was Dana Franz. Franz was unanimously reelected UCCC Chairperson for 2017-2018.

Kirkland moved to approve the Authorization to Plan the Master of Physician Assistant Studies. Stewart seconded the motion. Dr. Peter Ryan, Dr. Allison Pearson, and Dr. Richard Damms appeared in support of the proposal. The committee discussed the Meridian facilities that are available for use and the difference in a Physician Assistant degree and a Nurse Practitioner degree. The motion to approve the Authorization to Plan the Master of Physician Assistant Studies was approved unanimously.

Stewart moved to approve the modification of the Bachelor of Applied Technology. Crumpton seconded the motion. Dr. Richard Damms appeared in support. Committee members pointed out that while the proposed change is listed as adding a new concentration in Event and Hospitality Services, the major core courses were modified.   Since the Healthcare Services concentration was not listed in the program proposal, it was not clear how the major core modification would affect the Healthcare Services concentration. Carr moved to pass the

modification of the Bachelor of Applied Technology contingent upon the above concerns being addressed. Niemann seconded the motion. The motion to pass the modification to the Bachelor of Applied Technology contingent was unanimously approved.

Carr moved to approve the modification of the Ph.D. in Applied Psychology and the addition of PSY 8823 Diversity in Applied Psychology. Stewart seconded the motion. The subcommittee appointed to review the proposals made the following observations: both degree concentrations need to be listed on the cover/signature sheet; under the Cognitive core, the proposal lists PSY 6653, but the catalog lists PSY 8703 instead; under the Clinical concentration, 21 hours are listed as being required, while the current catalog lists 27; on page 3 of the proposal, there appears to be a typographical error in which PSY 8713, PSY 8313, and PSY 8613 were inserted by mistake. Howell moved to table the modification of the Ph.D. in Applied Psychology based upon the above concerns. Niemann seconded the motion. The motion to table the modification of the Ph.D. in Applied Psychology was approved. Committee members then unanimously approved the addition of PSY 8823 Diversity in Applied Psychology.

Crumpton moved to approve the addition and Maymester designation for ART 3253 Photogram, the addition of ART 3263 Scanography, and the addition of ART 4893/6893 Video Art. Rigsby seconded the motion. Franz announced that Dr. Peter Ryan was contacted about offering a three credit hours studio class during Maymester, and Dr. Ryan did not object. The committee discussed the attendance policies for Art and Architecture classes. The motion to approve the addition and Maymester designation for ART 3253, the addition of ART 3263, and the addition of ART 4893/6893 was approved unanimously.

Crumpton moved to approve the modification of the BS in Interior Design, the addition of ID 2403 Introduction to Historic Preservation, the addition of ID 4661 Senior Portfolio Production, and the modification of ID 4662 Professional Practice for Interior Design. The subcommittee appointed to review the proposals made the following observations: in the program modification, there is a modification listed in the first Justification and Learnings Outcome that is not listed under the Summary of Proposed Changes on the cover/signature page; committee members asked if the new course ID 2403 should be listed under electives in the program modification; on ID 2403 there is a typographic error on the grading scale and the information in the drop policy section needs review; on ID 4662, the grading scales overlap in some areas and the information in the drop policy section needs review; and the syllabus for ID 4662 has the heading of ID 4663. Stewart moved to pass the modification of the BS in Interior Design, the addition of ID 2403, the addition of ID 4661, and the modification of ID 4662 contingent upon the above concerns being addressed. Kirkland seconded the motion. The motion to pass contingent was approved unanimously.

Stewart moved to approve the modification of CO 3433 Editing and Design. Crumpton seconded the motion. The motion to approve CO 3433 was approved unanimously.

Carr moved to approve the additions and distance designations of CE 4753/6753 Construction Cost Estimating and CE 4763/6763 Construction Risk Management. Perkins seconded the

motion. Committee members were concerned the day of the final exam was not indicated on the syllabus and an attendance policy was not included in the syllabus as required by university policy. Cox moved to pass CE 4753/6753 and CE 4763/6763 contingent upon the above concerns being addressed. Rigsby seconded the motion. The motion to pass CE 4753/6753 and CE 4763/6763 contingent was approved unanimously.

Carr moved to approve the modification of CHE 1101 Introduction to Chemical & Petroleum Engineering. Perkins seconded the motion. Committee members questioned why students were only receiving one hour of credit for the course while there are enough contact hours for two hours of credit. Committee members also pointed out the syllabus does not contain a support services statement. Niemann moved to pass CHE 1101 contingent upon the above concerns being addressed. R. Moore seconded the motion. The motion to pass CHE 1101 contingent was approved unanimously.

R. Moore moved to approve the modification to the BBA in Marketing. Rigsby seconded the motion. The motion to approve the modification to the BBA in Marketing was approved unanimously.

Crumpton moved to approve distance designation for ADS 1113 Animal Science. Rigsby seconded the motion. Dr. Jamie Larson appeared in support of the proposal. Committee members were concerned the equivalency table did not have clarification or details about how the online lectures would be delivered (video, synchronized, etc.), no interactions the distance students would have (chat rooms, etc.) were included in the equivalency table, the top of the grading scale needs to be reviewed, and participation was only graded for the online course. Carr moved to pass ADS 1113 contingent upon the above concerns being addressed. Phillips seconded the motion. The motion to pass ADS 1113 contingent was approved unanimously.

Cox moved to approve the modification to the BS in Human Development and Family Science. Stewart seconded the motion.   The subcommittee appointed to review the proposal made the following observations: for the Child Development concentration, HS 2283 should be changed to HDFS 2283 and bolded in the table, HS 3813 and HS 4760 should be italicized in the table, CO 1003 Fundamentals of Public Speaking should be bolded in the table, Computer Literacy and Writing Competency current requirements should be italicized in the tabled and the proposed requirements should be bolded in the table, and the 8 hours electives should not be italicized in the table; for the Child Life concentration, HS 4832 and HS 4883 should be italicized in the table, and Computer Literacy and Writing Competency should be bolded in the table; for the Youth Development concentration, Computer Literacy and Writing Competency should be italicized on the current side of the table and bolded on the proposed side of the table; for the Family Science concentration, Computer Literacy and Writing Competency should be italicized on the current side of the table and bolded on the proposed side of the table; for FCS Teacher Education, HS 3303 should be changed to HDFS 3303 and bolded in the table, Computer Literacy and Writing Competency should be italicized on the current side of the table and bolded on the proposed side of the table, and indicate if there is a communication requirement

and/or courses satisfying the communication requirement. Crumpton moved to pass the BS in Human Development and Family Science contingent upon the above concerns being addressed. Moore seconded the motion. The motion to pass contingent was approved unanimously.

Crumpton moved to approve the addition and designation of distance for GRD 9010 Graduate Degree Completion. Carr seconded the motion. Committee members discussed the need for the class and the deadlines graduate students must meet before graduation. The motion to approve the addition and designation of distance for GRD 9010 was approved with two committee members abstaining.

Stewart moved to adjourn. Crumpton seconded the motion. The motion to adjourn was approved unanimously. The meeting was adjourned at 3:35 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: Arts & Sciences   **Department:** Psychology

Contact Person: Kevin J. Armstrong   **Mail Stop:** 9514   **E-mail:** kja3@msstate.edu

Nature of Change: Modification   **Date:** 10/21/16

Program will be offered at: Starkville (Campus 1)

Current Degree Program Name: Doctor of Philosophy   **Effective Date:** Summer 2017

Major: Applied Psychology   **Concentration:** Applied Cognitive Science/Clinical

New Degree Program Name: Doctor of Philosophy

Major: Applied Psychology   **Concentration:** Cognitive Science/Clinical

Summary of Proposed Changes:

Applied Psychology has 2 doctoral concentrations.
1. Change name of Applied Cognitive Science concentration to Cognitive Science.
2. Replace a COE multicultural counseling course in the Clinical concentration with PSY 8823 "Diversity in Applied Psychology" (new course recently approved by the UCCC).
3. Reduce the overall clinical concentration credit hours from 58 to 52 (still requiring minimum 40-hr M.S. prior to granting Ph.D.).

_____   _____
Department Head

_____   _____
Chair, College or School Curriculum Committee

_____   _____
Dean of College or School

_____   _____
Chair, University Committee on Courses and Curricula

_____   _____
Chair, Graduate Council (if applicable)

_____   _____
Chair, Deans Council

☐   **SACS Letter Sent**

DEGREE PROGRAMS

MISSISSIPPI STATE UNIVERSITY

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Contact Person: Kevin J. Armstrong   **Mail Stop:** 9514   **E-mail:** kja3@msstate.edu

Nature of Change: Modification   **Date:** 10/21/16

Program will be offered at: Starkville (Campus 1)

Current Degree Program Name: Doctor of Philosophy   **Effective Date:** Summer 2017

Major: Applied Psychology   **Concentration:** Applied Cognitive Science

New Degree Program Name: Doctor of Philosophy

Major: Applied Psychology   **Concentration:** Cognitive Science

Summary of Proposed Changes:

Applied Psychology has 2 doctoral concentrations. Each gets a change.
1. Change name of Applied Cognitive Science concentration to Cognitive Science.
2. Replace a COE multicultural counseling course with a new PSY 8823 "Diversity in Applied Psychology" course as required for the Applied Psychology, Clinical Concentration.

Department Head   10/24/16

Chair, College or School Curriculum Committee   7 Feb 2017

Dean of College or School   2.8.17

Chair, University Committee on Courses and Curricula

Chair, Graduate Council (if applicable)

Chair, Deans Council

[ ]   SACS Letter Sent

DEGREE PROGRAM MODIFICATION
DOCTOR OF PHILOSOPHY IN APPLIED PSYCHOLOGY

1. CATALOG DESCRIPTION

See below.

2. CURRICULUM OUTLINE

CURRENT Degree Description	PROPOSED Degree Description
Degree: Doctor of Philosophy Major: Applied Psychology Concentrations: (1) *Applied* Cognitive Science; (2) Clinical	Degree: Doctor of Philosophy Major: Applied Psychology Concentrations: (1) Cognitive Science; (2) Clinical
Catalog Description The Department of Psychology offers a doctoral degree in Applied Psychology. The objective of the program is to train applied psychologists for employment in business, industry, engineering, college, university, clinical, and other applied settings. Concentrations are offered in the areas of *Applied* Cognitive Science and Clinical.	Catalog Description The Department of Psychology offers a doctoral degree in Applied Psychology. The objective of the program is to train applied psychologists for employment in business, industry, engineering, college, university, clinical, and other applied settings. Concentrations are offered in the areas of Cognitive Science and Clinical.
Catalog description of the *Applied* Cognitive Science concentration in Applied Psychology: The Cognitive concentration focuses on the interplay and linkages between cognitive psychology, advances in computer science and engineering, the varying cognitive abilities of individuals, and demands for people to use technology more easily and efficiently. Catalog description of the Clinical concentration in Applied Psychology: The Clinical concentration focuses on the study and application of psychological science involving both normal and pathological human behavior, drawing from the cognitive, social, and biological arenas as well as computer science and advanced technologies.	Catalog description of the Cognitive Science concentration in Applied Psychology: The Cognitive concentration focuses on the interplay and linkages between cognitive psychology, advances in computer science and engineering, the varying cognitive abilities of individuals, and demands for people to use technology more easily and efficiently. Catalog description of the Clinical concentration in Applied Psychology: The Clinical concentration focuses on the study and application of psychological science involving both normal and pathological human behavior, drawing from the cognitive, social, and biological arenas as well as computer science and advanced technologies.
CURRENT CURRICULUM OUTLINE	Required Hours	**PROPOSED CURRICULUM OUTLINE**	Required Hours
Major Required Courses: **CONCENTRATION 1 (COGNITIVE)**		Major Required Courses: **CONCENTRATION 1 (COGNITIVE)**	

Research Methods and Quantitative Core	10	Research Methods and Quantitative Core	10
PSY 8214 Quant. Methods in Psych II PSY 8803 Advanced Quant. Methods PSY 8513 Psychological Research Method		PSY 8214 Quant. Methods in Psych II PSY 8803 Advanced Quant. Methods PSY 8513 Psychological Research Method	
Dissertation Hours PSY 9000 Dissertation/research	21	Dissertation Hours PSY 9000 Dissertation/research	21
Cognitive Science Core	6	Cognitive Science Core	6
PSY 8703 Advanced Cognitive Science PSY 8713 Issues and Methods in Cog Psy		PSY 8703 Advanced Cognitive Science PSY 8713 Issues and Methods in Cog Psy	
Cognitive Science Integration	6	Cognitive Science Integration	6
PSY 8723 Cognitive Models of Skills PSY 8773 Distributed Representations in Cognition		PSY 8723 Cognitive Models of Skills PSY 8773 Distributed Representations in Cognition	
Cognitive Psychology Integration (Select two from the following)	6	Cognitive Psychology Integration (Select two from the following)	6
PSY 8743 Perception and Attention PSY 8753 Advanced Human Memory PSY 8763 Expertise and Cognitive Skill Acquisition		PSY 8743 Perception and Attention PSY 8753 Advanced Human Memory PSY 8763 Expertise and Cognitive Skill Acquisition	
Advanced Graduate Seminars	6	Advanced Graduate Seminars	6
PSY 8653 Applied Cognitive Reading Seminar		PSY 8653 Applied Cognitive Reading Seminar	
Research & Professional Skills	12	Research & Professional Skills	12
PSY 8683 Cognitive Science Research Skills PSY 8693 Advanced Cognitive Science Research Skills PSY 8783 Cognitive Science Professional Skills PSY 8793 Advanced Cognitive Science Professional Skills		PSY 8683 Cognitive Science Research Skills PSY 8693 Advanced Cognitive Science Research Skills PSY 8783 Cognitive Science Professional Skills PSY 8793 Advanced Cognitive Science Professional Skills	
Cognitive Science Seminar	5	Cognitive Science Seminar	5
PSY 8731 Applied Cognitive Science Research Seminar		PSY 8731 Applied Cognitive Science Research Seminar	
Total hours	72	Total hours	72

CONCENTRATION 2 (CLINICAL)		CONCENTRATION 2 (CLINICAL)	
Research Methods and Quantitative Core	10	Research Methods and Quantitative Core	10
PSY 8214 Quant. Methods in Psych II PSY 8803 Advanced Quant. Methods PSY 8513 Psychological Research Method		PSY 8214 Quant. Methods in Psych II PSY 8803 Advanced Quant. Methods PSY 8513 Psychological Research Method	
Dissertation Hours PSY 9000 Dissertation/research	21	Dissertation Hours PSY 9000 Dissertation/research	21
Clinical Concentration	*27*	Clinical Concentration	**21**
PSY 8713 Issues and Methods in Cog Psy PSY 8313 Developmental Psychology PSY 8613 Advanced Social Psychology EPY 8113 History and Systems of Psychology *COE 8073 Cultural Foundations in Counseling* PSY 8233. Ethical and Professional Issues in Clinical Psychology PSY 9730. Doctoral Internship in Clinical Psychology		PSY 8713 Issues and Methods in Cog Psy PSY 8313 Developmental Psychology PSY 8613 Advanced Social Psychology EPY 8113 History and Systems of Psychology **PSY 8823 Diversity in Applied Psychology** PSY 8233. Ethical and Professional Issues in Clinical Psychology PSY 9730. Doctoral Internship in Clinical Psychology	
Total hours:	*58*	Total hours:	**52**

3. JUSTIFICATION AND STUDENT LEARNING OUTCOMES

The Applied Psychology doctoral program has two concentrations. This modification includes a name change for the cognitive science concentration and two changes to the clinical concentration.

There are no changes in courses/requirements for the Cognitive Science concentration – only a name change (deleting the word "Applied" from in front of "Cognitive Science"). The justification for changing the name of the "Applied Cognitive Science" concentration to "Cognitive Science" is to reduce confusion amongst prospective graduate student applicants about the nature of our program. There are dozens of Cognitive Science programs in the United States, but we were able to only locate three programs including the word Applied Cognitive Science somewhere in the program title (Michigan Technical University, Arizona State University – in an engineering department, and Kansas State University). Using a name for the concentration that is different from the rest of the field in the best case leads to questions from students about what is "Applied" about our program and how it is different from the other cognitive science programs in the field. In the worst case, it leads students to never consider our program because they want to work in non-applied research settings. There is no change to learning outcomes based on this name change.

The first change to the clinical concentration is that we propose to substitute the newly approved PSY 8823 Diversity in Applied Psychology – approved by the UCCC in February 2017 – for

COE 8073 Multicultural Foundations in Counseling. This change is necessary to contribute to the overall method used by the clinical psychology doctoral program to provide and document knowledge and skills training to doctoral students in issues related to matters of diversity. Outcome data from the course will become available for use in the evaluation of student progress and for assessing the effectiveness of the program in meeting overall diversity training goals.

Course enrollment should be 5-6 per year based on the last 4 years of enrollment figures for the Applied Psychology, Clinical Concentration program. It could be higher if there is interest outside the department.

The existing Applied Psychology, Clinical Concentration curriculum is enhanced in several ways. Prior to this course, our students took a multicultural counseling course across campus. That course was heavily influenced by the ethics codes and professional standards present in the separately regulated counseling profession. This course is constructed based on the training goals of psychologists and takes into consideration how diversity issues is already addressed in other doctoral program training. Additionally, this course will utilize examples confronted by professional psychologists in clinical, research, and teaching settings.

The addition of our own diversity course will help the clinical program directly address the training standards (https://www.apa.org/monitor/2015/05/new-standards.aspx) of their national accrediting body, the American Psychological Association.

This will be the only doctoral level course on diversity in applied psychology on campus.

It is hoped that the addition of this course will increase the attractiveness of the program to diverse graduate students who may look more favorably upon a program that offers their own diversity course taught by a core faculty member to the clinical psychology program.

While adding this course will not directly impact the placement or salaries of its graduates, it will contribute to the amount of control the American Psychological Association expects an accredited program to have over its own curriculum. Securing and maintaining accreditation will help our students compete for better placements and jobs.

Second, we propose to reduce the number of required credit hours of PSY 9730 Doctoral Internship in Clinical Psychology from 9 to 3. This will reduce the number of required hours for the concentration by $9 - 3 = 6$ total hours. This reduction is motivated by a desire to reduce student cost by taking advantage of a recent financial aid office clarification regarding how many credit hours students must sign up for to be considered full time during their 5th year in the program when they are completing a predoctoral, full time internship as is required for Ph.D. level psychologists. Since we first proposed the program, the financial aid office has determined that our students, when completing a required 2,000 hour predoctoral internship, only need 3 hours of PSY 9730 Doctoral Internship in Clinical Psychology instead of 9 hours to defer their student loans. Please note that the reduction of required hours from 58 to 52 reflects this reduction. Also note that clinical students must have previously complete a minimum 40-hr M.S. in Psychology degree program at the beginning of their training while "dually enrolled" in the M.S. and Ph.D. programs. Thus, students receiving their Ph.D. in Applied Psychology with a

Clinical Concentration will complete a minimum total of $40 + 52 = 92$ credit hours of graduate work between their M.S. curriculum and the Ph.D. curriculum below.

The learning outcomes for the degree remain unchanged. The current learning outcomes as reflected in the IE report are:
- Students will understand major theories and models in psychology.
- Students will understand and apply research methods in psychology.
- Students will demonstrate the ability to disseminate research findings.

4. SUPPORT

A letter of support from the psychology department graduate curriculum committee is attached.

5. PROPOSED 4-LETTER ABBREVIATION

No change to the 4-letter abbreviation is needed.

4. EFFECTIVE DATE

6/1/17 (Summer 2017 Semester)

Department of Psychology
Magruder Hall
P.O. Box 6161
255 Lee Boulevard
Mississippi State, MS 39762
Phone: 662-325-3202
FAX: 662-325-7212

March 1, 2017

The Graduate Committee in Psychology (signatures below) endorses the following changes within the "Applied Psychology" doctoral program as approved by the departmental faculty as a whole.

1. In the clinical concentration, substitute PSY 8823 Diversity in Applied Psychology for COE 8073 Cultural Foundations in Counseling.
2. In the clinical concentration, reduce the number of expected PSY 9730 Doctoral Internship in Clinical Psychology from 9 credit hours to 3 credit hours. This, in turn, reduces the number of required hours for the clinical concentration from 58 to 52 (acknowledging that all students will have completed a minimum 40-hour M.S. degree as well).
3. Change the name of the "Applied Cognitive Science" concentration to "Cognitive Science" – with no content changes to the program.

We have faculty with the appropriate training to teach the Diversity course. The department is committed to offering the course on an annual basis. There are no special laboratory or library requirements associated with the Diversity course (approved by the UCCC in February 2017).

Respectfully,

Kevin J. Armstrong, Ph.D.
Associate Professor
Graduate Coordinator
Kja3@msstate.edu
662-325-7657

Michael R. Nadorff, Ph.D.
Assistant Professor
Director, Clinical Psychology Program

Jarrod Moss, Ph.D.
Associate Professor
Director, Applied Cognitive Science Program

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APPROVAL FORM FOR

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College: Arts & Sciences   **Department:**___Sociology

Contact Person: Stacy Haynes   **Mail Stop:** 9562   **E-mail: shaynes@soc.msstate.edu**

Nature of Change: Degree Modification   **Date Initiated: 11/16/16**   **Effective Date:** Fall 2017

Degree to be offered at: Campus 1

Current Degree Program Name: Doctor of Philosophy

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

New Degree Program Name: No Change

Major: No Change   **Concentration: No Change**

Summary of Proposed Changes:

Overall motivation: The changes made above and described below are intended to increase the rigor of student learning at both the Master's and PhD level, while also encouraging our students to move through the program in a timely manner, with the end goal of successful placement in the job market. The main changes are to remove a somewhat outdated course (SO 8203 Data Management) that was redundant with other courses offered in our program, add two additional methodology courses (SO 8223 and SO 8233) as requirements for PhD students to enhance their training, and increase the flexibility of PhD students in choosing their substantive/topical courses by eliminating the Core II: General Sociology requirements. Separate Degree Program changes have been submitted for the MS and the PhD.
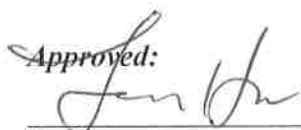
Change 1: Deletion of SO 8203 from Doctor of Philosophy in Sociology. This course, Data Management Soc Sci has already been deleted from the Course Inventory Management System (more than 5 years ago). The material from this course has been folded into SO 8213 and SO 8274 for both Master's students and Doctoral students, and Doctoral students also receive additional training in data management in SO 8223.

Change 2: Add two required courses—SO 8223 and SO 8233—to the Doctor of Philosophy in Sociology program of study. These courses are additional research methods courses that expand on topics covered in SO 8213, and SO 8223 in particular covers extended material from the deleted SO 8203 data management course. The courses already exist in the Course Inventory System, and are not being created at this time (only added as requirements).

Change 3: Delete the General Sociology requirement (9 hours) and move some of those coursework hours into Elective hours. We are making this change for several reasons. First, the courses that students were required to choose from no longer reflect what we think of as "general sociology", or even reflect the departmental faculty's areas of core expertise. Second, the department was finding it difficult to offer these courses on a frequent enough basis to meet the needs of the students. Only three of them were offered with any regularity, which created timing issues for students, and may have contributed to slowed progress through the program. Therefore, we deleted those 9 hours from the program, and increased the number of Electives by 3 hours (1 additional elective). This gives students more flexibility in their program to take classes to meet their individualized needs (in consultation with the major professor), and gives faculty the flexibility to offer more courses that better reflect faculty expertise.

Change 4: Total hours for Doctor of Philosophy in Sociology have been reduced from 73 to 70. This reflects the following changes: deletion of SO 8203 (3 hours), deletion of Core II: General Sociology requirements (9 hours), addition of SO 8223 (3 hours), SO 8233 (3 hours), and increase in number of electives by one course (3 hours). In sum, 12 hours were deleted from the program, and 9 hours were added, resulting in a net decrease by 3 hours. At 70 hours, the Doctor of Philosophy in Sociology is still well-above the university/Graduate School minimum of 54 hours.

Change 5: Footnote 1 in Doctor of Philosophy in Sociology has been changed to reflect the fact that students must take seven Core 1 (Core): Sociology Tools courses instead of six as it had been.

Approved: **Date:**

_3 -9 -17_

Department Head

Chair, College or School Curriculum Committee

Dean of College or School

Chair, University Committee on Courses and Curricula

Chair, Graduate Council (if applicable)

Chair, Deans Council

☐ IHL Action Required   ☐ SACS Letter Sent

December 6, 2016

TO: University Committee on Courses & Curricula
FROM: Department of Sociology, Graduate Curriculum Committee
RE: SO Graduate Degree Program Change

Dear Dr. Franz and the UCCC:

This letter serves as an indication of support for the Sociology Graduate Degree Program Change. The major requested changes are intended to (1) strengthen the research methodology training for our PhD students by requiring two additional methods courses (which replace an old class that has been deleted) and (2) relax the restrictions on which substantive courses our PhD students are required to take, to give more flexibility in designing their own program of study in consultation with the major professor. The degree program was reviewed by the faculty in the Department of Sociology and received unanimous support at the faculty meeting on December 5. If you have any questions, please feel free to contact Dr. Stacy Haynes at shaynes@soc.msstate.edu.

Sincerely,

Stacy Haynes (Chair) _____

Lindsey Peterson _____

Shelley Keith _____

Kecia Johnson _____

Dustin Brown _____

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: Doctor of Philosophy Major: Sociology	Degree: Doctor of Philosophy Major: Sociology
Department Head: **Dr. Leslie H. Hossfeld** **Graduate Coordinator**: **Dr. Stacy Haynes** 207 Bowen Hall Box C Mississippi State, MS 39762 Telephone: 662-325-2495 E-mail: sociology@soc.msstate.edu Website: http://www.sociology.msstate.edu This department has graduate programs leading to the Master of Science and Doctor of Philosophy degrees in sociology. **Admission Criteria** The applicant must submit: 1. a completed application form for graduate study at MSU 2. official transcripts from previous institutions 3. a GPA of 3.00 on the last two years of baccalaureate work 4. an academic writing sample in English (a sample of the student's choice) 5. General Graduate Records Examination (GRE) scores 6. three letters of recommendation (from people who know the student's academic abilities and potential) 7. a statement of purpose (explaining why the student wishes to study Sociology at MSU and how the program at MSU will assist the student in attaining goals). **Academic Performance** Continuous enrollment in the M.S. program in Sociology is dependent upon a satisfactory evaluation of academic performance and progress toward completion of the degree. Unsatisfactory performance will result in dismissal from the program. A student's performance is deemed unsatisfactory if one or more of the following occurs. • More than two letter grades below a B in a student's graduate coursework	**Department Head**: **Dr. Leslie H. Hossfeld** **Graduate Coordinator**: **Dr. Stacy Haynes** 207 Bowen Hall Box C Mississippi State, MS 39762 Telephone: 662-325-2495 E-mail: sociology@soc.msstate.edu Website: http://www.sociology.msstate.edu This department has graduate programs leading to the Master of Science and Doctor of Philosophy degrees in sociology. **Admission Criteria** The applicant must submit: 1. a completed application form for graduate study at MSU 2. official transcripts from previous institutions 3. a GPA of 3.00 on the last two years of baccalaureate work 4. an academic writing sample in English (a sample of the student's choice) 5. General Graduate Records Examination (GRE) scores 6. three letters of recommendation (from people who know the student's academic abilities and potential) 7. a statement of purpose (explaining why the student wishes to study Sociology at MSU and how the program at MSU will assist the student in attaining goals). **Academic Performance** Continuous enrollment in the M.S. program in Sociology is dependent upon a satisfactory evaluation of academic performance and progress toward completion of the degree. Unsatisfactory performance will result in dismissal from the program. A student's performance is deemed unsatisfactory if one or more of the following occurs. • More than two letter grades below a B in a student's graduate coursework

- Failure to maintain a cumulative 3.00 GPA for two consecutive semesters
- More than one unsatisfactory U grade for thesis research
- Two failures on the M.S. exit examination
- Two failures on the M.S. thesis defense

Upon the completion of coursework for a student's program of study, a student must defend a thesis proposal. Once the thesis proposal is accepted by the student's thesis committee, the student may proceed to carry out the thesis research in close consultation with his or her thesis committee. The student must pass a public defense of the thesis.

CURRENT CURRICULUM OUTLINE	Required Hours
Doctor of Philosophy in Sociology	
Sociological Tools	3
SO 8213[1]: Research Design	3
SO 8103[1]: Graduate Theory I	3
SO 8113[1]: Graduate Theory II	*3*
SO 8203[1]: Data Management Soc Sci	4
SO 8274[1]: Graduate Social Statistics I	4
SO 8284[1]: Graduate Social Statistics II	
	9
General Sociology	
	15
Areas of Specialization Coursework	
	9
Electives	
	20
SO 9000	*73*
Total Hours	

[1] After completing the *six* courses, a Ph.D. student is required to pass a Ph.D. qualifying examination in the areas of theory, methods, and statistics. The student typically takes the qualifying exam during the third or fourth semester of study.

After completing all coursework, the student takes a comprehensive preliminary examination in the area of specialization. Areas of specialization

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- Failure to maintain a cumulative 3.00 GPA for two consecutive semesters
- More than one unsatisfactory U grade for thesis research
- Two failures on the M.S. exit examination
- Two failures on the M.S. thesis defense

Upon the completion of coursework for a student's program of study, a student must defend a thesis proposal. Once the thesis proposal is accepted by the student's thesis committee, the student may proceed to carry out the thesis research in close consultation with his or her thesis committee. The student must pass a public defense of the thesis.

PROPOSED CURRICULUM OUTLINE	Required Hours
Doctor of Philosophy in Sociology	
Sociological Tools	3
SO 8213[1]: Research Design	3
SO 8103[1]: Graduate Theory I	3
SO 8113[1]: Graduate Theory II	4
SO 8274[1]: Graduate Social Statistics I	4
SO 8284[1]: Graduate Social Statistics II	**3**
SO 8223[1]: Quantitative Analysis	**3**
SO 8233[1]: Qualitative Analysis	
	15
Areas of Specialization Coursework	
	12
Electives	
	20
SO 9000	**70**
Total Hours	

[1] After completing the **seven** courses, a Ph.D. student is required to pass a Ph.D. qualifying examination in the areas of theory, methods, and statistics. The student typically takes the qualifying exam during the third or fourth semester of study.

After completing all coursework, the student takes a comprehensive preliminary examination in the area of specialization. Areas of specialization include the following.

include the following. 1. Criminology 2. Rural Sociology 3, Social Demography and Population Studies 4. Social Inequality and Stratification. After the completion of coursework for a student's program of study, the successful completion of the Ph.D. Qualifying examination, and the Ph.D. Preliminary examination, a student is admitted into doctoral candidacy. A doctoral candidate must defend a dissertation proposal. Once the dissertation proposal is accepted by the student's dissertation committee, the candidate may proceed to conduct dissertation research in close consultation with his or her dissertation committee. After the dissertation committee unanimously agrees that the dissertation is defensible, the candidate must pass a public defense of the dissertation. NOTE: Thesis and dissertation research are subject to review and approval by the University's Institutional Review Board (IRB).		1. Criminology 2. Rural Sociology 3, Social Demography and Population Studies 4. Social Inequality and Stratification. . After the completion of coursework for a student's program of study, the successful completion of the Ph.D. Qualifying examination, and the Ph.D. Preliminary examination, a student is admitted into doctoral candidacy. A doctoral candidate must defend a dissertation proposal. Once the dissertation proposal is accepted by the student's dissertation committee, the candidate may proceed to conduct dissertation research in close consultation with his or her dissertation committee. After the dissertation committee unanimously agrees that the dissertation is defensible, the candidate must pass a public defense of the dissertation. NOTE: Thesis and dissertation research are subject to review and approval by the University's Institutional Review Board (IRB).	

3. JUSTIFICATION OF THE CHANGE OF DEGREE AND STUDENT LEARNING OUTCOMES:

Overall motivation: The changes made above and described below are intended to increase the rigor of student learning at both the Master's and PhD level, while also encouraging our students to move through the program in a timely manner, with the end goal of successful placement in the job market. The main changes are to remove a somewhat outdated course (SO 8203 Data Management) that was redundant with other courses offered in our program, add two additional methodology courses (SO 8223 and SO 8233) as requirements for PhD students to enhance their training, and increase the flexibility of PhD students in choosing their substantive/topical courses by eliminating the General Sociology requirements. Separate Degree Program changes have been submitted for the MS and the PhD.

Change 1: Deletion of SO 8203 from Doctor of Philosophy in Sociology. This course, Data Management Soc Sci has already been deleted from the Course Inventory Management System (more than 5 years ago). The material from this course has been folded into SO 8213 and SO 8274 for both Master's students and Doctoral students, and Doctoral students also receive additional training in data management in SO 8223.

Change 2: Add two required courses—SO 8223 and SO 8233—to the Doctor of Philosophy in Sociology program of study. These courses are additional research methods courses that expand on topics covered in SO 8213, and SO 8223 in particular covers extended material from the deleted SO 8203 data management course. The courses already exist in the Course Inventory System, and are not being created at this time (only added as requirements).

Change 3: Delete the General Sociology requirement (9 hours) and move some of those coursework hours into

Elective hours. We are making this change for several reasons. First, the courses that students were required to choose from no longer reflect what we think of as "general sociology", or even reflect the departmental faculty's areas of core expertise. Second, the department was finding it difficult to offer these courses on a frequent enough basis to meet the needs of the students. Only three of them were offered with any regularity, which created timing issues for students, and may have contributed to slowed progress through the program. Therefore, we deleted those 9 hours from the program, and increased the number of Electives by 3 hours (1 additional elective). This gives students more flexibility in their program to take classes to meet their individualized needs (in consultation with the major professor), and gives faculty the flexibility to offer more courses that better reflect faculty expertise.

Change 4: Total hours for Doctor of Philosophy in Sociology have been reduced from 73 to 70. This reflects the following changes: deletion of SO 8203 (3 hours), deletion of General Sociology requirements (9 hours), addition of SO 8223 (3 hours), SO 8233 (3 hours), and increase in number of electives by one course (3 hours). In sum, 12 hours were deleted from the program, and 9 hours were added, resulting in a net decrease by 3 hours. At 70 hours, the Doctor of Philosophy in Sociology is still well-above the university/Graduate School minimum of 54 hours.

Change 5: Footnote 1 in Doctor of Philosophy in Sociology has been changed to reflect the fact that students must take seven Core 1 (Core): Sociology Tools courses instead of six as it had been.

NOTE: Because three or fewer courses are being added, modified or deleted along with this degree program change, a complete review and assessment of the degree program was not deemed necessary.

1. Will this program change meet local, state, regional, and national educational and cultural needs? If so, please describe.
    a. The PhD in Sociology at Mississippi State is the only one in the state of Mississippi. We believe that strengthening the Sociological Tools requirements and making it easier for students to take classes that are more in keeping with changing faculty and student interests by eliminating the General Sociology requirements, will make our program more attractive and our students more competitive on the job market.

2. Will this program change result in duplication in the System? If so, please describe.
    a. The requested changes are minor and will not cause any duplication in the System.

3. Will this program change advance student diversity within the discipline? If so, please describe.
    a. We do not anticipate these curriculum changes having a substantial impact on student diversity within the discipline.

4. Will this program change result in a increase in the potential placement of graduates in MS, the Southeast, and the U.S.? If so, please describe.
    a. By increasing the rigor of the PhD Sociological Tools, we believe we can better prepare doctoral students for both research-oriented and teaching-oriented jobs locally and around the country.

5. Will the program change result in an increase in the potential salaries of graduates in MS, the Southeast, and the U.S.? If so, please describe.
    a. The requested changes are minor and will not have any significant impact on potential salaries of graduates.

Sociology Graduate Program List of Courses

SO 6113 Social Organization and Change: 3 hours.
(Prerequisites: SO 1003 and junior standing). Three hours lecture. An intensive examination of recent research focusing on the prediction, explanation and control of social change with attention to trends in developing countries

SO 6123 Poverty Analysis: People, Organization and Programs: 3 hours.
(Prerequisites: SO 1003 and junior standing). Three hours lecture. Historical perspectives; problems of definition and measurement; socio-cultural situations contributing to deprivation; delineation of poverty groups; social consequences of poverty; poverty programs and organizations

SO 6173 Environment and Society: 3 hours.
(Prerequisite: AN 1103 or SO 1003 or consent of instructor). Three hours lecture. A study of the interaction between human society and the environment including the social aspects of environmental problems. (Same as AN 4173/6173)

SO 6223 Comparative Family Systems: 3 hours.
(Prerequisite: SO 1203). Three hours lecture. A systematic study of family patterns in selected cultures of the world

SO 6233 Juvenile Delinquency: 3 hours.
(Prerequisites: CRM 1003 and SO 1003 or consent of instructor). Three hours lecture. Critical study of problems, causes, ways of handling; attitudes, roles and relationships of persons involved, including youthful offenders, social workers, court and law enforcement officials. (Same as CRM 4233/6233)

SO 6243 Drugs, Crime and Control: 3 hours.
(Prerequisites: SO 1003 and CRM 1003 or consent of instructor). Three hours lecture. Focus on the social factors which give rise to illicit drug use, patterns and trends in drug crime and strategies to control drug crime. (Same as CRM 4243/6243)

SO 6253 White Collar Crime and Elite Deviance: 3 hours.
(Prerequisites: SO 1003 and CRM 1003 or consent of instructor). Three hours lecture. An overview of the sociological and criminological literature in the area defined as 'White Collar Crime' (Same as CRM 4253/6253)

SO 6273 Sociology of Education: 3 hours.
(Prerequisites: SO 1003 and junior standing). Three hours lecture. A sociological analysis of education as a social institution, its role in the larger society, the organization of schooling, and the social dynamics of classrooms

SO 6303 Urban Sociology: 3 hours.(Prerequisites: SO 1003 and junior standing). Three hours lecture. A sociological and ecological study of urban areas emphasizing the processes of population, environment, technology and social organization

SO 6323 Victimology: 3 hours.
(Prerequisite: <u>CRM 1003</u> and <u>SO 1003</u> or consent of instructor). Three hours lecture. A critical study of victims, examining theories of victimization, the social construction of victimization, the relationship between victims and offenders, and victim prevention efforts. (Same as <u>CRM 4323</u>/6323)

SO 6333 Sociology of Sport: 3 hours.
(Prerequisites: <u>SO 1003</u> and junior standing). Three hours lecture. Examination of sport as a social institution in American society, its contributions to society and to participants

SO 6403 Sociology of Gender: 3 hours.
(Prerequisites: <u>SO 1003</u>, or approval of instructor). Three hours lecture. Changing character of gender and significance in various social institutions. Intersection between gender and other forms of inequality

SO 6413 Aging and Retirement in American Society: 3 hours.
(Prerequisites: Nine hours of sociology or related disciplines). Three hours lecture. A study of the social and economic aspects of aging and of the social problems in American society related to the aged and retired groups

SO 6423 Health and Society: 3 hours.
(Prerequisite:3 hours in sociology). Three hours lecture. Examines health and the health care structure of the United States as it relates to our culture,norms and social institutions

SO 6433 Sociology of Death and Dying: 3 hours.
(Prerequisite:3 hours in Sociology). Three hours lecture. Examines death as a social event,the social nature of death, relationships at the end of life, and social structural impacts on death and dying

SO 6503 Gender and Work: 3 hours.
Three hours lectures. This course presents research and theories on the role of gender in shaping labor market opportunities, experiences, and rewards; remedies for enduring problems, including those applied in the United States' workplace and abroad; and new research directions

SO 6513 Correctional Systems: 3 hours.
(Prerequisites: <u>CRM 1003</u> and <u>CRM 3603</u> or consent of instructor). Three hours lecture. Survey of contemporary correctional systems and practices. Emphasis placed on the formal organization and functioning of penal systems (same as <u>CRM 4513</u>/6513)

SO 6523 Law and Society: 3 hours.
(Prerequisites: <u>SO 1003</u> and <u>CRM 1003</u> or consent of instructor). Three hours lecture. Explores the social origins of law and how law can both maintain social order and bring about social change (Same as <u>CRM 4523</u>/6523)

*SO 6623 Language and Culture: 3 hours.*Three hours lecture. Examination of language as a part of culture, a source of knowledge about other aspects of culture, and a social behavior. (Same as AN 4623/6623 and EN 4623/6623)

SO 6633 Language and Society: 3 hours.
Three hours lecture. Examination of relationship between language and society. How language varies regionally and socially; people's use of and attitudes toward different ways of speaking. (Same as AN 4633/6633 andEN 4633/6633)

SO 6703 Population Problems and Processes: 3 hours.
(Prerequisite: SO 1003 or consent of the instructor). Three hours lecture. World population growth and its consequences, population change and national policies, family planning, recent U.S. population trends, basic demographic measurement, the demographic report

SO 6713 Methods in Population Research: 3 hours.
Review and evaluation of censuses, vital statistics, and demographic surveys and their uses, with emphasis on measurement, methods, and analytical techniques

SO 6733 Community: Organization and Relationships: 3 hours.
(Prerequisites: SO 1003 and junior standing). Three hours lecture. Rural-urban approach to community; types of local societies and community organizations; perspectives in community study

SO 6990 Special Topics in Sociology: 1-9 hours.
Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years)

SO 7000 Directed Individual Study in Sociology: 1-6 hours.
Hours and credits to be arranged

SO 8000 Thesis Research/ Thesis in Sociology: 1-13 hours.
Hours and credits to be arranged

SO 8103 Graduate Theory I: 3 hours.
Social theories and intellectual antecedents: European and American origins and development. Includes entire range of socio-cultural complex associated with 19th- and early 20th-century sociology

SO 8113 Graduate Theory II: 3 hours.
Focus on post-19th century theory and antecedents. Delineation of the basic postures in the discipline and relative relationships of these postures to theory development

SO 8213 Research Design: 3 hours.
(Prerequisite: SO 8274). Three hours lecture. Emphasis on overall design, plan, structure, and strategy. Also limitations of theory, measurement, sampling and statistical testing in research

SO 8223 Advanced Quantitative Methods: 3 hours.***
(Prerequisite:SO 8213). Experimental Design, questionnaire and question construction,sampling,field procedures, advanced techniquesof analysis, presentation of statistical materials

SO 8233 Qualitative Analysis: 3 hours.
(Prerequisite: SO 8213). Three hours lecture. Qualitative approaches to understanding social behavior. Exposure to all phases of qualitative research: epistemology, design, field work, ethics, and writing research results

SO 8243 Spatial Analysis of Social Data: 3 hours.
(Prerequisite:SO 8284 or equivalent, or consent of instructor). Three hours lecture. Spatial theorires of society;relevant digital databases; procedures for visualizing data;exploratory spatial data; local and global spatial regression models

SO 8274 Graduate Social Statistics I: 4 hours.
(Prerequisite: ST 2113 or equivalent). Three hours lecture. Two hours laboratory. Probability, hypothesis testing, tests of means and proportions, contingency table analysis, analysis of variance, bivariate linear regressions correlation; data analysis and interpretation using current statistical software

SO 8284 Graduate Social Statistics II: 4 hours.
(Prerequisite: SO 8274). Three hours lecture. Two hours laboratory. Hypothesis testing, analysis of variance, multiple linear regression and correlation, causal models, exploratory factor analysis; data analysis and interpretation using current statistical software

SO 8293 Structural Equations Modeling with Latent Variables in Sociology: 3 hours.
(Prerequisite: SO 8284 or equivalent). Three hours lecture. The application of structural equation modeling techniques to sociological problems containing unobserved variables, focusing on estimation and interpretation of model parameters with errors of measurement

SO 8313 Political Sociology: 3 hours.
Three hours seminar. Study of power relations within and across societies and the relationships between social groups and politics. Special attention given to the links between stratification, power, and contentious politics

SO 8343 Complex Organizations: 3 hours.
Theory and research in organizations. Nature and types of organizations; determinants and consequences of organizational growth; organizational effectiveness; production, authority, and control systems in organizations

SO 8403 Seminar in Race Relations: 3 hours.
Three hours lecture. Contributions of anthropology, sociology and psychology to the field of race relations. Critical analysis of recent studies, current racial theories and programs

SO 8413 Seminar in Social Stratification: 3 hours.
Three hours lecture. Critical analyses of theories and research on social class and related social structures. Explores race/gender/class stratification and policies to alter income.wealth inequality

SO 8423 Seminar in Deviant Behavior: 3 hours.
Examination of relation between social conditions, social problems, deviance, and deviant careers. The organization of social control activities, and the social differentiation of deviant populations

SO 8433 Seminar in Criminology: 3 hours.
Exploration of conceptual, methodological, and substantive problems of research in the field of criminology. The classification of criminals and criminal careers receives special emphasis

SO 8503 Seminar in the Family: 3 hours.
An advanced seminar on the family institution, emphasizing theoretical and conceptual frameworks, topics of current concern to family sociology, and major literature in the area

SO 8523 Symbolic Interaction and Social Structure: 3 hours.
Review of classic and current sociological literature in symbolic interaction and development of self as process and product of social structure

SO 8703 Seminar in Population: 3 hours.
(Prerequisite: SO 4703/6703 or equivalent). Study of population dynamics; theories of optimum population; population policies and programs; zero population growth; interrelationship of population phenomena with socioeconomic developments

SO 8900 Fields of Sociology: 1-3 hours.
(Hours and credits to be arranged up to 3 hours.) A seminar in selected areas of sociological research and practice

SO 8963 Exploring Issues in Gender: 3 hours.
(Prerequisite:Graduate standing and enrollment in the Diveristy Certificate Program).Three hours lecture. An intensive introduction to theories of gender structures social, economic and cultural inequalities. Designed for online Diversity Certificate Program students. (Same as GS 8963)

SO 8973 Gender and Work: 3 hours.
(Prerequisite: Graduate standing and enrollment in the Diversity Certificate Program).Three hours lecture. An intensive examination of how gender impacts

experiences of work from the home to the corporation. Designed for online Diversity Certificate Program Students. (Same as GS 8973)

SO 8983 Seminar in Race Relations: 3 hours.
(Prerequisite:Graduate standing and enrollment in the Diversity Certificate Program). Three hours lecture. Contributions of anthropology, scoiology , and psychology to race relations. Critical analysis of recent studies, curretn racial theories and programs. Designed for online Diversity Certificate Program students

SO 8990 Special Topics in Sociology: 1-9 hours.
Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years)

SO 9000 Dissertation Research /Dissertation in Sociology: 1-13 hours.
Hours and credits to be arranged

***Note: This course is currently being modified in name and course description only. It is being changed to "Quantitative Analysis" so that students are better able to understand the parallel between it and SO 8233: Qualitative Analysis.

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: Arts & Sciences   **Department:** Sociology

Contact Person: Stacy Haynes   **Mail Stop:** 9562   **E-mail:** shaynes@soc.msstate.edu

Nature of Change: Degree Modification   **Date Initiated:** 11/16/16   **Effective Date:** Fall 2017

Degree to be offered at: Campus 1

Current Degree Program Name: Master of Science -Thesis

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

Current Degree Program Name: Master of Science –Non-Thesis

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

New Degree Program Name: No Change

Major: No Change   **Concentration:** No Change

Summary of Proposed Changes:

Overall motivation: The changes made above and described below are intended to increase the rigor of student learning at both the Master's and PhD level, while also encouraging our students to move through the program in a timely manner, with the end goal of successful placement in the job market. The main changes are to remove a somewhat outdated course (SO 8203 Data Management) that was redundant with other courses offered in our program, add two additional methodology courses (SO 8223 and SO 8233) as requirements for PhD students to enhance their training, and increase the flexibility of PhD students in choosing their substantive/topical courses by eliminating the Core II: General Sociology requirements. Separate Degree Program changes have been submitted for the MS and the PhD.

Change 1: Deletion of SO 8203 from Master of Science in Sociology-Thesis Option. This course, Data Management Soc Sci has already been deleted from the Course Inventory Management System (more than 5 years ago). The material from this course has been folded into SO 8213 and SO 8274 for Master's students.

Change 2: Additional Coursework increased from 11 hours to 14 hours for the Thesis Option. Because of the deletion of SO 8203 as a required course (and as a course at all), students need to take 14 hours additional coursework to match the . This still meets the University/Graduate School requirement of a minimum of 30 hours in graduate study.

Change 3: Deletion of SO 8203 from Master of Science in Sociology-Non-Thesis Option. This course, Data Management Soc Sci has already been deleted from the Course Inventory Management System (more than 5 years ago). The material from this course has been folded into SO 8213 and SO 8274 for Master's students.
Change 4: Add three hours to Additional Coursework for the Non-Thesis Option, raising it from 23 to 26. This change is required to keep the total hours the same (36) given the deletion of the Data Management class listed in Change 3.

Approved: _(signature)_   **Date:** 3 - 9 - 17

Department Head

Chair, College or School Curriculum Committee

Dean of College or School

Chair, University Committee on Courses and Curricula

Chair, Graduate Council (if applicable)

Chair, Deans Council

☐ IHL Action Required   ☐ SACS Letter Sent

3 - 9 - 17

MISSISSIPPI STATE
U N I V E R S I T Y™

COLLEGE OF ARTS & SCIENCES
Department of Sociology

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December 6, 2016

TO: University Committee on Courses & Curricula
FROM: Department of Sociology, Graduate Curriculum Committee
RE: SO Graduate Degree Program Change

Dear Dr. Franz and the UCCC:

This letter serves as an indication of support for the Sociology Graduate Degree Program Change. The major requested changes are intended to (1) strengthen the research methodology training for our PhD students by requiring two additional methods courses (which replace an old class that has been deleted) and (2) relax the restrictions on which substantive courses our PhD students are required to take, to give more flexibility in designing their own program of study in consultation with the major professor. The degree program was reviewed by the faculty in the Department of Sociology and received unanimous support at the faculty meeting on December 5. If you have any questions, please feel free to contact Dr. Stacy Haynes at shaynes@soc.msstate.edu.

Sincerely,

Stacy Haynes (Chair) _____

Lindsey Peterson _____

Shelley Keith _____

Kecia Johnson _____

Dustin Brown _____

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: Master of Science Major: Sociology	Degree: Master of Science Major: Sociology
Department Head: **Dr. Leslie H. Hossfeld** **Graduate Coordinator**: **Dr. Stacy Haynes** 207 Bowen Hall Box C Mississippi State, MS 39762 Telephone: 662-325-2495 E-mail: sociology@soc.msstate.edu Website: http://www.sociology.msstate.edu This department has graduate programs leading to the Master of Science and Doctor of Philosophy degrees in sociology. **Admission Criteria** The applicant must submit: 1. a completed application form for graduate study at MSU 2. official transcripts from previous institutions 3. a GPA of 3.00 on the last two years of baccalaureate work 4. an academic writing sample in English (a sample of the student's choice) 5. General Graduate Records Examination (GRE) scores 6. three letters of recommendation (from people who know the student's academic abilities and potential) 7. a statement of purpose (explaining why the student wishes to study Sociology at MSU and how the program at MSU will assist the student in attaining goals). **Academic Performance** Continuous enrollment in the M.S. program in Sociology is dependent upon a satisfactory evaluation of academic performance and progress toward completion of the degree. Unsatisfactory performance will result in dismissal from the program. A student's performance is deemed unsatisfactory if one or more of the following occurs. • More than two letter grades below a B in a student's graduate coursework	**Department Head**: **Dr. Leslie H. Hossfeld** **Graduate Coordinator**: **Dr. Stacy Haynes** 207 Bowen Hall Box C Mississippi State, MS 39762 Telephone: 662-325-2495 E-mail: sociology@soc.msstate.edu Website: http://www.sociology.msstate.edu This department has graduate programs leading to the Master of Science and Doctor of Philosophy degrees in sociology. **Admission Criteria** The applicant must submit: 1. a completed application form for graduate study at MSU 2. official transcripts from previous institutions 3. a GPA of 3.00 on the last two years of baccalaureate work 4. an academic writing sample in English (a sample of the student's choice) 5. General Graduate Records Examination (GRE) scores 6. three letters of recommendation (from people who know the student's academic abilities and potential) 7. a statement of purpose (explaining why the student wishes to study Sociology at MSU and how the program at MSU will assist the student in attaining goals). **Academic Performance** Continuous enrollment in the M.S. program in Sociology is dependent upon a satisfactory evaluation of academic performance and progress toward completion of the degree. Unsatisfactory performance will result in dismissal from the program. A student's performance is deemed unsatisfactory if one or more of the following occurs. • More than two letter grades below a B in a student's graduate coursework

- Failure to maintain a cumulative 3.00 GPA for two consecutive semesters
- More than one unsatisfactory U grade for thesis research
- Two failures on the M.S. exit examination
- Two failures on the M.S. thesis defense

Upon the completion of coursework for a student's program of study, a student must defend a thesis proposal. Once the thesis proposal is accepted by the student's thesis committee, the student may proceed to carry out the thesis research in close consultation with his or her thesis committee. The student must pass a public defense of the thesis.

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CURRENT CURRICULUM OUTLINE	Required Hours	PROPOSED CURRICULUM OUTLINE	Required Hours
Master of Science in Sociology-Thesis Option		Master of Science in Sociology-Thesis Option	
SO 8103: Graduate Theory I	3	SO 8103: Graduate Theory I	3
SO 8203: Data Management Soc Sci	*3*	SO 8213: Research Design	3
SO 8213: Research Design	3	SO 8274: Graduate Social Statistics I	4
SO 8274: Graduate Social Statistics I	4		
Additional Coursework[1]	*11*	Additional Coursework[1]	**14**
SO 8000: Thesis Research	6	SO 8000: Thesis Research	6
Total Hours	30	Total Hours	30

[1] A minimum of 12 GPA credit hours of graduate coursework must be taken at the 8000 level.

Upon the completion of coursework for a student's program of study, a student must defend a thesis proposal. Once the thesis proposal is accepted by the student's thesis committee, the student may proceed to carry out the thesis research in close consultation with his or her thesis committee. After the thesis committee unanimously agrees that the thesis is defensible the student must pass a public defense of the thesis.

NOTE: Thesis and dissertation research are subject to review and approval by the University's Institutional Review Board

[1] A minimum of 12 GPA credit hours of graduate coursework must be taken at the 8000 level.

Upon the completion of coursework for a student's program of study, a student must defend a thesis proposal. Once the thesis proposal is accepted by the student's thesis committee, the student may proceed to carry out the thesis research in close consultation with his or her thesis committee. After the thesis committee unanimously agrees that the thesis is defensible the student must pass a public defense of the thesis.

NOTE: Thesis and dissertation research are subject to review and approval by the University's Institutional Review Board (IRB).

(IRB).			
Master of Science in Sociology-Non-Thesis		Master of Science in Sociology-Non-Thesis	
SO 8103: Graduate Theory I	3	SO 8103: Graduate Theory I	3
SO 8203: Data Management Soc Sci	*3*	SO 8213: Research Design	3
SO 8213: Research Design	3	SO 8274: Graduate Social Statistics I	4
SO 8274: Graduate Social Statistics I	4		
Additional Coursework[1]	*23*	Additional Coursework[1]	**26**
Total Hours	36	Total Hours	36
[1] A minimum of 15 GPA credit hours of graduate coursework must be taken at the 8000 level.		[1] A minimum of 15 GPA credit hours of graduate coursework must be taken at the 8000 level.	
A student must take an exit examination. The exit examination may be taken during the semester that all coursework for a student's program of study is completed or the semester immediately following completion of the coursework. The exit examination is a five hour, in-class exam which covers social theory, social research methods and statistic, and general sociology.		A student must take an exit examination. The exit examination may be taken during the semester that all coursework for a student's program of study is completed or the semester immediately following completion of the coursework. The exit examination is a five hour, in-class exam which covers social theory, social research methods and statistic, and general sociology.	

3. JUSTIFICATION OF THE CHANGE OF DEGREE AND STUDENT LEARNING OUTCOMES:

Overall motivation: The changes made above and described below are intended to increase the rigor of student learning at both the Master's and PhD level, while also encouraging our students to move through the program in a timely manner, with the end goal of successful placement in the job market. The main changes are to remove a somewhat outdated course (SO 8203 Data Management) that was redundant with other courses offered in our program, add two additional methodology courses (SO 8223 and SO 8233) as requirements for PhD students to enhance their training, and increase the flexibility of PhD students in choosing their substantive/topical courses by eliminating the General Sociology requirements. Separate Degree Program changes have been submitted for the MS and the PhD.

Change 1: Deletion of SO 8203 from Master of Science in Sociology-Thesis Option. This course, Data Management Soc Sci has already been deleted from the Course Inventory Management System (more than 5 years ago). The material from this course has been folded into SO 8213 and SO 8274 for Master's students.

Change 2: Additional Coursework increased from 11 hours to 14 hours for the Thesis Option. Because of the deletion of SO 8203 as a required course (and as a course at all), students need to take 14 hours additional coursework to match the . This still meets the University/Graduate School requirement of a minimum of 30 hours in graduate study.

Change 3: Deletion of SO 8203 from Master of Science in Sociology-Non-Thesis Option. This course, Data Management Soc Sci has already been deleted from the Course Inventory Management System (more than 5 years ago). The material from this course has been folded into SO 8213 and SO 8274 for Master's students.

<u>Change 4</u>: Add three hours to Additional Coursework for the Non-Thesis Option, raising it from 23 to 26. This change is required to keep the total hours the same (36) given the deletion of the Data Management class listed in Change 3.

NOTE: Because three or fewer courses are being added, modified or deleted along with this degree program change, a complete review and assessment of the degree program was not deemed necessary.

1. Will this program change meet local, state, regional, and national educational and cultural needs? If so, please describe.
   a. The PhD in Sociology at Mississippi State is the only one in the state of Mississippi. We believe that strengthening the Sociological Tools requirements and making it easier for students to take classes that are more in keeping with changing faculty and student interests by eliminating the General Sociology requirements, will make our program more attractive and our students more competitive on the job market.

2. Will this program change result in duplication in the System? If so, please describe.
   a. The requested changes are minor and will not cause any duplication in the System.

3. Will this program change advance student diversity within the discipline? If so, please describe.
   a. We do not anticipate these curriculum changes having a substantial impact on student diversity within the discipline.

4. Will this program change result in a increase in the potential placement of graduates in MS, the Southeast, and the U.S.? If so, please describe.
   a. By increasing the rigor of the PhD Sociological Tools, we believe we can better prepare doctoral students for both research-oriented and teaching-oriented jobs locally and around the country.

5. Will the program change result in an increase in the potential salaries of graduates in MS, the Southeast, and the U.S.? If so, please describe.
   a. The requested changes are minor and will not have any significant impact on potential salaries of graduates.

Sociology Graduate Program List of Courses

SO 6113 Social Organization and Change: 3 hours.
(Prerequisites: SO 1003 and junior standing). Three hours lecture. An intensive examination of recent research focusing on the prediction, explanation and control of social change with attention to trends in developing countries

SO 6123 Poverty Analysis: People, Organization and Programs: 3 hours.
(Prerequisites: SO 1003 and junior standing). Three hours lecture. Historical perspectives; problems of definition and measurement; socio-cultural situations contributing to deprivation; delineation of poverty groups; social consequences of poverty; poverty programs and organizations

SO 6173 Environment and Society: 3 hours.
(Prerequisite: AN 1103 or SO 1003 or consent of instructor). Three hours lecture. A study of the interaction between human society and the environment including the social aspects of environmental problems. (Same as AN 4173/6173)

SO 6223 Comparative Family Systems: 3 hours.
(Prerequisite: SO 1203). Three hours lecture. A systematic study of family patterns in selected cultures of the world

SO 6233 Juvenile Delinquency: 3 hours.
(Prerequisites: CRM 1003 and SO 1003 or consent of instructor). Three hours lecture. Critical study of problems, causes, ways of handling; attitudes, roles and relationships of persons involved, including youthful offenders, social workers, court and law enforcement officials. (Same as CRM 4233/6233)

SO 6243 Drugs, Crime and Control: 3 hours.
(Prerequisites: SO 1003 and CRM 1003 or consent of instructor). Three hours lecture. Focus on the social factors which give rise to illicit drug use, patterns and trends in drug crime and strategies to control drug crime. (Same as CRM 4243/6243)

SO 6253 White Collar Crime and Elite Deviance: 3 hours.
(Prerequisites: SO 1003 and CRM 1003 or consent of instructor). Three hours lecture. An overview of the sociological and criminological literature in the area defined as 'White Collar Crime' (Same as CRM 4253/6253)

SO 6273 Sociology of Education: 3 hours.
(Prerequisites: SO 1003 and junior standing). Three hours lecture. A sociological analysis of education as a social institution, its role in the larger society, the organization of schooling, and the social dynamics of classrooms

SO 6303 Urban Sociology: 3 hours.(Prerequisites: SO 1003 and junior standing). Three hours lecture. A sociological and ecological study of urban areas emphasizing the processes of population, environment, technology and social organization

SO 6323 Victimology: 3 hours.
(Prerequisite: <u>CRM 1003</u> and <u>SO 1003</u> or consent of instructor). Three hours lecture. A critical study of victims, examining theories of victimization, the social construction of victimization, the relationship between victims and offenders, and victim prevention efforts. (Same as <u>CRM 4323</u>/6323)

SO 6333 Sociology of Sport: 3 hours.
(Prerequisites: <u>SO 1003</u> and junior standing). Three hours lecture. Examination of sport as a social institution in American society, its contributions to society and to participants

SO 6403 Sociology of Gender: 3 hours.
(Prerequisites: <u>SO 1003</u>, or approval of instructor). Three hours lecture. Changing character of gender and significance in various social institutions. Intersection between gender and other forms of inequality

SO 6413 Aging and Retirement in American Society: 3 hours.
(Prerequisites: Nine hours of sociology or related disciplines). Three hours lecture. A study of the social and economic aspects of aging and of the social problems in American society related to the aged and retired groups

SO 6423 Health and Society: 3 hours.
(Prerequisite:3 hours in sociology). Three hours lecture. Examines health and the health care structure of the United States as it relates to our culture,norms and social institutions

SO 6433 Sociology of Death and Dying: 3 hours.
(Prerequisite:3 hours in Sociology). Three hours lecture. Examines death as a social event,the social nature of death, relationships at the end of life, and social structural impacts on death and dying

SO 6503 Gender and Work: 3 hours.
Three hours lectures. This course presents research and theories on the role of gender in shaping labor market opportunities, experiences, and rewards; remedies for enduring problems, including those applied in the United States' workplace and abroad; and new research directions

SO 6513 Correctional Systems: 3 hours.
(Prerequisites: <u>CRM 1003</u> and <u>CRM 3603</u> or consent of instructor). Three hours lecture. Survey of contemporary correctional systems and practices. Emphasis placed on the formal organization and functioning of penal systems (same as <u>CRM 4513</u>/6513)

SO 6523 Law and Society: 3 hours.
(Prerequisites: <u>SO 1003</u> and <u>CRM 1003</u> or consent of instructor). Three hours lecture. Explores the social origins of law and how law can both maintain social order and bring about social change (Same as <u>CRM 4523</u>/6523)

*SO 6623 Language and Culture: 3 hours.*Three hours lecture. Examination of language as a part of culture, a source of knowledge about other aspects of culture, and a social behavior. (Same as AN 4623/6623 and EN 4623/6623)

SO 6633 Language and Society: 3 hours.
Three hours lecture. Examination of relationship between language and society. How language varies regionally and socially; people's use of and attitudes toward different ways of speaking. (Same as AN 4633/6633 andEN 4633/6633)

SO 6703 Population Problems and Processes: 3 hours.
(Prerequisite: SO 1003 or consent of the instructor). Three hours lecture. World population growth and its consequences, population change and national policies, family planning, recent U.S. population trends, basic demographic measurement, the demographic report

SO 6713 Methods in Population Research: 3 hours.
Review and evaluation of censuses, vital statistics, and demographic surveys and their uses, with emphasis on measurement, methods, and analytical techniques

SO 6733 Community: Organization and Relationships: 3 hours.
(Prerequisites: SO 1003 and junior standing). Three hours lecture. Rural-urban approach to community; types of local societies and community organizations; perspectives in community study

SO 6990 Special Topics in Sociology: 1-9 hours.
Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years)

SO 7000 Directed Individual Study in Sociology: 1-6 hours.
Hours and credits to be arranged

SO 8000 Thesis Research/ Thesis in Sociology: 1-13 hours.
Hours and credits to be arranged

SO 8103 Graduate Theory I: 3 hours.
Social theories and intellectual antecedents: European and American origins and development. Includes entire range of socio-cultural complex associated with 19th- and early 20th-century sociology

SO 8113 Graduate Theory II: 3 hours.
Focus on post-19th century theory and antecedents. Delineation of the basic postures in the discipline and relative relationships of these postures to theory development

SO 8213 Research Design: 3 hours.
(Prerequisite: <u>SO 8274</u>). Three hours lecture. Emphasis on overall design, plan, structure, and strategy. Also limitations of theory, measurement, sampling and statistical testing in research

SO 8223 Advanced Quantitative Methods: 3 hours.***
(Prerequisite:<u>SO 8213</u>). Experimental Design, questionnaire and question construction,sampling,field procedures, advanced techniquesof analysis, presentation of statistical materials

SO 8233 Qualitative Analysis: 3 hours.
(Prerequisite: <u>SO 8213</u>). Three hours lecture. Qualitative approaches to understanding social behavior. Exposure to all phases of qualitative research: epistemology, design, field work, ethics, and writing research results

SO 8243 Spatial Analysis of Social Data: 3 hours.
(Prerequisite:<u>SO 8284</u> or equivalent, or consent of instructor). Three hours lecture. Spatial theorires of society;relevant digital databases; procedures for visualizing data;exploratory spatial data; local and global spatial regression models

SO 8274 Graduate Social Statistics I: 4 hours.
(Prerequisite: <u>ST 2113</u> or equivalent). Three hours lecture. Two hours laboratory. Probability, hypothesis testing, tests of means and proportions, contingency table analysis, analysis of variance, bivariate linear regressions correlation; data analysis and interpretation using current statistical software

SO 8284 Graduate Social Statistics II: 4 hours.
(Prerequisite: <u>SO 8274</u>). Three hours lecture. Two hours laboratory. Hypothesis testing, analysis of variance, multiple linear regression and correlation, causal models, exploratory factor analysis; data analysis and interpretation using current statistical software

SO 8293 Structural Equations Modeling with Latent Variables in Sociology: 3 hours.
(Prerequisite: <u>SO 8284</u> or equivalent). Three hours lecture. The application of structural equation modeling techniques to sociological problems containing unobserved variables, focusing on estimation and interpretation of model parameters with errors of measurement

SO 8313 Political Sociology: 3 hours.
Three hours seminar. Study of power relations within and across societies and the relationships between social groups and politics. Special attention given to the links between stratification, power, and contentious politics

SO 8343 Complex Organizations: 3 hours.
Theory and research in organizations. Nature and types of organizations; determinants and consequences of organizational growth; organizational effectiveness; production, authority, and control systems in organizations

SO 8403 Seminar in Race Relations: 3 hours.
Three hours lecture. Contributions of anthropology, sociology and psychology to the field of race relations. Critical analysis of recent studies, current racial theories and programs

SO 8413 Seminar in Social Stratification: 3 hours.
Three hours lecture. Critical analyses of theories and research on social class and related social structures. Explores race/gender/class stratification and policies to alter income.wealth inequality

SO 8423 Seminar in Deviant Behavior: 3 hours.
Examination of relation between social conditions, social problems, deviance, and deviant careers. The organization of social control activities, and the social differentiation of deviant populations

SO 8433 Seminar in Criminology: 3 hours.
Exploration of conceptual, methodological, and substantive problems of research in the field of criminology. The classification of criminals and criminal careers receives special emphasis

SO 8503 Seminar in the Family: 3 hours.
An advanced seminar on the family institution, emphasizing theoretical and conceptual frameworks, topics of current concern to family sociology, and major literature in the area

SO 8523 Symbolic Interaction and Social Structure: 3 hours.
Review of classic and current sociological literature in symbolic interaction and development of self as process and product of social structure

SO 8703 Seminar in Population: 3 hours.
(Prerequisite: SO 4703/6703 or equivalent). Study of population dynamics; theories of optimum population; population policies and programs; zero population growth; interrelationship of population phenomena with socioeconomic developments

SO 8900 Fields of Sociology: 1-3 hours.
(Hours and credits to be arranged up to 3 hours.) A seminar in selected areas of sociological research and practice

SO 8963 Exploring Issues in Gender: 3 hours.
(Prerequisite:Graduate standing and enrollment in the Diveristy Certificate Program).Three hours lecture. An intensive introduction to theories of gender structures social, economic and cultural inequalities. Designed for online Diversity Certificate Program students. (Same as GS 8963)

SO 8973 Gender and Work: 3 hours.
(Prerequisite: Graduate standing and enrollment in the Diversity Certificate Program).Three hours lecture. An intensive examination of how gender impacts

experiences of work from the home to the corporation. Designed for online Diversity Certificate Program Students. (Same as GS 8973)

SO 8983 Seminar in Race Relations: 3 hours.
(Prerequisite:Graduate standing and enrollment in the Diversity Certificate Program). Three hours lecture. Contributions of anthropology, scoiology , and psychology to race relations. Critical analysis of recent studies, curretn racial theories and programs. Designed for online Diversity Certificate Program students

SO 8990 Special Topics in Sociology: 1-9 hours.
Credit and title to be arranged. This course is to be used on a limited basis to offer developing subject matter areas not covered in existing courses. (Courses limited to two offerings under one title within two academic years)

SO 9000 Dissertation Research /Dissertation in Sociology: 1-13 hours.
Hours and credits to be arranged

***Note: This course is currently being modified in name and course description only. It is being changed to "Quantitative Analysis" so that students are better able to understand the parallel between it and SO 8233: Qualitative Analysis.

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: Engineering   **Department:** Computer Science and Eng

Contact Person: Dr. David Dampier   **Mail Stop:** 9637   **E-mail:** dad6@msstate.edu

Nature of Change: Add New Degree - IHL Approval Required   **Date:** 12/2016

Program will be offered at: Starkville (Campus 1)

Current Degree Program Name: Select One   **Effective Date:** 08/2018

Major: **Concentration:**
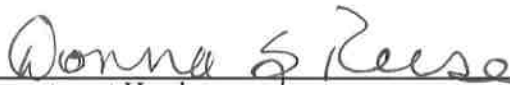
New Degree Program Name: Bachelor of Science

Major: Cyber Security and Operations   **Concentration:** Cyber Defense/Cyber Operations

Summary of Proposed Changes:

This proposal requests permission to offer a new BS in Cyber Security and Operations. This degree will have two concentrations: Cyber Defense and Cyber Operations.

_____   _____
Department Head

_____   _____
Chair, College or School Curriculum Committee

_____   _____
Dean of College or School

_____   _____
Chair, University Committee on Courses and Curricula

_____   _____
Chair, Graduate Council (if applicable)

_____   _____
Chair, Deans Council

☐   **SACS Letter Sent**

Appendix 8: New Degree Program Proposal

Institution: Mississippi State University		
Date of Implementation: August 16, 2018	**Six Year Cost of Implementation:** $1,860,728	**Per Student Cost of Implementation:** $9,304

Program Title as will Appear on Academic Program Inventory, Diploma, and Transcript: Bachelor of Science in Cyber Security and Operations	**Six Digit CIP Code:** 11.1003

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

List any institutions within the state offering similar programs:

None

Responsible Academic Unit(s): Department of Computer Science and Engineering	**Institutional Contact:** Dr. David A. Dampier

Check one of the boxes below related to SACS COC Substantive Changes.

[X] Proposed Program **is Not** a Substantive Change	[ ] Proposed Program **is** a Substantive Change

Number of Students Expected to Enroll in First Six Years:		**Number of Graduates Expected in First Six Years:**	
Year One	15	Year One	0
Year Two	25	Year Two	10
Year Three	40	Year Three	20
Year Four	40	Year Four	30
Year Five	40	Year Five	35
Year Six	40	Year Six	35
Total	200	Total	130

Program Summary: The Bachelor of Science in Cyber Security and Operations is a focused undergraduate education program in cyber security. The program is designed to satisfy the requirements laid out by the Department of Defense for the Center of Academic Excellence in Cyber Operations program that was awarded to MSU in 2013, as well as the Center of Academic Excellence in Cyber Defense Education originally awarded to MSU in 2001 and most recently renewed in 2014. This would be to offer a full undergraduate degree option in cyber security and operations that would build on the current programs in computer science, software engineering, and computer engineering. Students in this program would be prepared to serve in the government or industry as cyber security engineers, either on the defensive side or operations side. These students would have the skills to move into these jobs with little or no additional training. Additionally, these students would be prepared to continue pursuit of a M.S. in computer science with a concentration in cyber security, or a M.S. in Cyber Security and Operations. MSU is one of only six schools in the country qualified to offer this degree with both defensive and offensive capability, and uniquely qualified in the southeast United States.

Institutional Executive Officer Signature	**Date**

Institution:

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

This program will be administered through the Department of Computer Science and Engineering by an Undergraduate Coordinator to be determined. The curriculum will be managed by an Undergraduate Studies Committee responsible for this degree program, and will be subject to annual review by both this committee, and the external advisory board. Accreditation will be sought through ABET, as soon as accreditation is available and the program has its first graduates.

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

The educational objectives of this degree program are:

- The graduate will demonstrate an understanding of cyber security principles and an ability to solve unstructured cyber security problems through the successful entrance into and advancement as a cyber security professional in the government or industrial sectors.
- The graduate will demonstrate an understanding of relevant laws and policies relating to information, computer, and network security.
- The graduate will demonstrate an appreciation for lifelong learning and for the value of continuing professional development through participation in graduate education, professional education or continuing education opportunities, attainment of professional licensure, or membership in professional societies.
- The graduate will demonstrate an understanding of professional and ethical responsibilities to the profession, society and the environment incumbent on a computer science professional.
- The graduate will successfully interact with others of different backgrounds, educations, and cultures.
- The graduate will demonstrate effective communication skills in their profession.

Cyber Defense Concentration

- The graduate will demonstrate the ability to develop enterprise policies appropriate to the level of the enterprise in accordance with applicable laws and policies.
- The graduate will demonstrate the ability to conduct risk assessments of cyber systems, and develop appropriate mitigation strategies to offset those risks.

Cyber Operations Concentration

- The graduate will demonstrate the ability to perform in an operational cyber environment against adversaries of varying capabilities.
- The graduate will demonstrate the ability to develop plans for cyber operations in an offensive or defensive posture.
- The graduate will demonstrate the ability to conduct penetration tests to assess a system's ability to withstand intrusions by known adversaries.

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

No special admission requirements will be sought for this program.

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

This degree program does not represent a substantive change from existing programs, as it does not differ from existing programs in computer science, computer engineering, and software engineering by a significant amount. Program accreditation standards are under development by the Accreditation Board for Engineering and Technology (ABET) and program accreditation will be sought as soon as those standards are available and accreditation is possible. Draft criteria for cyber security accreditation is:

- **Cyber Defense,** such as cryptography, data security, network security, information assurance.
- **Cyber Operations**, such as cyber attack, penetration testing, cyber intelligence, reverse engineering, cryptanalysis.
- **Digital Forensics,** such as hardware and software forensics, incident response, cybercrime, cyber law enforcement.
- **Cyber Physical Systems**, such as Supervisory Control and Data Acquisition (SCADA) systems, internet-of-things (IOT), industrial control systems.
- **Secure Software Development**, such as secure systems design, secure coding, deployability, maintainability, usability of secure information system.
- **Cyber Ethics**, such as ethical use of information systems, privacy and anonymity, intellectual property rights, professional responsibility, global societal impact of information systems.
- **Cyber Policy, Governance, and Law**, such as government and institutional cyber policy and practices, regulatory authorities for cyber systems and operations, cyber law.
- **Cyber Risk Management**, such as cyber resilience, mission assurance, disaster recover, business continuity, security evaluation, cyber economics.
- **Human Behavioral Relating to Cyber Systems and Operations,** such as social engineering, social networks, user experience, and organizational behavior.

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

All students will be required to complete at least 128 hours of course work, including the full university core curriculum. One full year of mathematics and science will be required as well, according to ABET requirements. Additionally, an adequate preparation in computer science, computer engineering, and software engineering subjects will be required.

Requirements:

University Core

- English Composition (6 hours)
- Humanities (6 hours)
- Social Science (6 hours)
- Public Speaking (3 hours)
- Fine Arts (3 hours)
- Technical Writing (3 hours)
- Mathematics
  - MA 1713, 1723, 2733: Calculus I, II, and III (9 hours)
  - IE 4613: Engineering Statistics (3 hours)
  - CSE 2813: Discrete Structures (3 hours)
- Lab Science
  - Biology (4 hours)
  - Chemistry (4 hours)
  - Physics I & II (6 hours)

Engineering Core

- Computer Science, Electrical and Computer Engineering, and Business Information Systems
  - CSE 1002: Intro to CSE (2 hours)
  - CSE 1284 and 1384: Intro and Intermediate Programming (8 hours)
  - CSE 2383: Data Structures (3 hours)
  - CSE 3324: Distributed Client Server Programming (4 hours)
  - CSE 4153: Data Communications and Networks (3 hours)
  - CSE 4243: Info and Computer Security (3 hours)
  - CSE 4253: Secure Software Engineering (3 Hours) NEW
  - CSE 4273: Digital Forensics (3 hours)
  - CSE 4383: Network Security and Cryptography (3 hours)
  - CSE 4763: Cyber Law (3 hours) NEW
  - CSE 4733: Operating Systems I (3 hours)
  - ECE 3714: Digital Devices (4 hours)
  - ECE 3724: Microprocessors (4 hours)
  - Cyber Defense (CD) Concentration
    - BIS 4113: BIS Security (3 hours)
    - CSE 4503: Database Management Systems (3 hours)
  - Cyber Operations (CO) Concentration
    - CSE 4363: Software Reverse Engineering (3 hours)
    - CSE 4743: Operating Systems II (3 hours)
    - CSE 4753: Intro to Cyber Operations (3 hours) NEW
    - ECE 4723: Embedded Systems (3 hours)

Electives

- Mathematics Elective: Any upper division mathematics class (3 hours)
- Technical Elective: Any upper division CSE, ECE, or MA classes (12 hours for CD & 6 hours for CO)
- Free Electives: Any university classes (5 hours)

CSE	1002	Intro to CSE	Two hours lecture. Introduction to the computer science, cyber security and operations, and software engineering curricula, profession, and career opportunities. Historical perspective; support role of the department. Ethics, team building, problem solving.
CSE	1284	Intro Comp Prog	(Prerequisiste:MA 1313 or equivalent).Three hours lecture Three hours laboratory. Introductory problem solving and computer programming using object-oriented techniques. Theoretical and practical aspects of programming and problem solving. Designed for CS, CPE, CYSO and SE majors.

CSE	1384	Intermed Comp Prog	(Prerequisite: CSE 1284 with grade of C or better). Three hours lecture.Three hour laboratory. Object-oriented problem solving, design,and programming. Introduction to data structures, algorithm design and complexity. Second course in sequence designed for CS, CPE, CYSO and SE majors.
CSE	2383	Data Struc & Anal of Alg	(Prerequisite :Grade C or better in CSE 1384 and MA 1713). Three hours lecture. Non-linear data structures and their associated algorithms. Trees, graphs, hash tables, relational data model, file organization. Advanced software design and development.
CSE	2813	Discrete Structures	(Prerequisites:Grade of C or better in CSE 1284 and MA 1313 or equivalent). Three hours lecture. Concepts of algorithms, induction, recursion,proofs, topics from logic,set theory, combinatorics, graph theory fundamental to study of computer science.
CSE	3324	Dist Client/Server Prog	(Prerequisite: All majors: Grade of C or better in CSE 2383. CS/SE majors: CSE 4503 with a grade of C or better). Three hours lecture. Three hours laboratory. Design of software systems for distributed environments. Multithreaded and server-side programming, client/server.
CSE	4153	Data Comm Networks	(Prerequisites: Grade of C or better in CSE 1384 or ECE 3732, and ECE 3724 . Three hours lecture.The concepts and practices of data communications and networking to provide the student with an understanding of the hardware and software used for data communications. (Same as ECE 4833/6833).
CSE	4243	Info & Computer Security	(Prerequisite: Credit or registration in CS 4733/6733). Three hours lecture. Topics include encryption systems, network security, electronic commerce, systems threats, and risk avoidance procedures.
CSE	4253	Secure Software Engineering	(Prerequisite: Grade of C or better in CSE 3324). Three hours lecture. Principles, techniques, and practices involved in building security into software systems including security requirements analysis, secure design, secure coding and security testing, verification and risk management. Topics also include analysis and security assessment of legacy software systems.
CSE	4273	Intro to Computer Forensics	(Prerequisite: Senior standing in CSE/SE/CPE/MIS/CJ/CYSO) Three hours lecture. Introduction to computer crime and the study of evidence for solving computer-based crimes. Topics: computer crime, computer forensics and methods for handling evidence.
CSE	4363	Software Reverse Engineering	(Prerequisite: CSE 4733/6733). Three hours lecture. Software specification recovery and malicious software analysis. Tools and techniques for analyzing compiled programs and communications in the absence of documentation.
CSE	4383	Crypto & Network Secur	(Prerequisite: Credit or registration in CSE 4153/6153). Three hours lecture. Basic and advanced concepts in cryptography and network security: symmetric and asymmetric cryptography, key management, wired and wireless network security protocols, network systems security.
CSE	4503	Database Management Sys	(Prerequisites: CSE 2383 and CSE 2813, both with a grade of C or better). Three hours lecture. Modern database models; basic database management concepts; query languages; database design through normalization; advanced database models; extensive development experience in a team environment.
CSE	4733	Operating Systems I	(Prerequisites: Grade of C or better in CSE 2383 and ECE 3724).Three hours lecture. Historical development of operating systems to control complex computing systems; process management, communication, scheduling techniques; file systems concepts and operation; data communication, distributed process management.
CSE	4743	Operating Systems II	(Prerequisites: CSE 4733/6733 with grade of C or better). Three hours lecture. Integrated treatment of hardware and software concepts in operating systems design; procedure implementation; creation and control of processes; name and space management.
CSE	4753	Intro to Cyber Operations	(Prerequisites: Permission of Instructor). Three hours lecture. This course is designed to develop the students' knowledge of cyberspace operations concepts and methodologies. Graduates should be able to assist in the analysis, synthesis, and evaluation of management, engineering, and operational approaches to solve complex problems within cyberspace, defensive and offensive.
CSE	4763	Cyber Law	(Prerequisite: Permission of Instructor). Three hours lecture. A detailed discussion of laws, technology issues, business strategies, and policies relating to cyber security.

ECE	3714	Digital Devices	(Prerequisite: Credit or registration in CSE 1213, CSE 1233, or CSE 1284). Three hours lecture. Three hours laboratory. Binary codes, Boolean, algebra, combinational logic design, flip-flops, counters, synchronous sequential logic, programmable logic devices, MSI logic devices, adder circuits.
ECE	3724	Microprocessors	(Prerequisites: Grade of C or better in both CSE 2383 and ECE 3714). Three hour lecture. Three hour laboratory. Architecture of microprocessor-based systems. Study of microprocessor operation, assembly language, arithmetic operations, and interfacing.
ECE	4723	Embedded Systems	(Prerequisites: Grade of C or better in CSE 3324 and ECE 3724 and in either ECE 3424 or CSE 4153). Two hours lecture. Three hours laboratory. Advanced topics in embedded systems design using contemporary practice. Interrupt-driven, reactive, real-time, object-oriented, and distributed client/server embedded systems.
IE	4613	Eng Statistics I	(Prerequisite: MA 1723). Three hours lecture. Introduction to statistical analysis. Topics include: probability, probability distributions, data analysis, parameter estimation, statistical intervals, and statistical inferences.
MA	1713	Calculus I	(Prerequisite: ACT Math subscore 26, or grade of C or better in 1323 or 1453). Three hours lecture. Analytic geometry; functions; limits; continuity; derivatives of algebraic functions; applications of the derivative.
MA	1723	Calculus II	(Prerequisite: Grade of C or better in MA 1713). Three hours lecture. Antidifferentiation; the definite integral; applications of the definite integral; differentiation and integration of transcendental functions.
MA	2733	Calculus III	(Prerequisite: Grade of C or better in MA 1723). Three hours lecture. Further methods of integration; polar coordinates; vectors; infinite series.
BIS	4113	BIS Security	(Prerequisite: BIS 3233 or any 3 hours of computer-related coursework). Three hours lecture. Concepts, skills, tools and techniques involved in management of computer security as it applies to today's business environment.
BIO	1134	Biology I	Three hours lecture. Two hours laboratory. Principles of Biology including nature of science, chemistry of life, cell structure and division, cellular respiration, photosynthesis, Mendelian, chromosomal and molecular genetics, evolution, and ecology.
CH	1211	Chemistry I Lab	(Prerequisite:Prior credit or concurrent enrollment in CH 1213).Three hours laboratory. Selected experiments to illustrate fundamentals of chemistry.Accompanies CH 1213.
CH	1213	Chemistry I	(Prerequisities:ACT Math subscore 24 or grade of C or better in MA 1313) Three hours lecture.The principles of atomic and molecular structure, energetics, dynamics, and synthesis as related to chemical systems.
PH	2213	Physics I	(Prerequisite:Grade of C or better in MA 1713). Three hours lecture. Calculus-based course emphasizing Newtonian mechanics and conservation laws. Honors section available.
PH	2223	Physics II	(Prerequisites: PH 2213 and MA 1723). Two hours lecture, one hour recitation, two hours laboratory. Calculus-based introduction to gravitation, electricity and magnetism. Laboratory emphasizes concepts of force and motion, conservation laws, and simple electrical circuits. Honors section available.

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

   a. David A. Dampier, Professor of Computer Science and Engineering, Computer Science, Administrator: CSE 4753, CSE 4273

   b. John A. Hamilton, Professor of Computer Science and Engineering, Computer Science, Administrator: CSE 4243, CSE 4753

   c. Wesley McGrew, Adjunct Assistant Professor of Computer Science and Engineering, Computer Science, Part-Time Faculty: CSE 4243, CSE 4363

   d. Richard Anderson, Instructor of Computer Science and Engineering, Computer Science, Full Time Faculty: CSE 4243, 4273

e. Tanmay Bhowmik, Assistant Professor of Computer Science and Engineering, Computer Science, Full Time Faculty: CSE 4243, 4253, 4273

f. Joseph Crumpton, Assistant Clinical Professor of Computer Science and Engineering, Computer Science, Full Time Faculty: CSE 4243, 4253, 4273

g. Mahalingam Ramkumar, Associate Professor of Computer Science and Engineering, Computer Engineering, Full Time Faculty: CSE 4383

h. Byron Williams, Assistant Professor of Computer Science and Engineering, Computer Science, Full Time Faculty: CSE 4253

i. Maxwell Young, Assistant Professor of Computer Science and Engineering, Computer Science, Full Time Faculty: CSE 4153

j. Jerry Bruce, Associate Professor of Electrical and Computer Engineering, Computer Engineering, Full Time Faculty: ECE 4723

k. Kent Marett, Associate Professor of Management Information Systems, Information Systems, Full Time Faculty: BIS 4113

l. David Lee, Adjunct Assistant Professor of Computer Science and Engineering, Law, Part-Time Faculty: CSE 4763 (Cyber Law)

m. 2 Tenure-Track Assistant or Associate Professors of Computer Science and Engineering or Electrical and Computer Engineering, qualified to teach cyber security courses

Additional CSE Faculty that will teach Core CSE and Engineering classes required by this degree:

a. Christopher Archibald, Assistant Professor of Computer Science and Engineering, Computer Science, Full Time Faculty

b. Ioana Banicescu, Professor of Computer Science and Engineering, Computer Science, Full Time Faculty

c. Cindy Bethel, Associate Professor of Computer Science and Engineering, Computer Science, Full Time Faculty

d. Eric Hansen, Associate Professor of Computer Science and Engineering, Computer Science, Full Time Faculty

e. Lisa Henderson, Instructor of Computer Science and Engineering, Computer Science, Full Time Faculty

f. T.J. Jankun-Kelly, Associate Professor of Computer Science and Engineering, Computer Science, Full Time Faculty

g. Sarah Lee, Assistant Clinical Professor of Computer Science and Engineering, Computer Science, Full Time Faculty

h. Edward Luke, Professor of Computer Science and Engineering, Computer Science, Full Time Faculty

i. Andy Perkins, Associate Professor of Computer Science and Engineering, Computer Science, Full Time Faculty

j. Donna Reese, Professor of Computer Science and Engineering, Computer Science, Full Time Faculty

k. J. Edward Swan, Professor of Computer Science and Engineering, Computer Science, Full Time Faculty

l. Song Zhang, Associate Professor of Computer Science and Engineering, Computer Science, Full Time Faculty

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

The Mississippi State University Library holds subscriptions for hundreds of journals related to computer science, electrical and computer engineering, and business information systems. Among them, the following appear to be most relevant to the study of cyber security and operations:

- Annual Reviews in Control
- Big Data & Society
- Computers & Security
- Future Generations Computer Systems
- Journal of Computer & System Sciences
- Journal of Information Security and Applications
- International Journal of Critical Infrastructure Protection
- Network Security
- Industrial Management & Data Systems
- Information & Computer Security

Additionally, our library has subscriptions to IEEE Xplore and ACM Digital Library, both of which give us access to a world of journals and conference proceedings related to cyber security and operations. The library's holdings are more than sufficient to support research and study in this domain.

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

Graduates will be assessed through course assessments (exams, quizzes, homework, and laboratory assignments). Periodically, these assessments will be collected and reviewed by the undergraduate studies committee to determine the effectiveness of the teaching. Graduates will also be surveyed as to the strengths and weaknesses of the program. When available, accreditation through the ABET Computing Accrediting Commission will be sought, which will ensure that every six years the program will be assessed for quality. Additionally, the NSA/DHS Center of Academic Excellence program provides an external assessment of all cyber security programs every five years. MSU has been designated a CAE in Cyber Defense Education continuously since 2001, a CAE in Cyber Defense Research since 2008, and a CAE in Cyber Operations since 2013. These designations are aligned with specific degree programs, and require very specific academic criteria be met. Additionally, changes in the job market will be monitored for increases and decreases, but quite frankly, the education system as it is today is incapable of satisfying the job needs, so no decrease is anticipated into the medium future.

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

The U.S. cyber command, as well as the Army and Air Force are constantly asking us for graduates with these credentials, and our students are also asking about these degree options. It is estimated that 25% or so of existing computer science students will change to this major immediately upon its approval. Additionally, the number of inquiries asking about this program is increasing regularly, especially since MSU was ranked in the top 5 for cyber security education in the United States. These rankings were 3rd for all academic levels in 2014[1] and 5th for graduate cyber security education in 2016[2].

http://www.hp.com/hpinfo/newsroom/press_kits/2014/RSAConference2014/Ponemon_2014_Best_Schools_Report.pdf, downloaded August 11, 2015 at 10:50 AM.

https://www.universities.com/articles/10-best-grad-schools-cyber-security/, downloaded July 26, 2016 at 5:30 PM.

NEW DEGREE OUTLINE FORM

Use the chart below to indicate your new degree outline. If any General Education (Core) course is acceptable in the category, please indicate by saying "any Gen Ed course". There is no need to type in the whole list. Expand rows as needed.

PROPOSED New Degree
Degree: Bachelor of Science Major: Cyber Security and Operations Concentrations: Cyber Defense/Cyber Operations
The Bachelor of Science in Cyber Security and Operations is designed for students who wish to help meet the challenges posed by increasing cyber-threats. Using a multidisciplinary approach, the program is designed to provide students with a focused education for evaluating, understanding, and solving cyber security problems.
The Cyber Defense concentration will focus on those aspects of cyber security needed to prepare an enterprise level system to protect itself. Specific material will prepare the students for developing cyber security policies to comply with existing and future laws, conducting risk assessments in an enterprise to determine compliance with requirements, and implementing security solutions for the enterprise.

Proposed Curriculum Outline	Required Hours
English (General Education):	6
Fine Arts (General Education):	3
Natural Sciences See Major Core	
Math (General Education): See Major Core	
Humanities (General Education):	6
Social/Behavioral Sciences (General Education):	6
Major Core Courses	
Biology I (BIO 1134)	4
Chemistry I (CH 1213)	3
Investigations in Chemistry I (CH 1211)	1
Physics I (PH 2213)	3
Physics II (PH 2223)	3
Calculus I (MA 1713)	3
Calculus II (MA 1723)	3
Calculus III (MA 2733)	3
Discrete Structures (CSE 2813)	3
Engineering Statistics I (IE 4613)	3
Upper Division Mathematics Elective	3
Introduction to CSE (CSE 1002)	2
Introduction to Computer Programming (CSE 1284)	4
Intermediate Computer Programming (CSE 1384)	4
Data Structures and Analysis of Algorithms (CSE 2383)	3
Distributed Client/Server Programming (CSE 3324)	4
Data Communications and Networks (CSE 4153)	3
Information and Computer Security (CSE 4243)	3
Secure Software Engineering (CSE 4253)	3
Computer Forensics and Cyber Crime (CSE 4273)	3
Network Security and Cryptography (CSE 4383)	3
Operating Systems I (CSE 4733)	3
Cyber Law (CSE 4763)	3
Digital Devices (ECE 3714)	4

Microprocessors (ECE 3724)	4
Technical Electives (Any Upper Division MA, CSE, or ECE)	6
Oral Communication Requirement Fundamentals of Public Speaking (CO 1003) or Introduction to Communication (CO 1013)	3
Writing Requirement Technical Writing (GE 3513)	3
Free Electives	5

Cyber Defense Concentration Courses
   BIS Security (BIS 4113)
   Database Management Systems (CSE 4503)
   Technical Electives (Any Upper Division MA, CSE, or ECE)
	3
	3
	6

Cyber Operations Concentration Courses
   Software Reverse Engineering (CSE 4363)
   Operating Systems II (CSE 4743)
   Introduction to Cyber Operations (CSE 4753)
   Embedded Systems (ECE 4723)
	3
	3
	3
	3

Total Hours	128

2. CURRICULUM OUTLINE

Three new courses are proposed in this degree program and the appropriate paperwork is included in CIM for the new courses. They are:

- CSE 4253: Secure Software Engineering
- CSE 4753: Introduction to Cyber Operations
- CSE 4763: Cyber Law

3. STUDENT LEARNING OUTCOMES AND ASSESSMENT

Basic Degree Learning Outcomes:

- Students will be prepared to serve in government or industry positions requiring expertise in cyber security, either offense or defense.
- Students will be prepared to understand relevant laws and policies relating to information, computer, and network security.
- Students will be prepared to evaluate security risks and/or vulnerabilities and formulate appropriate solutions to mitigate those risks/vulnerabilities.

Concentrations:

Cyber Defense:

- Students will be prepared to conduct detailed vulnerability assessments to determine risks for cyber attacks.
- Students will be prepared to develop enterprise policies appropriate to the level of the enterprise in accordance with applicable laws and policies.

Cyber Operations:

- Students will be prepared to operate in an operational cyber environment against adversaries of varying capabilities.
- Students will be prepared to develop plans for cyber operations in an offensive or defensive posture.
- Students will be prepared to conduct penetration tests to assess a system's ability to withstand intrusions by known adversaries.

Assessment Methods:

Throughout the curriculum, students will be expected to take examinations and quizzes, complete homework assignments, and do practical application assignments to prepare them for real-world problems. These methods of

assessment will be identical to the methods of assessment for the current B.S. in Computer Science, Software Engineering, and Computer Engineering.

4. SUPPORT

A letter of support is provided from the Heads of the Department of Computer Science and Engineering, the Department of Electrical and Computer Engineering, and the Department of Management and Information Systems as these are the departments with classes required in the engineering core of the curriculum.

5. PROPOSED 4-LETTER ABBREVIATION

CYSO

6. EFFECTIVE DATE

The desired effective date for this degree to be available is August 2018.

7. CIP NUMBER

11.1003

Mississippi State University
Bachelor of Science – Cyber Security and Operations (Cyber Operations)
Degree Requirements
Last Updated 2017

Freshman Year

Fall Semester			Spring Semester	
CSE 1002 Intro to CSE	2		CSE 1384 Intermed Programming	4
CSE 1284 Intro to Programming	4		MA 1723 Calculus II	3
EN 1103 English Comp I	3		EN 1113 English Comp II	3
CH 1213 Chemistry I	3		PH 2213 Physics I	3
CH 1211 Chemistry I Lab	1		CO 1003 Public Speaking	3
MA 1713 Calculus I	3			
	16			16

Sophomore Year

Fall Semester			Spring Semester	
CSE 2383 Data Struct & Anal of Alg	3		CSE 3324 Dist Client Server Prog	4
CSE 2813 Discrete Structures	3		ECE 3724 Microprocessors	4
ECE 3714 Digital Devices	4		CSE 4753 Intro to Cyber Operations	3
MA 2733 Calculus III	3		Fine Art Elective	3
PH 2223 Physics II	3		Humanities Elective	3
	16			17

Junior Year

Fall Semester			Spring Semester	
CSE 4733 Operating Systems I	3		CSE 4743 Operating Systems II	3
CSE 4243 Info and Comp Security	3		CSE 4153 Data Comm and Networks	3
BIO 1134 Biology I	4		IE 4613 Engineering Statistics I	3
Humanities Elective	3		Social Science Elective	3
Technical Elective	3		GE 3513 Technical Writing	3
	16			15

Senior Year

Fall Semester			Spring Semester	
ECE 4723 Embedded Systems	3		CSE 4363 Software Reverse Eng	3
CSE 4273 Computer Forensics	3		CSE 4383 Cryptography and Net Sec	3
CSE 4753 Cyber Law	3		Mathematics Elective	3
CSE 4253 Secure Software Eng	3		Social Science Elective	3
Technical Elective	3		Free Elective	5
	15			17

Mississippi State University
Bachelor of Science – Cyber Security and Operations (Cyber Operations)
Degree Requirements
Last Updated 2017

Communication Skills (12 Hours)
- English Composition 6
- Oral Communication (CO 1003) 3
- Technical Writing (GE 3513) 3

Fine Arts, Humanities, Social Studies (15 Hours)
- Fine Arts Elective 3
- Humanities Electives (2) 6
- Social Science Electives (2) 6

Natural Sciences (14 Hours)
- Biology (BIO 1134) 4
- Chemistry and lab (CH 1213/1211) 4
- Physics (PH 2213/2223) 6

Mathematics (18 Hours)
- Discrete Math (CSE 2813) 3
- Calculus (MA 1713/1723/2733) 9
- Upper Division Mathematics Elective 3
- Engineering Statistics (IE 4613) 3

Technical Electives (6 Hours)
- Electives (Any Upper Division Mathematics, CSE, or ECE class) 6

Computer Science and Engineering (47 Hours)
- Introduction to CSE (CSE 1002) 2
- Introduction to Computer Programming (CSE 1284) 4
- Intermediate Computer Programming (CSE 1384) 4
- Data Structures and Analysis of Algorithms (CSE 2383) 3
- Distributed Client/Server Programming (CSE 3324) 4
- Data Communications and Networks (CSE 4153) 3
- Information and Computer Security (CSE 4243) 3
- Secure Software Engineering (CSE 4253) 3
- Computer Forensics and Cyber Crime (CSE 4273) 3
- Software Reverse Engineering (CSE 4363) 3
- Network Security and Cryptography (CSE 4383) 3
- Operating Systems I (CSE 4733) 3
- Operating Systems II (CSE 4743) 3
- Introduction to Cyber Operations (CSE 4753) 3
- Cyber Law (CSE 4763) 3

Electrical and Computer Engineering (11 Hours)
- Digital Devices (ECE 3714) 4
- Microprocessors I (ECE 3724) 4
- Embedded Systems (ECE 4723) 3

Free Electives (5 Hours) 5

Total Hours 128

Mississippi State University
Bachelor of Science – Cyber Security and Operations (Cyber Defense)
Degree Requirements
Last Updated 2017

Freshman Year

Fall Semester			Spring Semester		
CSE 1002	Intro to CSE	2	CSE 1384	Intermed Programming	4
CSE 1284	Intro to Programming	4	MA 1723	Calculus II	3
EN 1103	English Comp I	3	EN 1113	English Comp II	3
CH 1213	Chemistry I	3	PH 2213	Physics I	3
CH 1211	Chemistry I Lab	1	CO 1003	Public Speaking	3
MA 1713	Calculus I	3			
		16			16

Sophomore Year

Fall Semester			Spring Semester		
CSE 2383	Data Struct & Anal of Alg	3	CSE 4503	Database Mng Sys	4
CSE 2813	Discrete Structures	3	ECE 3724	Microprocessors	4
ECE 3714	Digital Devices	4	BIS 4113	BIS Security	3
MA 2733	Calculus III	3	Fine Art Elective		3
PH 2223	Physics II	3	Humanities Elective		3
		16			17

Junior Year

Fall Semester			Spring Semester		
CSE 4733	Operating Systems I	3	CSE 4153	Data Comm and Networks	3
CSE 4243	Info and Comp Security	3	IE 4613	Engineering Statistics I	3
CSE 3324	Dist Client Server Prog	3	Technical Elective		3
BIO 1134	Biology I	4	Social Science Elective		3
Humanities Elective		3	GE 3513	Technical Writing	3
		16			15

Senior Year

Fall Semester			Spring Semester		
CSE 4253	Secure Software Eng	3	CSE 4383	Cryptography and Net Sec	3
CSE 4273	Computer Forensics	3	Technical Elective		3
CSE 4753	Cyber Law	3	Mathematics Elective		3
Technical Elective		3	Social Science Elective		3
Technical Elective		3	Free Elective		5
		15			17

Mississippi State University
Bachelor of Science – Cyber Security and Operations (Cyber Defense)
Degree Requirements
Last Updated 2017

Communication Skills (12 Hours)
- English Composition 6
- Oral Communication (CO 1003) 3
- Technical Writing (GE 3513) 3

Fine Arts, Humanities, Social Studies (15 Hours)
- Fine Arts Elective 3
- Humanities Electives (2) 6
- Social Science Electives (2) 6

Natural Sciences (14 Hours)
- Biology (BIO 1134) 4
- Chemistry and lab (CH 1213/1211) 4
- Physics (PH 2213/2223) 6

Mathematics (18 Hours)
- Discrete Math (CSE 2813) 3
- Calculus (MA 1713/1723/2733) 9
- Upper Division Mathematics Elective 3
- Engineering Statistics (IE 4613) 3

Technical Electives (12 Hours)
- Electives (Any Upper Division Mathematics, CSE, or ECE class) 12

Computer Science and Engineering (41 Hours)
- Introduction to CSE (CSE 1002) 2
- Introduction to Computer Programming (CSE 1284) 4
- Intermediate Computer Programming (CSE 1384) 4
- Data Structures and Analysis of Algorithms (CSE 2383) 3
- Distributed Client/Server Programming (CSE 3324) 4
- Data Communications and Networks (CSE 4153) 3
- Information and Computer Security (CSE 4243) 3
- Secure Software Engineering (CSE 4253) 3
- Computer Forensics and Cyber Crime (CSE 4273) 3
- Network Security and Cryptography (CSE 4383) 3
- Database Management Systems (CSE 4503) 3
- Operating Systems I (CSE 4733) 3
- Cyber Law (CSE 4763) 3

Electrical and Computer Engineering (8 Hours)
- Digital Devices (ECE 3714) 4
- Microprocessors I (ECE 3724) 4

Business Information Systems (3 Hours)
- BIS Security (BIS 4113) 3

Free Electives (5 Hours) 5

Total Hours 128

MISSISSIPPI STATE UNIVERSITY™
——JAMES WORTH——
BAGLEY
COLLEGE OF ENGINEERING

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

December 6, 2016

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

Dr. Franz:

This letter is provided to document the support of the Department of Computer Science and Engineering at Mississippi State University for the addition of a Bachelor's of Science degree in Cyber Security and Operations. The addition of this degree program to our existing offerings will require the creation of three additional undergraduate classes: CSE 4253 – Secure Software Engineering; CSE 4753 – Introduction to Cyber Operations; and CSE 4763 – Cyber Law. With the additional faculty resources included in the Appendix 8 application, the addition of these classes should not place an undue burden on the department's faculty. The department faculty voted unanimously to approve the application for the new degree program and the addition of the three classes in the faculty meeting held on December 2, 2016 with 16 faculty members voting.

This new degree program will add a valuable new dimension to the department's offerings and the new classes will be available not only for this new degree program, but also for students in the existing B.S. programs in Computer Science and Software Engineering.

Sincerely,

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

Eric Hansen, Ph.D.
CSE Courses and Curricula Member
Associate Professor

Song Zhang, Ph.D.
CSE Courses and Curricula Member
Associate Professor

MISSISSIPPI STATE UNIVERSITY™
———— J A M E S   W O R T H ————
BAGLEY
COLLEGE OF ENGINEERING

DEPARTMENT OF
COMPUTER SCIENCE & ENGINEERING

Dr. Donna S. Reese
Department Head and Professor
dreese@cse.msstate.edu

December 11, 2016

To Whom It May Concern:

The Department of Computer Science and Engineering fully supports the attached proposal for the creation of a BS degree in Cybersecurity and Operations. Since 2001 the department has been recognized as a Center for Academic Excellence in Cyber Defense Education. In 2013 the department added the designation as a Center of Academic Excellence in Cyber Operations as well. These designations, along with the certificate programs in Information Assurance and Cyber Operations have aided the department in attracting high-quality students from throughout the country, particularly in the southeast region. The ability to provide a BS program specifically in this area will further enhance these opportunities.

The time is right for adding this degree program. Nationwide demand for students with these capabilities is high and projected to continue growing. In addition, our accrediting body, the Computing Accreditation Commission of ABET, is currently developing program criteria to allow for accreditation of these programs. It is expected that these criteria will be in place by the time we graduate our first students from this program. This gives Mississippi State the opportunity to be among the first programs to be accredited under these new criteria. The attached BS program proposal has been designed with these draft criteria in mind so that we will be poised to seek accreditation for this program as soon as it is available.

This program cannot be offered, however, without the appropriate resources. Faculty resources in the department are already stretched thin due to a doubling of enrollment at the undergraduate level in our CS and SE programs in the last 8 years. Student support resources (e.g., advising) are also at capacity in the department. The department will need the new resources described in the program proposal to be able to support this new degree program. Capacity does not exist in the department to manage this program without these additional resources.

Sincerely,

Donna S Reese

Dr. Donna Reese
Professor and Department Head

MISSISSIPPI STATE UNIVERSITY™
——— JAMES WORTH ———
BAGLEY
COLLEGE OF ENGINEERING

DEPARTMENT OF ELECTRICAL
& COMPUTER ENGINEERING

Nicolas H. Younan
Department Head and Professor
James Worth Bagley Chair
younan@ece.msstate.edu

November 30, 2016

To Whom It May Concern:

The Department of Computer Science and Engineering is in the process of submitting a request to add a B.S. degree in Cybersecurity and Operations. The Department of Electrical and Computer Engineering supports this proposal and can handle additional students in the required ECE courses. If additional information is needed, feel free to contact me.

Sincerely yours,

Nicolas Younan

Nicolas H. Younan, Ph.D.
Department Head and Professor
James Worth Bagley Chair

December 1, 2016

David A. Dampier, Ph.D.
Professor of Computer Science and Engineering
Director, Distributed Analytics and Security Institute
HPC A129, Box 9627
Mississippi State, MS 39762

Dear Dr. Dampier:

Based on feedback from the information systems faculty in the Department of Management &
Information Systems, I am pleased to support your proposal to create a BS in Cyber Security and
Operations. We believe we could handle students from the Cyber Defense concentration of the
proposed degree program in the summer section of our BIS 4113 class (BIS Security
Management).

Sincerely,

James J. Chrisman, Ph.D.
Julia Bennett Rouse Professor of Management
Head, Department of Management & Information Systems
Director, Center of Family Enterprise Research
Mississippi State University
Mississippi State, MS 39762-9581
jchrisman@business.msstate.edu
Tel. 662-325-1991