ADDENDUM TO AGENDA
UNIVERSITY COMMITTEE ON COURSES AND CURRICULA
March 24, 2017

1. Welcome
2. Approval of Minutes
3. Course proposals by college/school
4. Degree proposals by college/school

EDUCATION

Modification	BS	Information Technology Services

VETERINARY MEDICINE

Modification	Ph.D.	Veterinary Medical Science
Modification	MS	Veterinary Medical Science

APPROVAL FORM FOR

DEGREE PROGRAMS

MISSISSIPPI STATE UNIVERSITY

NOTE: This form is a cover sheet that must accompany the degree program change proposal. The actual proposal should be prepared in accordance with format requirements provided in the *Guide and Format for Curriculum Proposals* published by the UCCC. Both cover sheet and proposal should be submitted, along with all required copies, to UCCC, Garner Hall, Room 279, Mail Stop 9702.

College: Education **Department:** Instructional Systems & Workforce Dev.

Contact Person: Sang Joon Lee/Kun Huang **Mail Stop:** 9730 **E-mail:** slee@colled.msstate.edu

Nature of Change: Modification **Date:** 10/24/2016

Program will be offered at: Starkville (Campus 1)

Current Degree Program Name: Bachelor of Science **Effective Date:** Upon Approval

Major: Information Technology Services **Concentration:** None

New Degree Program Name: Bachelor of Science

Major: Information Technology Services **Concentration:** None

Summary of Proposed Changes:

1) Modify the Business Core requirement:
   a. Remove BIS 1733 Visual Basic Applications
   b. Add BIS 1523 Web Development I
2) Modify the Technology Core requirement:
   a. Remove TKB 4283 Advanced Office Systems
   b. Add TKB 4573 Data Networks II

Connie M. Forde Department Head	11-21-2016
Rebecca Richards-Davis Chair, College or School Curriculum Committee	3-14-2017
Teresa Dufrene Dean of College or School	3-14-17
Chair, University Committee on Courses and Curricula	
Chair, Graduate Council (if applicable)	
Chair, Deans Council	

☐ SACS Letter Sent

Proposal to Modify **Bachelor of Science in Information Technology Services (ITS)**
in Instructional Systems and Workforce Development

1. CATALOG DESCRIPTION

(No modification)

This curriculum is designed to prepare students for the use of computer-based information systems, particularly software applications and hardware and the development and implementation of information technology end user support and information technology project management.

Minor in business administration. By completing the business requirements for the ITS degree, students may be eligible to receive a minor in Business Administration from the College of Business. ITS majors interested in a minor in business administration should contact an academic coordinator in room 106 McCool Hall.

2. CURRICULUM OUTLINE

DEGREE MODIFICATION OUTLINE FORM

CURRENT Degree Description		PROPOSED Degree Description	
Degree: Bachelor of Science Major: Information Technology Services (ITS) Concentration:		Degree: Bachelor of Science Major: Information Technology Services (ITS) Concentration:	
This curriculum is designed to prepare students for the use of computer-based information systems, particularly software applications and hardware and the development and implementation of information technology end user support and information technology project management. Minor in business administration. By completing the business requirements for the ITS degree, students may be eligible to receive a minor in Business Administration from the College of Business. ITS majors interested in a minor in business administration should contact an academic coordinator in room 106 McCool Hall.		This curriculum is designed to prepare students for the use of computer-based information systems, particularly software applications and hardware and the development and implementation of information technology end user support and information technology project management. Minor in business administration. By completing the business requirements for the ITS degree, students may be eligible to receive a minor in Business Administration from the College of Business. ITS majors interested in a minor in business administration should contact an academic coordinator in room 106 McCool Hall.	
CURRENT CURRICULUM OUTLINE	Required Hours	**PROPOSED CURRICULUM OUTLINE**	Required Hours
English Composition: English Composition I English Composition II	 3 3	English Composition: English Composition I English Composition II	 3 3
Mathematics: MA 1313 College Algebra ST 2113 Introduction to Statistics, or BQA 2113 Business Statistical Methods I	 3 3	Mathematics: MA 1313 College Algebra ST 2113 Introduction to Statistics, or BQA 2113 Business Statistical Methods I	 3 3
Science: Natural Science w/lab – See General Education courses Natural Science w/lab – See General Education courses	 3 3	Science: Natural Science w/lab – See General Education courses Natural Science w/lab – See General Education courses	 3 3

Math/Science Elective: See General Education courses	3	Math/Science Elective See General Education courses	3
Humanities: See General Education Requirement	6	Humanities: See General Education Requirement	6
Fine Arts: See General Education courses	3	Fine Arts See General Education courses	3
Social/Behavioral Sciences: See General Education Requirement	6	Social/Behavioral Sciences: See General Education Requirement	6
Oral Communication Requirement: CO 1003 Fundamentals of Public Speaking or CO 1013 Introduction to Communication	3	Oral Communication Requirement: CO 1003 Fundamentals of Public Speaking or CO 1013 Introduction to Communication	3
Computer Literacy Requirement: TKT 1273 Computer Applications (or other approved course)	3	Computer Literacy Requirement: TKT 1273 Computer Applications (or other approved course)	3
Writing Requirement: MGT 3213 Organizational Communications	3	Writing Requirement: MGT 3213 Organizational Communications	3
Minor Core: Business Courses	28	Minor Core: Business Courses	28
ACC 2013 Principles of Financial Accounting	3	ACC 2013 Principles of Financial Accounting	3
ACC 2023 Principles of Managerial Accounting	3	ACC 2023 Principles of Managerial Accounting	3
BL 2413 The Legal Environment of Business	3	BL 2413 The Legal Environment of Business	3
EC 2113 Principles of Macroeconomics	3	EC 2113 Principles of Macroeconomics	3
EC 2123 Principles of Microeconomics	3	EC 2123 Principles of Microeconomics	3
MGT 3114 Principles of Management and Production	4	MGT 3114 Principles of Management and Production	4
MGT 3513 Introduction to Human Resource Management	3	MGT 3513 Introduction to Human Resource Management	3
BIS 1733 Visual Basic Programming	*3*	**BIS 1523 Web Development I**	**3**
BIS 3233 Management Information Systems	3	BIS 3233 Management Information Systems	3
Major Core: Technology Courses	51	Major Core: Technology Courses	51
TKB 2123 Database Management	3	TKB 2123 Database Management	3
TKB 2133 Spreadsheet Design & Analysis	3	TKB 2133 Spreadsheet Design & Analysis	3
TKB 3133 Administrative Management and Procedures	3	TKB 3133 Administrative Management and Procedures	3
TKB 4283 Advanced Office Systems	*3*	TKB 4543 Information Processing	3
TKB 4543 Information Processing	3	TKB 4563 Introduction to Data Networks	3
TKB 4563 Introduction to Data Networks	3	**TKB 4573 Data Networks II**	**3**
TKB 4583 Graphics and Web Design	3	TKB 4583 Graphics and Web Design	3

TKT 3213 Call Center Management	3	TKT 3213 Call Center Management	3
TKT 3463 Computer Repair and Maintenance	3	TKT 3463 Computer Repair and Maintenance	3
TKT 3623 Design Technology Training	3	TKT 3623 Design Technology Training	3
TKT 4203 Emerging Technologies	3	TKT 4203 Emerging Technologies	3
TKT 4343 Information Technology Project Management	3	TKT 4343 Information Technology Project Management	3
TKT 4623 Delivery and Evaluation of Technology Training	3	TKT 4623 Delivery and Evaluation of Technology Training	3
TKT 4683 Senior Seminar	3	TKT 4683 Senior Seminar	3
TKT 4743 Electronic Desktop Publishing	3	TKT 4743 Electronic Desktop Publishing	3
TKT 4753 Media for Presentations, Instruction and Gaming	3	TKT 4753 Media for Presentations, Instruction and Gaming	3
Approved Elective	3	Approved Elective	3
Total Hours	124	Total Hours	124

3. JUSTIFICATION AND STUDENT LEARNING OUTCOMES

The main purpose of the proposed degree modification is to reflect the recent curriculum changes in the Business Information Systems program and strengthen students' foundations and applications of information technology service (ITS). This degree modification is proposed to remove *BIS 1733 Visual Basic Programming and TKB 4283 Advanced Office Systems* and add *BIS 1523 Web Development I and TKB 4573 Data Networks II.* The newly proposed TKB 4573 Data Networks II will provide students with advanced level knowledge and skills to identify major tasks in managing server systems, employing basic security and performance tuning techniques, and troubleshooting common system problems. The faculty believes that these changes will enhance the ITS program and allow the graduating students to achieve their career goals in ITS.

Learning outcomes for the program include:

- Students will be able to deliver technology training programs.
- Students will be proficient in written and oral communication.
- Students will demonstrate competency in technology.
- Students will be able to apply principles and methods of ITS content.

4. SUPPORT

Letter of support from graduate program faculty is attached.
The proposed modifications will not require any additional support in terms of personnel and material requirements (lab space, classroom space).

5. PROPOSED 4-LETTER ABBREVIATION

No Change

6. EFFECTIVE DATE

Upon approval.

MISSISSIPPI STATE UNIVERSITY

DEPARTMENT OF INSTRUCTIONAL SYSTEMS AND WORKFORCE DEVELOPMENT
BOX 9730
MISSISSIPPI STATE, MISSISSIPPI 39762-9730
TELEPHONE: 662-325-2281 FAX: 662-325-7599

LETTER OF SUPPORT

DATE: October 11, 2016

TO: Box Council and UCCC Committee Members

FROM: Kun Huang and Sang Joon Lee

RE: ***Support of ITS (B.S. in Information Technology Services) Degree Modification***

This letter of support is offered by the ITS program faculty for the proposed program modifications as follows:

Technology Core: TKB & TKT Courses

1) Remove the following course: (Total: 3 Credit Hours)
    a. TKB 4283 Advanced Office Systems (3 hours)

2) Add the following course: (Total: 3 Credit Hours)
    a. TKB 4573 Data Networks II (3 hours)

Business Core:

1) Remove the following course: (Total: 3 Credit Hours)
    a. BIS 1733 Visual Basic Applications (3 hours)

2) Add the following course: (Total: 3 Credit Hours)
    b. BIS 1523 Web Development I (3 hours)

As indicated by the signatures below, a majority of the program area faculty have approved the proposal as written for submission to the Box Council and the UCCC.

Program Area Faculty

Dr. Joanne Beriswill	[Date] 10/12/16
Dr. Pamela Bracey	[Date] 10/11/16
Dr. Kun Huang	[Date] 10/11/16
Ms. Vicki Keel	[Date] 10/11/16
Dr. Sang Joon Lee	[Date] 10/11/2016
Dr. Chien Yu	[Date] 10/11/2016
Dr. Wei-Chieh Yu	[Date] 10/11/16

MISSISSIPPI STATE UNIVERSITY

October 31, 2016

Dr. Connie Forde, Professor and Head
Department of Instructional Systems and Workforce Development
Mississippi State University

Dear Connie:

The information systems faculty and I reviewed your proposal to make the following changes to the curriculum of the Information Technology Services degree program: (a) replacing BIS 1733 (Visual Basic Programming) with BIS 1523 (Web Development I), and (b) adding a new course, TKB 4573 (Data Networks II). We have determined that the proposal would not adversely impact our Information Systems degree program and are therefore pleased to support these changes.

We wish you the best in getting your curriculum changes for the Information Technology Services degree program approved.

Sincerely,

James J. Chrisman, Ph.D.
Julia Bennett Rouse Professor of Management
Head, Department of Management & Information Systems
Director, Center of Family Enterprise Research
308/308A McCool Hall, College of Business
Mississippi State University
Mississippi State, MS 39762-9581
662-325-1991

Cc: Mr. Steve Canfield, Dr. Kent Marett, Dr. Kelly McNamara, Dr. Kathleen Olivieri, Dr. Robert Otondo, Dr. Rodney Pearson, Dr. Gary Templeton, Dr. Merrill Warkentin of the Department of Management and Information Systems, and Dr. Sang Joon Lee, ITS Coordinator of the Department of Instructional Systems and Workforce Development.

APPROVAL FORM FOR

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College: Veterinary Medicine **Department:** Office of Research and Graduate Studies

Contact Person: Tia Perkins or Carla Huston **Mail Stop:** 9825 **E-mail:** tia.perkins@msstate.edu

Nature of Change: Modification **Date Initiated:** 03/08/2017 **Effective Date:** Summer 2017

Degree to be offered at: Starkville campus

Current Degree Program Name:
Major: Ph.D in Veterinary Medical Science **Concentration:**
1. Veterinary Medical Research (VMRC)
2. Computational Biology (VCBC)
3. Infectious Diseases (VIDC)

New Degree Program Name:
Major: Ph.D. in Veterinary Medical Science **Concentration:**
1. Veterinary Medical Research (VMRC)
2. Computational Biology (VCBC)
3. Infectious Diseases (VIDC)
4. **Population Medicine (POPM)**

Summary of Proposed Changes:

The CVM Graduate Faculty request that the current Ph.D in Veterinary Medical Science be offered with an additional concentration: Population Medicine Thesis (POPM), which will allow students a more focused degree in population systems, including research options in both animal and human health, which is currently not available in the veterinary medical sciences program.

Approved:	***Date:***
Mark L. Lawrence, Associate Dean, CVM	3/10/17
Chair, Graduate Programs Advisory Committee	3-10-17
Chair, University Committee on Courses and Curricula	
Chair, Graduate Council (if applicable)	
Chair, Deans Council	

IHL Action Required

SACS Letter Sent

Major Modification Proposal – Ph.D in Veterinary Medical Science

1. CATALOG DESCRIPTION

Current Graduate Bulletin Description (2016 – 2017):

Veterinary Medical Science
Graduate Coordinator, Pathobiology and Population Medicine: Dr. R. Hartford Bailey
Graduate Coordinator, Basic Sciences: Dr. Larry Hanson
Graduate Coordinator, Clinical Sciences: *Dr. Andrew Mackin*
R 2002 Wise Center
Box 6100
Mississippi State, MS 39762-6100
Telephone: 662-325-1417
E-mail: tia.perkins@msstate.edu

Admission Criteria
To be admitted to the Veterinary Medical Sciences Graduate Program the applicant must either hold a D.V.M. degree from a recognized college of veterinary medicine or have at least a bachelor's degree from a fully recognized four-year institution of higher learning. The scholastic record for all undergraduate, graduate, and professional school coursework will be reviewed and should exceed a minimum GPA of 3.00for undergraduate work; GPA of 3.00 for graduate work; GPA of 2.75 for the four years of the veterinary curriculum or 2.75 for the last two years of the veterinary curriculum. Also required are three reference letters, a minimum TOEFL score of 550 PBT (213 CBT or 79 iBT) or IELTS score of 6.5 for international students from countries whose primarily language is not English, and if a Graduate Record Examination (GRE) score is available it will be considered.

Provisional Admission
In special circumstances a student who does not meet admission criteria may be admitted provisionally if approved by the Graduate Program Advisory Committee (GPAC). See Provisional Admission under Admission in this publication for provisional requirements.

Academic Performance
If a student does not show satisfactory progress toward meeting academic, research, and/or thesis requirements, his/her performance will be reviewed in a meeting with the student's graduate committee. This committee may recommend a change in the student's program or recommend that the student be dismissed from the degree program in the *College of Veterinary Medical Science* program. Students must follow all guidelines outlined in the Graduate Catalog.

Proposed Graduate Bulletin Catalog Description (2017 – 2018):

Veterinary Medical Science
Graduate Coordinator, Pathobiology and Population Medicine: Dr. R. Hartford Bailey
Graduate Coordinator, Basic Sciences: Dr. Larry Hanson
Graduate Coordinator, Clinical Sciences: **Dr. Cyprianna Swiderski**
R 2002 Wise Center
Box 6100
Mississippi State, MS 39762-6100
Telephone: 662-325-1417
E-mail: tia.perkins@msstate.edu

Admission Criteria
To be admitted to the Veterinary Medical Sciences Graduate Program the applicant must either hold a D.V.M. degree from a recognized college of veterinary medicine or have at least a bachelor's degree from a fully recognized four-year institution of higher learning. The scholastic record for all undergraduate, graduate, and professional school coursework will be reviewed and should exceed a minimum GPA of 3.00 for undergraduate work; GPA of 3.00 for graduate work; GPA of 2.75 for the four years of the veterinary curriculum or 2.75 for the last two years of the veterinary curriculum. Also required are three reference letters, a minimum TOEFL score of 550 PBT (213 CBT or 79 iBT) or IELTS score of 6.5 for international students from countries whose primarily language is not English, and if a Graduate Record Examination (GRE) score is available it will be considered.

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Academic Performance
If a student does not show satisfactory progress toward meeting academic, research, and/or thesis requirements, his/her performance will be reviewed in a meeting with the student's graduate committee. This committee may recommend a change in the student's program or recommend that the student be dismissed from the graduate degree program in the **College of Veterinary Medicine Veterinary Medical Science** Program. Students must follow all guidelines outlined in the Graduate Catalog.

2. Curriculum Outline

CURRENT Degree Description	PROPOSED Degree Description
Degree: Ph.D. Major: Veterinary Medical Science Concentrations: Veterinary Medical Research (VMRC), Computational Biology (VCBC), Infectious Diseases (VIDC)	Degree: Ph.D Major: Veterinary Medical Science Concentrations: Veterinary Medical Research (VMRC), Computational Biology (VCBC), Infectious Diseases (VIDC), **Population Medicine (POPM)**
Old degree catalog description: Admission Criteria To be admitted to the Veterinary Medical Sciences Graduate Program the applicant must either hold a D.V.M. degree from a recognized college of veterinary medicine or have at least a bachelor's degree from a fully recognized four-year institution of higher learning. The scholastic record for all undergraduate, graduate, and professional school coursework will be reviewed and should exceed a minimum GPA of 3.00 for undergraduate work; GPA of 3.00 for graduate work; GPA of 2.75 for the four years of the veterinary curriculum or 2.75 for the last two years of the veterinary curriculum. Also required are three reference letters, a minimum TOEFL score of 550 PBT (213 CBT or 79 iBT) or IELTS score of 6.5 for international students from countries whose primarily language is not English, and if a Graduate Record Examination (GRE) score is available it will be considered. Provisional Admission In special circumstances a student who does not meet admission criteria may be admitted provisionally if approved by the Graduate Program Advisory Committee (GPAC). See Provisional Admission under Admission in this publication for provisional requirements. Academic Performance If a student does not show satisfactory progress toward meeting academic, research, and/or thesis requirements, his/her performance will be reviewed in a meeting with the student's graduate committee. This committee may recommend a change in the student's program	New degree catalog description: Admission Criteria To be admitted to the Veterinary Medical Sciences Graduate Program the applicant must either hold a D.V.M. degree from a recognized college of veterinary medicine or have at least a bachelor's degree from a fully recognized four-year institution of higher learning. The scholastic record for all undergraduate, graduate, and professional school coursework will be reviewed and should exceed a minimum GPA of 3.00 for undergraduate work; GPA of 3.00 for graduate work; GPA of 2.75 for the four years of the veterinary curriculum or 2.75 for the last two years of the veterinary curriculum. Also required are three reference letters, a minimum TOEFL score of 550 PBT (213 CBT or 79 iBT) or IELTS score of 6.5 for international students from countries whose primarily language is not English, and if a Graduate Record Examination (GRE) score is available it will be considered. Provisional Admission In special circumstances a student who does not meet admission criteria may be admitted provisionally if approved by the Graduate Program Advisory Committee (GPAC). See Provisional Admission under Admission in this publication for provisional requirements. Academic Performance If a student does not show satisfactory progress toward meeting academic, research, and/or thesis requirements, his/her performance will be reviewed in a meeting with the student's graduate committee. This committee may recommend a change in the student's program

or recommend that the student be dismissed from the degree program in the *College of Veterinary Medical Science* program. Students must follow all guidelines outlined in the Graduate Catalog.

Old Concentration description:

Doctor of Philosophy in Veterinary Medical Science (VMS) – Veterinary Medical Research Concentration (VMRC)(for students with a master's degree)

Two statistics courses [1,2]	6
Three seminar courses (CVM 8011 or equivalent)[1]	3
Graduate-level courses (at least 12 hours of all coursework at 8000-level or higher) or additional CVM 9000 credits [1]	31
CVM 9000 Dissertation Research/Dissertation in Veterinary Medicine	20
Total Hours	60

[1] Equivalency of seminars and coursework is determined by the student's graduate committee.
[2] Previous graduate level statistics courses can satisfy this requirement with approval of the student's graduate committee. Transfer of credit for any previously taken courses is subject to the MSU Bulletin of the Graduate School policy. Graduate level statistics courses that have counted towards a previous degree can satisfy this policy but will not be calculated towards the Ph.D. coursework hours.

Doctor of Philosophy in Veterinary Medical Science (VMS) – Veterinary Medical Research Concentration (VMRC)(for students with a bachelor's but no master's degree)

Two statistics courses [1,2]	6
Three seminar courses (CVM 8011 or equivalent)[1]	3
Graduate-level courses (at least 12 hours of all coursework at 8000-level or higher)	15
CVM 9000 Dissertation Research/Dissertation in Veterinary Medicine	20
Additional graduate-level coursework and/or CVM 9000 credits[3]	46
Total Hours	90

[1] Equivalency of seminars and coursework is determined by the student's graduate committee.
[2] Previous graduate-level statistics courses can satisfy this requirement with approval of the student's graduate committee. Graduate-level statistics courses that have

or recommend that the student be dismissed from the graduate degree program in the **College of Veterinary Medicine Veterinary Medical Science** Program. Students must follow all guidelines outlined in the Graduate Catalog.

New Concentration description:

Doctor of Philosophy in Veterinary Medical Science (VMS) – Veterinary Medical Research Concentration (VMRC)(for students with a master's degree)

Two statistics courses [1,2]	6
Three seminar courses (CVM 8011 or equivalent)[1]	3
Graduate-level courses (at least 12 hours of all coursework at 8000-level or higher) or additional CVM 9000 credits [1]	31
CVM 9000 Dissertation Research/Dissertation in Veterinary Medicine	20
Total Hours	60

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Doctor of Philosophy in Veterinary Medical Science (VMS) – Veterinary Medical Research Concentration (VMRC)(for students with a bachelor's but no master's degree)

Two statistics courses [1,2]	6
Three seminar courses (CVM 8011 or equivalent)[1]	3
Graduate-level courses (at least 12 hours of all coursework at 8000-level or higher)	15
CVM 9000 Dissertation Research/Dissertation in Veterinary Medicine	20
Additional graduate-level coursework and/or CVM 9000 credits[3]	46
Total Hours	90

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[2] Previous graduate-level statistics courses can satisfy this requirement with approval of the student's graduate committee. Graduate-level statistics courses that have

counted towards a previous degree can satisfy this policy but will not be calculated towards the Ph.D. coursework hours.
[3]Students must have 24 hours of graduate coursework to graduate with a Ph.D. in VMS.

Doctor of Philosophy in Veterinary Medical Science (VMS) – Computational Biology Concentration (VCBC) (for students with a master's degree)

BCH 8653 Genomes and Genomics	3
or PSS 8653 Genomes and Genomics	
CSE 6613 Bio-computing	3
CSE 6623 Computational Biology	3
Three seminar courses (CVM 8011 or equivalent)[1]	3
Two graduate-level statistics courses [1,2]	6
Graduate-level courses (at least 12 hours of all coursework at 8000-level) or additional CVM 9000 credits [1]	22
CVM 9000	20
Total Hours	60

[1] Equivalency of seminars and coursework is determined by the student's graduate committee.
[2] Previous graduate-level statistics courses can satisfy this requirement with approval of the student's graduate committee. Graduate-level statistics courses that have counted towards a previous degree can satisfy this policy but will not be calculated towards the Ph.D. coursework hours.

Doctor of Philosophy in Veterinary Medical Science (VMS) – Computational Biology Concentration (VCBC) (for students with a bachelor's but no master's degree)

BCH 8653 Genomes and Genomics	3
or PSS 8653 Genomes and Genomics	
CSE 6613 Bio-computing	3
CSE 6623 Computational Biology	3
Three seminar courses (CVM 8011 or equivalent)[1]	3
Two graduate-level statistics courses [1,2]	6
Graduate-level courses (at least 12 hours of all coursework at 8000-level or higher)	6
CVM 9000 Dissertation Research/Dissertation in Veterinary Medicine	20
Graduate-level coursework and/or additional CVM 9000 credits[3]	46
Total Hours	90

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or PSS 8653 Genomes and Genomics	
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Three seminar courses (CVM 8011 or equivalent)[1]	3
Two graduate-level statistics courses [1,2]	6
Graduate-level courses (at least 12 hours of all coursework at 8000-level) or additional CVM 9000 credits [1]	22
CVM 9000	20
Total Hours	60

[1] Equivalency of seminars and coursework is determined by the student's graduate committee.
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Doctor of Philosophy in Veterinary Medical Science (VMS) – Computational Biology Concentration (VCBC) (for students with a bachelor's but no master's degree)

BCH 8653 Genomes and Genomics	3
or PSS 8653 Genomes and Genomics	
CSE 6613 Bio-computing	3
CSE 6623 Computational Biology	3
Three seminar courses (CVM 8011 or equivalent)[1]	3
Two graduate-level statistics courses [1,2]	6
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CVM 9000 Dissertation Research/Dissertation in Veterinary Medicine	20
Graduate-level coursework and/or additional CVM 9000 credits[3]	46
Total Hours	90

[1] Equivalency of seminars and coursework is determined by the student's graduate committee.
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but will not be calculated towards the Ph.D. coursework hours.
[3]Students must have 24 hours of graduate coursework to graduate with a Ph.D. in VMS.

Doctor of Philosophy in Veterinary Medical Science (VMS) – Infectious Diseases Concentration (VIDC) (for students with a bachelor's but no master's degree)

CVM 8303 Advanced Immunology	*3*
BCH 6013 Principles of Biochemistry	*3*
or BCH 6713 Molecular Biology	
Two statistics courses [1,2]	*6*
Three seminar courses (CVM 8011 or equivalent)[1]	*6*
Graduate-level courses (at least 12 hours of all coursework at 8000-level or higher)	*22*
CVM 9000 Dissertation Research/Dissertation in Veterinary Medicine	*20*
Total Hours	*60*

[1] Equivalency of seminars and coursework is determined by the student's graduate committee.
[2] Previous graduate-level statistics courses can satisfy this requirement with approval of the student's graduate committee. Graduate-level statistics courses that have counted towards a previous degree can satisfy this policy but will not be calculated towards the Ph.D. coursework hours.
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Doctor of Philosophy in Veterinary Medical Science (VMS) – Infectious Diseases Concentration (VIDC)

CVM 8303 Advanced Immunology	*3*
BCH 6013 Principles of Biochemistry	*3*
or BCH 6713 Molecular Biology	
Two statistics courses [1,2]	*6*
Three seminar courses (CVM 8011 or equivalent)[1]	*3*
Graduate-level courses (at least 12 hours of all coursework must be at 8000-level or higher)	*6*
CVM 9000 Dissertation Research/Dissertation in Veterinary Medicine	*20*
Additional graduate-level coursework and/or CVM 9000 credits[3]	*46*
Total Hours	*90*

[1] Equivalency of seminars and coursework is determined by the student's graduate committee.
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[3]Students must have 24 hours of graduate coursework to graduate with a Ph.D. in VMS.

Doctor of Philosophy in Veterinary Medical Science (VMS) – Infectious Diseases Concentration (VIDC) (for students with a master's degree)

CVM 8303 Advanced Immunology	**3**
BCH 6013 Principles of Biochemistry	**3**
or BCH 6713 Molecular Biology	
Two statistics courses [1,2]	**6**
Three seminar courses (CVM 8011 or equivalent)[1]	**3**
Graduate-level courses (at least 12 hours of all coursework at 8000-level or higher)	**25**
CVM 9000 Dissertation Research/Dissertation in Veterinary Medicine	**20**
Total Hours	**60**

[1] Equivalency of seminars and coursework is determined by the student's graduate committee.
[2] Previous graduate-level statistics courses can satisfy this requirement with approval of the student's graduate committee. Graduate-level statistics courses that have counted towards a previous degree can satisfy this policy but will not be calculated towards the Ph.D. coursework hours.

Doctor of Philosophy in Veterinary Medical Science (VMS) – Infectious Diseases Concentration (VIDC) (for students with a bachelor's but no master's degree)

CVM 8303 Advanced Immunology	**3**
BCH 6013 Principles of Biochemistry	**3**
or BCH 6713 Molecular Biology	
Two statistics courses [1,2]	**6**
Three seminar courses (CVM 8011 or equivalent)[1]	**3**
Graduate-level courses (at least 12 hours of all coursework must be at 8000-level or higher)	**6**
CVM 9000 Dissertation Research/Dissertation in Veterinary Medicine	**20**
Additional graduate-level coursework and/or CVM 9000 credits[3]	**46**
Total Hours	**90**

[1] Equivalency of seminars and coursework is determined by the student's graduate committee.
[2] Previous graduate-level statistics courses can satisfy this requirement with approval of the student's graduate

hours.

committee. Graduate-level statistics courses that have counted towards a previous degree can satisfy this policy but will not be calculated towards the Ph.D. coursework hours.

[3]Students must have 24 hours of graduate coursework to graduate with a Ph.D. in VMS.

Doctor of Philosophy in Veterinary Medical Science (VMS) –Population Medicine Concentration (POPM) (for students with a master's degree)

CVM 8333 Food Safety	**3**
CVM 8513 Applied Veterinary Epidemiology	**3**
CVM 8503 Epidemiology and Biostatistics	**3**
ST 8114 Statistical Methods [1,2]	**4**
Three seminar courses (CVM 8011, 8091 or equivalent)[1]	**3**
Graduate-level courses (at least 12 hours of all coursework must be at 8000-level or higher) or additional 9000-level credit	**24**
CVM 9000 Dissertation Research/Dissertation in Veterinary Medicine	**20**
Total Hours	**60**

[1] Equivalency of seminars and coursework is determined by the student's graduate committee.
[2] Previous graduate-level statistics courses can satisfy this requirement with approval of the student's graduate committee. Graduate-level statistics courses that have counted towards a previous degree can satisfy this policy but will not be calculated towards the Ph.D. coursework hours.

Doctor of Philosophy in Veterinary Medical Science (VMS) –Population Medicine Concentration (POPM) (for students with a bachelor's but no master's degree)

CVM 8333 Food Safety	**3**
CVM 8513 Applied Veterinary Epidemiology	**3**
CVM 8503 Epidemiology and Biostatistics	**3**
ST 8114 Statistical Methods [1,2]	**4**
Three seminar courses (CVM 8011, 8091, or equivalent)[1]	**3**
Graduate-level courses (at least 12 hours of all coursework must be at 8000-level or higher) or additional 9000-level credit	**54**
CVM 9000 Dissertation Research/Dissertation in Veterinary Medicine	**20**
Total Hours	**90**

[1] Equivalency of seminars and coursework is determined by the student's graduate committee.

		[2] Previous graduate-level statistics courses can satisfy this requirement with approval of the student's graduate committee. Graduate-level statistics courses that have counted towards a previous degree can satisfy this policy but will not be calculated towards the Ph.D. coursework hours. **[3]Students must have 24 hours of graduate coursework to graduate with a Ph.D. in VMS.** **A final examination (oral and/or written) which covers both the major and supportive fields and includes defense of the thesis is required. Students must present an open seminar of the thesis research just prior to oral final examinations. The student must adhere to the University and College regulations regarding his/her graduate program.**	
CURRENT CURRICULUM OUTLINE *See above section – Concentration Description and Curriculum Outline/hours are now combined in the Graduate Catalog, therefore outline is not repeated here.	Required Hours	**PROPOSED CURRICULUM OUTLINE** *See above section – Concentration Description and Curriculum Outline/hours are now combined in the Graduate Catalog, therefore outline is not repeated here.	Required Hours

3. JUSTIFICATION AND STUDENT LEARNING OUTCOMES:

JUSTIFICATION:
We are proposing the establishment of a concentration of Population Medicine Thesis within the Ph.D. Degree Program in Veterinary Medical Sciences. Currently the only option offered to students interested in animal and human population systems is the M.S. Degree in Population Medicine Non-Thesis Concentration (PMNT). Given the growing emphasis on population systems within the medical and research communities, this degree will offer students the opportunity to focus in a more specialized area of veterinary medicine, while potentially increasing opportunities for placement throughout the state, the southeast, and the US in general. Furthermore, the advanced knowledge and training may result in increased salaries for graduates as the demand for population-based research programs increases globally. There are currently no degrees within MSU that offer students this type of research program.

This proposal is submitted along with one additional proposal: Modification proposal for a concentration in Population Medicine within the M.S. Program in Veterinary Medical Sciences.

LEARNING OUTCOMES:
1. Students will demonstrate advanced knowledge in a research area of population medicine.
2. Students will demonstrate the ability to disseminate original research.
3. Students will demonstrate research skills necessary for an occupation related to their field.

4. SUPPORT

See attached letter from the CVM Graduate Program Advisory Committee (GPAC) chair indicating approval of this modification proposal.

5. PROPOSED 4-LETTER ABBREVIATION

Major: Ph.D. VMS (no change)
Concentrations:
1. Veterinary Medical Research (VMRC)
2. Computational Biology (VCBC)
3. Infectious Diseases (VIDC)
4. **Population Medicine (POPM)**

6. EFFECTIVE DATE

Summer 2017

MISSISSIPPI STATE UNIVERSITY

COLLEGE OF VETERINARY MEDICINE

P.O. Box 6100
240 Wise Center Drive
Mississippi State, MS 39762

www.cvm.msstate.edu

March 6, 2017

Dr. Hart Bailey
Chair, CVM Graduate Programs Advisory Committee (GPAC)
PO Box 6100
Mississippi State, MS 39762

Dear Dr. Bailey;

On behalf of the Epidemiology/Population Medicine faculty at the MSU College of Veterinary Medicine, I am submitting two Degree Modification proposals to the GPAC for approval. We propose to add a concentration of Population Medicine – Thesis concentration (POPM) to the MS program and a Population Medicine concentration to the PhD program within the Veterinary Medical Sciences degree program. The addition of this concentration will allow students a more focused degree in population systems, including research options in both animal and human health, which is currently not available in the veterinary medical sciences program.

Per the Degree Program Modification instructions, the attached proposal contains both current and proposed curriculum requirements. Deletions are italicized within the text, and additions are in bold type. In addition to the proposed concentration additions, several other minor changes to the current Graduate Bulletin were also made in the proposed curriculum description:

- Updated name of Graduate Coordinator for Dept. of Clinical Sciences
- Corrected name of college program from "College of Veterinary Medical Science" to "College of Veterinary Medicine Veterinary Medical Science Program" (pages 3,5 in Academic Performance section).
- Deleted PhD program statistics requirements in MS Programs.
- Corrected course requirements for VTOX concentration in MS Programs.
- Corrected requirements for VIDC concentration with and without master's degree.

We appreciate the time and consideration of GPAC regarding these Course Modification proposals. Please let me know if I can answer any questions.

Sincerely,

Carla L. Huston
Associate Professor
Department of Pathobiology and Population Medicine

MISSISSIPPI STATE UNIVERSITY

COLLEGE OF VETERINARY MEDICINE

P.O. Box 6100
240 Wise Center Drive
Mississippi State, MS 39762

www.cvm.msstate.edu

March 10, 2017

Dr. Dana Pomykal Franz, Chair
University Committee on Courses and Curricula
281 Garner Hall
PO Box 5268
Mississippi State, MS 39762

Dear Dr. Franz;

This letter is to inform you that the College of Veterinary Medicine (CVM) Graduate Programs Advisory Committee (GPAC) has approved the proposals for the addition of the Population Medicine concentration (POPM) thesis-option Master's degree and the Population Medicine concentration (POPM) Doctorate of Philosophy degree, which are being proposed by Dr. Carla Huston.

If you have any questions, please call me at 662-325-7726.

Sincerely,

R.Hartford Bailey, M.S., Ph.D, CFS
Professor and Chair, CVM GPAC

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, Mail Stop 9699 (25 Morgan Ave), Phone: 325-0831.

College: Veterinary Medicine **Department:** Office of Research and Graduate Studies

Contact Person: Tia Perkins or Carla Huston **Mail Stop:** 9825 **E-mail:** tia.perkins@msstate.edu

Nature of Change: Modification **Date Initiated:** 03/08/2017 **Effective Date:** Summer 2017

Degree to be offered at: Starkville campus

Current Degree Program Name:
Major: M.S. in Veterinary Medical Science **Concentration:** 1. Population Medicine Non-Thesis (PMNT)
2. Veterinary Medical Research (VMRC)
3. Computational Biology (VCBC)
4. Infectious Diseases (VIDC)
5. Toxicology (VTOX)

New Degree Program Name:
Major: M.S. in Veterinary Medical Science **Concentration:** 1. Population Medicine Non-Thesis (PMNT)
2. Veterinary Medical Research (VMRC)
3. Computational Biology (VCBC)
4. Infectious Diseases (VIDC)
5. Toxicology (VTOX)
6. Population Medicine Thesis (POPM)

Summary of Proposed Changes:

The CVM Graduate Faculty request that the current M.S. in Veterinary Medical Science be offered with an additional concentration: Population Medicine Thesis (POPM), which will allow students a more focused degree in population systems, including research options in both animal and human health, which is currently not available in the veterinary medical sciences program.

Approved:	***Date:***
Mark L. Lawrence, Associate Dean, CVM	3/10/17
Chair, Graduate Programs Advisory Committee	3-10-17
Chair, University Committee on Courses and Curricula	
Chair, Graduate Council (if applicable)	
Chair, Deans Council	

IHL Action Required

SACS Letter Sent

Major Modification Proposal - M.S. in Veterinary Medical Science

1. CATALOG DESCRIPTION

Current Graduate Bulletin Description (2016 – 2017):

Veterinary Medical Science
Graduate Coordinator, Pathobiology and Population Medicine: Dr. R. Hartford Bailey
Graduate Coordinator, Basic Sciences: Dr. Larry Hanson
Graduate Coordinator, Clinical Sciences: *Dr. Andrew Mackin*
R 2002 Wise Center
Box 6100
Mississippi State, MS 39762-6100
Telephone: 662-325-1417
E-mail: tia.perkins@msstate.edu

Admission Criteria
To be admitted to the Veterinary Medical Sciences Graduate Program the applicant must either hold a D.V.M. degree from a recognized college of veterinary medicine or have at least a bachelor's degree from a fully recognized four-year institution of higher learning. The scholastic record for all undergraduate, graduate, and professional school coursework will be reviewed and should exceed a minimum GPA of 3.00for undergraduate work; GPA of 3.00 for graduate work; GPA of 2.75 for the four years of the veterinary curriculum or 2.75 for the last two years of the veterinary curriculum. Also required are three reference letters, a minimum TOEFL score of 550 PBT (213 CBT or 79 iBT) or IELTS score of 6.5 for international students from countries whose primarily language is not English, and if a Graduate Record Examination (GRE) score is available it will be considered.

Provisional Admission
In special circumstances a student who does not meet admission criteria may be admitted provisionally if approved by the Graduate Program Advisory Committee (GPAC). See Provisional Admission under Admission in this publication for provisional requirements.

Academic Performance
If a student does not show satisfactory progress toward meeting academic, research, and/or thesis requirements, his/her performance will be reviewed in a meeting with the student's graduate committee. This committee may recommend a change in the student's program or recommend that the student be dismissed from the degree program in the *College of Veterinary Medical Science* program. Students must follow all guidelines outlined in the Graduate Catalog.

Proposed Graduate Bulletin Catalog Description (2017 – 2018):

Veterinary Medical Science
Graduate Coordinator, Pathobiology and Population Medicine: Dr. R. Hartford Bailey
Graduate Coordinator, Basic Sciences: Dr. Larry Hanson
Graduate Coordinator, Clinical Sciences: **Dr. Cyprianna Swiderski**
R 2002 Wise Center
Box 6100
Mississippi State, MS 39762-6100
Telephone: 662-325-1417
E-mail: tia.perkins@msstate.edu

Admission Criteria
To be admitted to the Veterinary Medical Sciences Graduate Program the applicant must either hold a D.V.M. degree from a recognized college of veterinary medicine or have at least a bachelor's degree from a fully recognized four-year institution of higher learning. The scholastic record for all undergraduate, graduate, and professional school coursework will be reviewed and should exceed a minimum GPA of 3.00 for undergraduate work; GPA of 3.00 for graduate work; GPA of 2.75 for the four years of the veterinary curriculum or 2.75 for the last two years of the veterinary curriculum. Also required are three reference letters, a minimum TOEFL score of 550 PBT (213 CBT or 79 iBT) or IELTS score of 6.5 for international students from countries whose primarily language is not English, and if a Graduate Record Examination (GRE) score is available it will be considered.

Provisional Admission
In special circumstances a student who does not meet admission criteria may be admitted provisionally if approved by the Graduate Program Advisory Committee (GPAC). See Provisional Admission under Admission in this publication for provisional requirements.

Academic Performance
If a student does not show satisfactory progress toward meeting academic, research, and/or thesis requirements, his/her performance will be reviewed in a meeting with the student's graduate committee. This committee may recommend a change in the student's program or recommend that the student be dismissed from the graduate degree program in the **College of Veterinary Medicine Veterinary Medical Science** Program. Students must follow all guidelines outlined in the Graduate Catalog.

2. Curriculum Outline

CURRENT Degree Description	PROPOSED Degree Description
Degree: M.S. Major: Veterinary Medical Science Concentrations: Population Medicine-Non-thesis (PMNT), Veterinary Medical Research (VMRC), Computational Biology (VCBC), Infectious Diseases (VIDC), Toxicology (VTOX)	Degree: M.S. Major: Veterinary Medical Science Concentrations: Population Medicine-Non-thesis (PMNT), Veterinary Medical Research (VMRC), Computational Biology (VCBC), Infectious Diseases (VIDC), Toxicology (VTOX), **Population Medicine Thesis (POPM)**
Old degree catalog description: Admission Criteria To be admitted to the Veterinary Medical Sciences Graduate Program the applicant must either hold a D.V.M. degree from a recognized college of veterinary medicine or have at least a bachelor's degree from a fully recognized four-year institution of higher learning. The scholastic record for all undergraduate, graduate, and professional school coursework will be reviewed and should exceed a minimum GPA of 3.00 for undergraduate work; GPA of 3.00 for graduate work; GPA of 2.75 for the four years of the veterinary curriculum or 2.75 for the last two years of the veterinary curriculum. Also required are three reference letters, a minimum TOEFL score of 550 PBT (213 CBT or 79 iBT) or IELTS score of 6.5 for international students from countries whose primarily language is not English, and if a Graduate Record Examination (GRE) score is available it will be considered. Provisional Admission In special circumstances a student who does not meet admission criteria may be admitted provisionally if approved by the Graduate Program Advisory Committee (GPAC). See Provisional Admission under Admission in this publication for provisional requirements. Academic Performance If a student does not show satisfactory progress toward meeting academic, research, and/or thesis requirements, his/her performance will be reviewed in a meeting with the student's	New degree catalog description: Admission Criteria To be admitted to the Veterinary Medical Sciences Graduate Program the applicant must either hold a D.V.M. degree from a recognized college of veterinary medicine or have at least a bachelor's degree from a fully recognized four-year institution of higher learning. The scholastic record for all undergraduate, graduate, and professional school coursework will be reviewed and should exceed a minimum GPA of 3.00 for undergraduate work; GPA of 3.00 for graduate work; GPA of 2.75 for the four years of the veterinary curriculum or 2.75 for the last two years of the veterinary curriculum. Also required are three reference letters, a minimum TOEFL score of 550 PBT (213 CBT or 79 iBT) or IELTS score of 6.5 for international students from countries whose primarily language is not English, and if a Graduate Record Examination (GRE) score is available it will be considered. Provisional Admission In special circumstances a student who does not meet admission criteria may be admitted provisionally if approved by the Graduate Program Advisory Committee (GPAC). See Provisional Admission under Admission in this publication for provisional requirements. Academic Performance If a student does not show satisfactory progress toward meeting academic, research, and/or thesis requirements, his/her performance will be reviewed in a meeting with the student's

graduate committee. This committee may recommend a change in the student's program or recommend that the student be dismissed from the degree program in the *College of Veterinary Medical Science* program. Students must follow all guidelines outlined in the Graduate Catalog.	graduate committee. This committee may recommend a change in the student's program or recommend that the student be dismissed from the graduate degree program in the **College of Veterinary Medicine Veterinary Medical Science** Program. Students must follow all guidelines outlined in the Graduate Catalog.
Old Concentration description: Master of Science in Veterinary Medical Science (VMS) - Population Medicine Non-Thesis Concentration (PMNT)	New Concentration description: Master of Science in Veterinary Medical Science (VMS) - Population Medicine Non-Thesis Concentration (PMNT)

Graduate-level coursework credits (at least 15 hours of all coursework credits must be 8000-level or above) [1]	*31*
Statistics course [1,2]	3
CVM 8011 Seminar	1
or CVM 8091 Current Topics in Production Animal Medicine	
Total Hours	35

[1] Equivalency of seminars and coursework is determined by the student's graduate committee.
[2] Previous graduate level statistics courses can satisfy this requirement with approval of the student's graduate committee. Transfer of credit for any previously taken courses is subject to the MSU Bulletin of the Graduate School policy. *Graduate level statistics courses that have counted towards a previous degree can satisfy this policy but will not be calculated towards the Ph.D. coursework hours.*

A final examination (oral and/or written) which covers both the major and supportive fields and includes defense of the thesis is required. Students must present an open seminar of the thesis research just prior to oral final examinations. The student must adhere to the University and College regulations regarding his/her graduate program.

Master of Science in Veterinary Medical Science (VMS) - Veterinary Medical Research Concentration (VMRC)

Graduate-level coursework credits (at least 12 hours of all coursework credits must be 8000-level or above) [1]	*20*
One statistics course [1,2]	3
One seminar course (CVM 8011 or equivalent)[1]	1
CVM 8000 Thesis Research/Thesis in Veterinary Medicine	6
Total Hours	30

Statistics course [1,2]	3
CVM 8011 Seminar	1
or CVM 8091 Current Topics in Production Animal Medicine	
Graduate-level courses (at least 15 hours of all coursework credits must be 8000-level or higher) [1]	**31**
Total Hours	35

[1] Equivalency of seminars and coursework is determined by the student's graduate committee.
[2] Previous graduate level statistics courses can satisfy this requirement with approval of the student's graduate committee. Transfer of credit for any previously taken courses is subject to the MSU Bulletin of the Graduate School policy.

A final examination (oral and/or written) which covers both the major and supportive fields and includes defense of the thesis is required. Students must present an open seminar of the thesis research just prior to oral final examinations. The student must adhere to the University and College regulations regarding his/her graduate program.

Master of Science in Veterinary Medical Science (VMS) - Veterinary Medical Research Concentration (VMRC)

One statistics course [1,2]	3
One seminar course (CVM 8011 or equivalent)[1]	1
CVM 8000 Thesis Research/Thesis in Veterinary Medicine	6
Graduate-level courses (at least 12 hours of all coursework credits must be 8000-level or higher) [1]	**20**
Total Hours	30

[1] Equivalency of seminars and coursework is determined by the student's graduate committee.

[2] Previous graduate-level statistics courses can satisfy this requirement with approval of the student's graduate committee. *Graduate-level statistics courses that have counted towards a previous degree can satisfy this policy but will not be calculated towards the Ph.D. coursework hours.*

A final examination (oral and/or written) which covers both the major and supportive fields and includes defense of the thesis is required. Students must present an open seminar of the thesis research just prior to oral final examinations. The student must adhere to the University and College regulations regarding his/her graduate program.

Master of Science in Veterinary Medical Science (VMS) - Computational Biology Concentration (VCBC)

Graduate-level courses (at least 12 hours of all coursework credits must be 8000-level or higher) [1]	*11*
BCH 8653 Genomes and Genomics	3
or PSS 8653 Genomes and Genomics	
CSE 6613 Bio-computing	3
CSE 6623 Computational Biology	3
One statistics course [1,2]	3
One seminar course (CVM 8011 or equivalent)[1]	1
CVM 8000 Thesis Research/Thesis in Veterinary Medicine	6
Total Hours	30

[1] Equivalency of seminars and coursework is determined by the student's graduate committee.

[2] Previous graduate-level statistics courses can satisfy this requirement with approval of the student's graduate committee. *Graduate-level statistics courses that have counted towards a previous degree can satisfy this policy but will not be calculated towards the Ph.D. coursework hours.*

A final examination (oral and/or written) which covers both the major and supportive fields and includes defense of the thesis is required. Students must present an open seminar of the thesis research just prior to oral final examinations. The student must adhere to the University and College regulations regarding his/her graduate program.

[1] Equivalency of seminars and coursework is determined by the student's graduate committee.

[2] Previous graduate-level statistics courses can satisfy this requirement with approval of the student's graduate committee.

A final examination (oral and/or written) which covers both the major and supportive fields and includes defense of the thesis is required. Students must present an open seminar of the thesis research just prior to oral final examinations. The student must adhere to the University and College regulations regarding his/her graduate program.

Master of Science in Veterinary Medical Science (VMS) - Computational Biology Concentration (VCBC)

BCH 8653 Genomes and Genomics	3
or PSS 8653 Genomes and Genomics	
CSE 6613 Bio-computing	3
CSE 6623 Computational Biology	3
One statistics course [1,2]	3
One seminar course (CVM 8011 or equivalent)[1]	1
CVM 8000 Thesis Research/Thesis in Veterinary Medicine	6
Graduate-level courses (at least 12 hours of all coursework credits must be 8000-level or higher) [1]	**11**
Total Hours	30

[1] Equivalency of seminars and coursework is determined by the student's graduate committee.

[2] Previous graduate-level statistics courses can satisfy this requirement with approval of the student's graduate committee. *Graduate-level statistics courses that have counted towards a previous degree can satisfy this policy but will not be calculated towards the Ph.D. coursework hours.*

A final examination (oral and/or written) which covers both the major and supportive fields and includes defense of the thesis is required. Students must present an open seminar of the thesis research just prior to oral final examinations. The student must adhere to the University and College regulations regarding his/her graduate program.

[1] Equivalency of seminars and coursework is determined by the student's graduate committee.

[2] Previous graduate-level statistics courses can satisfy this requirement with approval of the student's graduate committee.

A final examination (oral and/or written) which covers both the major and supportive fields and includes defense of the thesis is required. Students must present an open seminar of the thesis research just prior to oral final examinations. The student must adhere to the University and College regulations regarding his/her graduate program.

Master of Science in Veterinary Medical Science (VMS) - Infectious Diseases Concentration (VIDC)

CVM 8303 Advanced Immunology	3
BCH 6013 Principles of Biochemistry	3
or BCH 6713 Molecular Biology	
One statistics course [1,2]	3
One seminar course (CVM 8011 or equivalent)[1]	1
Graduate-level courses (at least 12 hours of all coursework credits must be 8000-level or higher) [1]	14
CVM 8000 Thesis Research/Thesis in Veterinary Medicine	6
Total Hours	30

[1] Equivalency of seminars and coursework is determined by the student's graduate committee.

[2] Previous graduate-level statistics courses can satisfy this requirement with approval of the student's graduate committee. *Graduate-level statistics courses that have counted towards a previous degree can satisfy this policy but will not be calculated towards the Ph.D. coursework hours.*

A final examination (oral and/or written) which covers both the major and supportive fields and includes defense of the thesis is required. Students must present an open seminar of the thesis research just prior to oral final examinations. The student must adhere to the University and College regulations regarding his/her graduate program.

Master of Science in Veterinary Medical Science (VMS) – Toxicology Concentration (TOXI)

CVM 8543 Mechanisms of Toxic Action	3
or *CVM 8513 Applied Veterinary Epidemiology*	
or CVM 8533 Organ Systems Toxicology II	
CVM 6513 Environmental Toxicology	3
One statistics course [1,2]	3
One seminar course (CVM 8011, 8091 or equivalent)[1]	1
Graduate-level courses (at least 12 hours of all coursework credits must be 8000-level or higher) [1]	14
CVM 8000 Thesis Research/Thesis in Veterinary Medicine	6
Total Hours	30

[1] Equivalency of seminars and coursework is determined by the student's graduate committee.

Master of Science in Veterinary Medical Science (VMS) - Infectious Diseases Concentration (VIDC)

CVM 8303 Advanced Immunology	3
BCH 6013 Principles of Biochemistry	3
or BCH 6713 Molecular Biology	
One statistics course [1,2]	3
One seminar course (CVM 8011 or equivalent)[1]	1
Graduate-level courses (at least 12 hours of all coursework credits must be 8000-level or higher) [1]	14
CVM 8000 Thesis Research/Thesis in Veterinary Medicine	6
Total Hours	30

[1] Equivalency of seminars and coursework is determined by the student's graduate committee.

[2] Previous graduate-level statistics courses can satisfy this requirement with approval of the student's graduate committee.

A final examination (oral and/or written) which covers both the major and supportive fields and includes defense of the thesis is required. Students must present an open seminar of the thesis research just prior to oral final examinations. The student must adhere to the University and College regulations regarding his/her graduate program.

Master of Science in Veterinary Medical Science (VMS) – Toxicology Concentration (TOXI)

CVM 8543 Mechanisms of Toxic Action	3
or **CVM 8523 Organ Systems Toxicology I**	
or CVM 8533 Organ Systems Toxicology II	
CVM 6513 Environmental Toxicology	3
One statistics course [1,2]	3
One seminar course (CVM 8011, 8091 or equivalent)[1]	1
Graduate-level courses (at least 12 hours of all coursework credits must be 8000-level or higher) [1]	14
CVM 8000 Thesis Research/Thesis in Veterinary Medicine	6
Total Hours	30

[1] Equivalency of seminars and coursework is determined by the student's graduate committee.

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A final examination (oral and/or written) which covers both the major and supportive fields and includes defense of the thesis is required. Students must present an open seminar of the thesis research just prior to oral final examinations. The student must adhere to the University and College regulations regarding his/her graduate program.

Master of Science in Veterinary Medical Science (VMS) –Population Medicine Thesis Concentration (POPM)

CVM 8333 Food Safety	**3**
CVM 8513 Applied Veterinary Epidemiology	**3**
CVM 8503 Epidemiology and Biostatistics	**3**
ST 8114 Statistical Methods [1,2]	**4**
One seminar course (CVM 8011, 8091 or equivalent)[1]	**1**
Graduate-level courses (at least 12 hours of all coursework credits must be 8000-level or higher) [1]	**10**
CVM 8000 Thesis Research/Thesis in Veterinary Medicine	**6**
Total Hours	**30**

[1] Equivalency of seminars and coursework is determined by the student's graduate committee.

[2] Previous graduate-level statistics courses can satisfy this requirement with approval of the student's graduate committee.

A final examination (oral and/or written) which covers both the major and supportive fields and includes defense of the thesis is required. Students must present an open seminar of the thesis research just prior to oral final examinations. The student must adhere to the University and College regulations regarding his/her graduate program.

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

3. JUSTIFICATION AND STUDENT LEARNING OUTCOMES:

JUSTIFICATION:
We are proposing the establishment of a concentration of Population Medicine Thesis within the M.S. Degree Program in Veterinary Medical Sciences. Currently the only option offered to students interested in animal and human population systems is the Population Medicine Non-Thesis Concentration (PMNT). Given the growing emphasis on population systems within the medical and research communities, this degree will offer students the opportunity to focus in a more specialized area of veterinary medicine, while potentially increasing opportunities for placement throughout the state, the southeast, and the US in general. Furthermore, the advanced knowledge and training may result in increased salaries for graduates as the demand for population-based research programs increases globally. There are currently no degrees within MSU that offer students this type of research program.

This proposal is submitted along with one additional proposal: Modification proposal for a concentration in Population Medicine within the Ph.D. Program in Veterinary Medical Sciences.

LEARNING OUTCOMES:
1. Students will demonstrate advanced knowledge in a research area of population medicine.
2. Students will demonstrate the ability to disseminate original research.
3. Students will demonstrate research skills necessary for an occupation related to their field.

4. SUPPORT

See attached letter from the CVM Graduate Program Advisory Committee (GPAC) chair indicating approval of this modification proposal.

5. PROPOSED 4-LETTER ABBREVIATION

Major: M.S. VMS (no change)
Concentrations:
1. Population Medicine Non-Thesis (PMNT)
2. Veterinary Medical Research (VMRC)
3. Computational Biology (VCBC)
4. Infectious Diseases (VIDC)
5. Toxicology (TOXI)
6. **Population Medicine Thesis (POPM)**

6. EFFECTIVE DATE

Summer 2017

MISSISSIPPI STATE UNIVERSITY

COLLEGE OF VETERINARY MEDICINE

P.O. Box 6100
240 Wise Center Drive
Mississippi State, MS 39762

www.cvm.msstate.edu

March 6, 2017

Dr. Hart Bailey
Chair, CVM Graduate Programs Advisory Committee (GPAC)
PO Box 6100
Mississippi State, MS 39762

Dear Dr. Bailey;

On behalf of the Epidemiology/Population Medicine faculty at the MSU College of Veterinary Medicine, I am submitting two Degree Modification proposals to the GPAC for approval. We propose to add a concentration of Population Medicine – Thesis concentration (POPM) to the MS program and a Population Medicine concentration to the PhD program within the Veterinary Medical Sciences degree program. The addition of this concentration will allow students a more focused degree in population systems, including research options in both animal and human health, which is currently not available in the veterinary medical sciences program.

Per the Degree Program Modification instructions, the attached proposal contains both current and proposed curriculum requirements. Deletions are italicized within the text, and additions are in bold type. In addition to the proposed concentration additions, several other minor changes to the current Graduate Bulletin were also made in the proposed curriculum description:

- Updated name of Graduate Coordinator for Dept. of Clinical Sciences
- Corrected name of college program from "College of Veterinary Medical Science" to "College of Veterinary Medicine Veterinary Medical Science Program" (pages 3,5 in Academic Performance section).
- Deleted PhD program statistics requirements in MS Programs.
- Corrected course requirements for VTOX concentration in MS Programs.
- Corrected requirements for VIDC concentration with and without master's degree.

We appreciate the time and consideration of GPAC regarding these Course Modification proposals. Please let me know if I can answer any questions.

Sincerely,

Carla L. Huston
Associate Professor
Department of Pathobiology and Population Medicine

MISSISSIPPI STATE UNIVERSITY

COLLEGE OF VETERINARY MEDICINE

P.O. Box 6100
240 Wise Center Drive
Mississippi State, MS 39762

www.cvm.msstate.edu

March 10, 2017

Dr. Dana Pomykal Franz, Chair
University Committee on Courses and Curricula
281 Garner Hall
PO Box 5268
Mississippi State, MS 39762

Dear Dr. Franz;

This letter is to inform you that the College of Veterinary Medicine (CVM) Graduate Programs Advisory Committee (GPAC) has approved the proposals for the addition of the Population Medicine concentration (POPM) thesis-option Master's degree and the Population Medicine concentration (POPM) Doctorate of Philosophy degree, which are being proposed by Dr. Carla Huston.

If you have any questions, please call me at 662-325-7726.

Sincerely,

R.Hartford Bailey, M.S., Ph.D, CFS
Professor and Chair, CVM GPAC