Culverhouse
College of Commerce

Faculty Executive Board Meeting
March 21, 2018
10:00-12:00
Dean's Conference Room

Attendees: **Members Present**: Dr. Steve Buchheit, Dr. Doug Cook, Dr. Ron Dulek, Dr. Peter Magnusson, Dr. Volodymyr Melnykov, Professor Joyce Meyer, Dr. Robert McLeod, Dr. Paul Pecorino, Dr. Uzma Raja, Dr. Ed Schnee.

Others Present: Dr. Jonathon Halbesleben, Ms. Danielle Clarke, and Mrs. Kati Hardemon (serving as recorder).

Dr. Schnee opened the meeting at 10:00 am.

1. **New Course Proposals for MIS 564 and MIS 566, and MSMIS Proposals–** These course were decided to be listed as independent and not cross listed. A Motion was made by Dr. Raja to approve MIS 564 and 566 as well as the MSMIS Proposal, and was seconded by Dr. Buchheit. **The FEB voted unanimously for approval of this motion.**
2. **New Course Proposals for ST 440/540 and ST 445/545 –** There was some discussion by the FEB about why a specific software package was listed and why it was not more generic. The package listed has been the most popular, but the proposal could be rewritten in the future to be less specific**.** This proposal is cross listed with Masters Students having an additional project to complete. A motion was made by Dr. Raja to send these proposals to the Undergraduate Programs and Masters Committee, which was seconded by Prof. Meyer. **The FEB voted unanimously for approval of this motion.**
3. **Minor in Statistics** – This was designed with the actuarial science students in mind, they would only have to take a few additional courses to have the additional minor. There was also some discussion about the issue with the overlap of taking just two additional course to receive both minors. A motion was made by Dr. Melnykov and seconded by Dr. Pecorino to send this to the Undergraduate Programs Committee. **The FEB voted to approve this motion unanimously**.
4. **Journal List Policies** – This proposal addresses revisions to the college journal list and consideration of journals not currently on the journal list. There was discussion about the rewards earned from publishing in an aspirational journal. The payment or course release was meant to encourage those improving the research profile of the business school, the aspirational by exception would not be be eligible for a course release or summer funding, but would be considered in merit raises and other

performance evaluations. It was also suggested that a footnote be added to include a longer period that petitions would be considered for the transition period. A motion was made by Dr. Dulek and seconded by Dr. Melynkov to approve this policy with the added footnote. **The FEB voted to approve this motion unanimously**.

5. **Absences Policy –** There were a minor language changes to section 1c – adding "format" to course must be offered in another time. A motion was made by Prof. Meyer and seconded by Dr. McLeod to approve this policy with the suggested change. **The FEB voted to approve this motion unanimously**.
6. **Updates from the Dean's Office**
    - Austin Cup process will begin shortly.
    - Four new minor proposals will be coming during the April FEB meeting
    - Hiring – currently we have filled 12 positions, and have two pending offers, with many more in process
    - New Faculty Lines – 20 have been requested, with one of those to help address salary inversion
    - Faculty and Staff award winners will be announced at the April 13 award ceremony. Winners of University awards from the College include Dr. Kristy Reynolds (Morris Mayer Award) and Drs. Ellinger, Harms, and Ross (Presidential Research Awards).
    - New Building - The external renderings of the new building should be ready by the 3rd week in April to be submitted to the Board of Trustees.

The meeting was concluded at 11:45 pm

MIS 564 Organizational Security Management (Graduate)

Course Description

The course is intended to teach students how to develop and apply an information security management plan to an organization. Topics include governance and security policy, threat and vulnerability management, incident management, risk management, information leakage, crisis management and business continuity, compliance management, and security awareness and security implementation considerations. Students will also be exposed to the national and international policy and legal considerations related to cybersecurity and cyberspace such as privacy, intellectual property, and cybercrime.

Course Prerequisites and Co-Requisites

None

Learning Objectives

Upon the completion of this course, the student will be able to:

1. Understand the strategic importance of effective, interdisciplinary, and multifunctional organizational information security governance and information security management program and its execution.
2. Compare various types of organizational information security governance structures, information security management programs, and their critical components.
3. Develop a working knowledge of types of policy, how policy is created, how to manage policy.
4. Understand the importance of compliance and training in information security risk management.
5. Differentiate between stakeholder groups and their respective roles, investment, and interest in an effective organizational information security management program.
6. Assess the ethical, social, environmental, and risk considerations for organizational information security governance.
7. Evaluate the effectiveness and potential application of multiple information security governance structures and information security management programs for variant organizational scenarios with consideration for strategic, operational, ethical, social, environmental, and risk factors.

Required Texts or Materials

Information Governance and Security: Protecting and Managing Your Company's Proprietary Information. Iannarelli, J. G., & O' Shaughnessy, M. O. | Waltham, MA: Butterworth Heinemann, Elsevier, 2015.

We will also discuss the following cases in the classes.

1. McNulty, E. (2017). "Boss, I Think Someone Stole Our Customer Data," Harvard Business Review Case Study.
2. Narayanamurti, V. and Ellis, R. (2015). "The Vulnerability Economy: Zero-Days, Cybersecurity, and Public Policy," Harvard Business Review Case Study.

3. Hooper, V. and Mckissack, J. (2016). “The Emerging Role of the CISO,” Harvard Business Review Case Study.
4. Chun, M. Hall, O. and Griffy-Brown, C. (2016). “Cloud Syzygy Technologies: Cloud-Based Computing,” Harvard Business Review Case Study.
5. McGee, H. Hsieh, N-H, and McAra, S. (2016). “Apple: Privacy vs. Safety,” Harvard Business Review Case Study.
6. Srinivasan, S. Paine, L. S., Goyal, N. (2016). “Cyber Breach at Target,” Harvard Business Review Case Study.

Course Assessment:

Evaluation of knowledge and understanding of materials will be by written assignments, quizzes, exams, class activity, and two individual research papers.
5% class activity
10% quizzes
20% assignments
35% three (3) exams
30% two (2) research papers

Quizzes, assignments, and exams will include objective items (e.g. multiple-choice questions, fill-in the blank, true/false questions, etc.), short answer, and essay items. Each class activity consists of in-class discussion to assess students’ understanding of the topics and their abilities to apply their knowledge and skills.
Two research papers (approximately 10 pages each) will allow the students to delve more deeply into the challenges of establishing, maintaining, and improving meaningful security governance and compliance programs. The papers will be focused on strategic level work related to information security governance structures and information security management program. The students are required to present their work in the class and demonstrate that their work contributes to the state of practice in the IS security management arena.

MIS 566 Introduction to Cybercrime and Digital Forensics

Course Description

This course introduces the topics of cybercrime and digital forensics. Students will learn different aspects of cybercrime and methods to uncover, protect and analyze digital evidence. They will be exposed to different types of software and hardware tools and use them to perform rudimentary investigations. Cybercrime and digital forensics are increasingly important areas of study. Students will also gain an understanding of evidentiary law from the perspective of first responders. Tools are becoming more powerful and attacks more sophisticated. Consequently, there is a growing need for graduates with the skills to investigate these crimes.

Course Prerequisites and Co-Requisites

None

Learning Objectives

The major learning objectives for this course are as follows:

1. The student will understand the role and purpose of digital forensics.
2. The student will understand the legal aspects of cybercrime, evidence collection, and testimony.
3. The student will practice the skills required to be a first responder.
4. The student will demonstrate the ability to acquire a forensically sound image.
5. The student will demonstrate the ability to accurately perform a simple analysis of digital evidence.
6. The student will produce a report of digital evidence analysis and draw logical conclusions based on the evidence.
7. The student will communicate how digital forensics can be applied to organizations for strategic advantage

Required Texts or Materials

1. Johansen, Gerard. Digital forensics and incident response. Packt Publishing Limited, 2017.
2. Carrier, Brian. The NTFS File System.

Assessment

Work product	Weight in Final Grade
Assignments	30%
Quizzes	10%
Exam 1	15%
Exam 2	15%
Case study paper/presentation	15%
Final	15%

PROPOSAL TO OFFER A NEW COURSE

COLLEGE OF COMMERCE AND BUSINESS ADMINISTRATION
THE UNIVERSITY OF ALABAMA

Department: *Information Systems, Statistics, and Management Science*
Date: *January, 2018*
Course Number: *ST 440*
Course Title: *Statistical Programming and Computing with R*
Effective Date: *Fall 2018*

PART ONE

(To be completed by the individual proposing the course.)

I. GENERAL INFORMATION

A. Description (25 words or less):

This course explores the syntax of the R language and its capabilities for statistical data analysis, computing, and graphics.

B. 1. Prerequisite(s): *ST 260*

2 Corequisite(s): *None*

3. Other: *NA*

C. Course Level: *Upper Division Undergraduate*
(Lower Division Undergraduate, Upper Division Undergraduate, Graduate I or Graduate II)

D. Format: *3 Hours of lecture per week*

_____ Hours of discussion (recitation per week)

_____ Hours of laboratory (or field work) per week

Other instructional methods and modes: _____
_____
_____

E . Credit Hours: *3*

II ACADEMIC INFORMATION

A. Course Objectives:

Every field of science relies on experiments supported by statistical analysis fulfilled by means of statistical software. The proposed course aims to provide students with necessary knowledge about the statistical package R. Upon the completion of the course, students should be able to use standard statistical built-in functions and write their own programming code. The knowledge of basic random number generating commands will allow conducting various simulation studies. Students will become familiar with standard graphical tools and will be able to use them effectively. Finally, students will be able to conduct standard statistical analysis using R.

B. What course or courses, if any, will this course replace? Implementation of this course, if it does not replace an existing course, may cause enrollment reductions in other courses. Please list all courses in which such enrollment declines may be expected.

There is no course replacement associated with this proposal.

C. What is the justification for proposing the course at this time?

This will be an elective in the new Statistics Minor. It will also help prepare Actuary students who are required to understand and interpret R output in professional Actuary exams offered by SOA.

D. Name the current faculty who are qualified to teach this course. What specific qualifications and capabilities must an individual have in order to teach this course?

Volodymyr Melnykov, Michael Porter, Bruce Barrett
Proficiency with R and Statistical Methods are required to successfully teach the proposed course.

E .This course is designed for the following curricula (programs):

The proposed undergraduate Minor in Statistics.

F .This course will be required for the following majors and minors:

None. It is an elective for the proposed Minor in Statistics.

G. Attach an outline of the course of at least one page in length and name any textbooks or principal readings that will be used. (This request is not intended to bind future instructors to a detailed program, but only to establish the general scope, nature and level of the course)

See the attached outline of the course.

PART TWO

(To be completed by the department head, alone or in consultation with the proposer)

I. **BUDGETARY INFORMATION**

A Anticipated frequency of offering:

___1_ section(s) each fall semester _____ section(s) each spring semester

_____ section(s) during summer school _____ according to demand

B Estimated total enrollment (undergraduate / graduate):

First Year: ____10_____

Second Year: ____15_____

Third Year ____15_____

C Estimated capacity per section:

Lecture: _____40_____

Discussion _____0_____

Laboratory _____0_____

D How does this course impact on the mission of the College and department?

This course helps address the growing demand of statistical and computational proficiency in our students. It also helps to build up student capacity to support projects through the Business Analytics Institute.

E What resources will be needed to teach this course and where will they come from?

With the addition of two new faculty lines in Applied Statistics (starting in Fall 2018), no additional resources are needed.

F Is there agreement within the department that the course is needed and that resources will be available to teach this course?

Yes

G Is there any indication that this course duplicates course work offered elsewhere in the College or University?

No

II. EVALUATION

Describe the system of evaluation that will be used to determine whether this course should be continued in the departmental program. (It would be helpful to relate this system of evaluation to the kinds of information, requested in PART ONE, Section II-Academic Information and PART TWO, Section I-Budgetary Information).

After three years, we will evaluate the statistics minor to ensure that enrollment is meeting the requirements to justify resource investments in the program.

Proposed by: *Volodymyr Melnykov* *01/25/18*
Name Date

Approved by: John Mittenthal March 7, 2018
Department Head/Director Date

Dean Date

Conditions of approval, if any:

Upon final approval, a course inventory form must be completed and forwarded to the Office for Academic Affairs.

ST 440 Statistical Programming and Computing with R

Text: *"R for everyone: advanced analytics and graphics" by Jared Lander, 2nd edition, 2017. This textbook provides a detailed introduction to R and will be a valuable resource after the course completion.*

Prerequisites: *Stat 260 or equivalent is required for the course enrollment; knowledge of programming concepts is not mandatory.*

Course description: *This course explores the syntax and capabilities of the R language. R commands, expressions, and matrix operations will be considered. Operations with internal built-in as well as user-written functions will be covered. Programming in R as well as optimization and graphical capabilities will be explored. Finally, the application of R to statistical problem solving, including linear and nonlinear regression, will be considered.*

Student learning objectives: *Every field of science relies on experiments supported by statistical analysis and fulfilled by means of statistical software. This course aims to provide students with necessary knowledge about the statistical package R. Upon the completion of the course, students will be able to: (i) use standard built-in R functions and write their own programming code, (ii) use basic random number generating commands to conduct simulation studies, (iii) use standard graphical tools, and (iv) conduct standard statistical analysis using R.*

Course Topics*:*

Topic:	*Week*
Installation and basic preliminaries	*1*
Syntax of R: commands, expressions	*1*
Data objects	*2*
Vector and matrix operations	*3-4*
Elements of programming	*5-6*
Standard built-in functions	*7-8*
Writing functions	*9*
Graphical capabilities	*10*
Optimization and root finding	*11*
Statistical problem solving	*12-15*
Basic statistical methods	*12*
Linear and logistic regression	*13*
Nonlinear regression	*14*
Other statistical methods	*15*

PROPOSAL TO OFFER A NEW COURSE

COLLEGE OF COMMERCE AND BUSINESS ADMINISTRATION
THE UNIVERSITY OF ALABAMA

Department: *ISM*
Date: *Jan 2018*
Course Number: *ST 445*
Course Title: *Introduction to Statistical Learning and Data Mining*
Effective Date: *Fall 2018*

PART ONE

(To be completed by the individual proposing the course.)

I. GENERAL INFORMATION

A. Description (25 words or less):

This course offers an introduction to the field of statistical learning, an essential toolkit for making sense of vast and complex data sets.

B. 1. Prerequisite(s): ST 452

2. Corequisite(s): None

3. Other: NA

C. Course Level: *Upper Division Undergraduate*
(Lower Division Undergraduate, Upper Division Undergraduate, Graduate I or Graduate II)

D. Format: 3 Hours of lecture per week

_____ Hours of discussion (recitation per week)

_____ Hours of laboratory (or field work) per week

Other instructional methods and modes: _____

_____

_____

E. Credit Hours: 3

II. ACADEMIC INFORMATION

A. Course Objectives:

This course offers an introduction to the field of statistical learning, an essential toolkit for making sense of the vast and complex data sets that have emerged in fields ranging from biology to finance to marketing to astrophysics in the past twenty years. Topics include linear and logistic regression, classification, resampling methods, shrinkage/penalized approaches, tree-based methods, generalized additive models, principal component analysis, and clustering.

B. What course or courses, if any, will this course replace? Implementation of this course, if it does not replace an existing course, may cause enrollment reductions in other courses. Please list all courses in which such enrollment declines may be expected.

This will not replace any course at the undergraduate level. No enrollment declines are expected in other undergraduate courses.

C. What is the justification for proposing the course at this time?

This will be an elective in the new Statistics Minor. It will also be part of a course sequence preparing Actuary students to take the new Statistics for Risk Modeling Exam offered by the SOA.

D. Name the current faculty who are qualified to teach this course. What specific qualifications and capabilities must an individual have in order to teach this course?

Qualified faculty includes Michael Porter, Volodymyr Melnykov, Jim Cochran

Instructors of this course should be familiar with theoretical and applied concepts in statistical learning and data mining as well as knowledge of the R programming language.

E. This course is designed for the following curricula (programs):

The proposed undergraduate Minor in Statistics.

F. This course will be required for the following majors and minors:

None. It is an elective for the proposed Minor in Statistics.

G. Attach an outline of the course of at least one page in length and name any textbooks or principal readings that will be used. (This request is not intended to bind future instructors to a detailed program, but only to establish the general scope, nature and level of the course.)

See accompanying outline

PART TWO

(To be completed by the department head, alone or in consultation with the proposer.)

I. **BUDGETARY INFORMATION**

A. Anticipated frequency of offering:

_____ section(s) each fall semester __1__ section(s) each spring semester

_____ section(s) during summer school _____ according to demand

B. Estimated total enrollment (undergraduate):

First Year: _15_____

Second Year: _20_____

Third Year _20_____

C. Estimated capacity per section:

Lecture: _40_____

Discussion __0_____

Laboratory __0_____

D. How does this course impact on the mission of the College and department?

This course helps address the growing demand of statistical and computational proficiency in our students. It also helps to build up student capacity to support projects through the Business Analytics Institute.

E. What resources will be needed to teach this course and where will they come from?

With the addition of two new faculty lines in Applied Statistics (starting in Fall 2018), no additional resources are needed.

F. Is there agreement within the department that the course is needed and that resources will be available to teach this course?

Yes

G. Is there any indication that this course duplicates course work offered elsewhere in the College or University?

No.

II. EVALUATION

Describe the system of evaluation that will be used to determine whether this course should be continued in the departmental program. (It would be helpful to relate this system of evaluation to the kinds of information, requested in PART ONE, Section II-Academic Information and PART TWO, Section I-Budgetary Information).

After three years, we will evaluate the statistics minor to ensure that enrollment is meeting the requirements to justify resource investments in the program.

Proposed by: Michael Porter — January 26, 2018
Name — Date

Approved by: John Mittenthal — March 7, 2018
Department Head/Director — Date

Dean — Date

Conditions of approval, if any:

Upon final approval, a course inventory form must be completed and forwarded to the Office for Academic Affairs.

ST 445: *Introduction to Statistical Learning and Data Mining*

Course Prerequisites:

Students taking this course should be familiar with the concepts from introductory statistics including confidence intervals, hypothesis testing, and linear regression. This is satisfied with ST 260 and ST 452.

Course Description:

This course offers an introduction to the field of statistical learning, an essential toolkit for making sense of the vast and complex data sets that have emerged in fields ranging from biology to finance to marketing to astrophysics in the past twenty years. Topics include linear and logistic regression, classification, resampling methods, shrinkage/penalized approaches, tree-based methods, generalized additive models, principal component analysis, and clustering.

Student Learning Objectives:

Students will learn how and when to use statistical learning methods, understand their comparative strengths and weaknesses, and how to critically evaluate their performance. Students completing this course should be able to: (i) construct and apply novel statistical learning methods for predictive modeling, (ii) use unsupervised learning methods to find structure in data, and (iii) properly select, tune, and assess models.

Required Textbooks:

- *An Introduction to Statistical Learning: with Applications in R* by James, Witten, Hastie and Tibshirani. An electronic version of this book is freely available at http://www-bcf.usc.edu/~gareth/ISL/.

Software:

This course requires the statistical software R and some additional document generation software.

- R (http://cran.us.r-project.org) is a free command-line based statistical language.
- RStudio is a free IDE for R (http://www.rstudio.com/ide).
- LaTex (http://www.tug.org) is a free typesetting system for producing technical documents (e.g., journal articles and presentations). Install MikTex for windows, MacTeX for mac, TeXLive for Linux.

All of these programs are free and cross-platform (Windows, Mac, Linux). Install R first, then RStudio. Use the latest versions of each. More detailed instructions can be found here: http://www.reed.edu/data-at-reed/resources/#R

Course Outline and Schedule:

The list below shows the assigned chapter from ISL, suggested schedule, and homework assignments.

1. Introduction (Week 1)
    - Install: R, RStudio, LaTex
    - Produce sample RMarkdown document in html and pdf formats
    - Install R packages: ISLR, MASS, ggplot2, dplyr, gbm, glmnet, rpart, e1071
2. Statistical Learning (Week 2)
    - Exercises 2.4: 1-10
3. Linear Regression (Week 3-4)
    - Exercises 3.7: 1-7, 9-10, 13-15
4. Classification (Week 5)
    - Exercises 4.7: 1-13
5. Resampling Methods (Week 6)
    - Exercises 5.4: 1-9
6. Linear Model Selection and Regularization (Week 7-8)
    - Exercises 6.8: 1-11
7. Moving Beyond Linearity (Week 9)
    - Exercises 7.9: 3-4, 6-7, 9-12
8. Tree-Based Methods (Week 10)
    - Exercises 8.4: 1-6, 7-8, 10-11
9. Support Vector Machines (Week 11)
    - Exercises 9.7: 1, 3, 5, 7-8
10. Unsupervised Learning (Week 12-13)
    - Exercises: 1-3, 7-11
11. Final Project (Weeks 14-15)

PROPOSAL TO OFFER A NEW COURSE

COLLEGE OF COMMERCE AND BUSINESS ADMINISTRATION
THE UNIVERSITY OF ALABAMA

Department: *Information Systems, Statistics, and Management Science*
Date: *January, 2018*
Course Number: ST *540*
Course Title: *Statistical Programming and Computing with R*
Effective Date: *Fall 2018*

PART ONE

(To be completed by the individual proposing the course.)

I. GENERAL INFORMATION

A. Description (25 words or less):

This course explores the syntax of the R language and its capabilities for statistical data analysis, computing, and graphics.

B. 1. Prerequisite(s): *ST 260*

2. Corequisite(s): *None*

3. Other: *NA*

C. Course Level: *Graduate I*
(Lower Division Undergraduate, Upper Division Undergraduate, Graduate I or Graduate II)

D. Format: *3 Hours of lecture per week*

_____ Hours of discussion (recitation per week)

_____ Hours of laboratory (or field work) per week

Other instructional methods and modes: _____
_____
_____

E. Credit Hours: *3*

II ACADEMIC INFORMATION

A. Course Objectives:

Every field of science relies on experiments supported by statistical analysis fulfilled by means of statistical software. The proposed course aims to provide students with necessary knowledge about the statistical package R. Upon the completion of the course, students should be able to use standard statistical built-in functions and write their own programming code. The knowledge of basic random number generating commands will allow conducting various simulation studies. Students will become familiar with standard graphical tools and will be able to effectively use them. Finally, students will be able to conduct standard statistical analysis using R.

B. What course or courses, if any, will this course replace? Implementation of this course, if it does not replace an existing course, may cause enrollment reductions in other courses. Please list all courses in which such enrollment declines may be expected.

There is no course replacement associated with this proposal.

C. What is the justification for proposing the course at this time?

The undergraduate version of this course will be an elective in the new Statistics Minor. It will also help prepare Actuary students who are required to understand and interpret R output in professional Actuary exams offered by SOA. At the graduate level, there is a large demand for an R course not only among Applied Statistics students but also across the University.

D. Name the current faculty who are qualified to teach this course. What specific qualifications and capabilities must an individual have in order to teach this course?

Volodymyr Melnykov, Michael Porter, Bruce Barrett
Proficiency with R and Statistical Methods are required to successfully teach the proposed course.

E .This course is designed for the following curricula (programs):

MS in Applied Statistics

F .This course will be required for the following majors and minors:

None. It is an elective for the MS in Applied Statistics.

G. Attach an outline of the course of at least one page in length and name any textbooks or principal readings that will be used. (This request is not intended to bind future instructors to a detailed program, but only to establish the general scope, nature and level of the course)

See the attached outline of the course.

PART TWO

(To be completed by the department head, alone or in consultation with the proposer)

I. **BUDGETARY INFORMATION**

A Anticipated frequency of offering:

_1__ section(s) each fall semester _____ section(s) each spring semester

_____ section(s) during summer school _____ according to demand

B Estimated total enrollment (graduate):

First Year: ____10_____

Second Year: ____15_____

Third Year ____15_____

C Estimated capacity per section:

Lecture: _____40_____

Discussion _____0_____

Laboratory _____0_____

D How does this course impact on the mission of the College and department?

This course helps address the growing demand of statistical and computational proficiency in our students. It also helps to build up student capacity to support projects through the Business Analytics Institute.

E What resources will be needed to teach this course and where will they come from?

With the addition of two new faculty lines in Applied Statistics (starting in Fall 2018), no additional resources are needed.

F Is there agreement within the department that the course is needed and that resources will be available to teach this course?

Yes

G Is there any indication that this course duplicates course work offered elsewhere in the College or University?

No

II. EVALUATION

Describe the system of evaluation that will be used to determine whether this course should be continued in the departmental program. (It would be helpful to relate this system of evaluation to the kinds of information, requested in PART ONE, Section II-Academic Information and PART TWO, Section I-Budgetary Information).

Because this course can be used for several programs (undergraduate minor in statistics via a potential accelerated master's program, master's in applied statistics, potential elective for masters students across campus), meeting minimum enrollments is not a serious concern. However, after three years, we will evaluate the statistics minor and applied statistics MS programs to ensure that enrollment is meeting the requirements to justify resource investments in these programs.

Proposed by: *Volodymyr Melnykov* *01/25/18*
Name Date

Approved by: John Mittenthal March 7, 2018
Department Head/Director Date

_____
Dean Date

Conditions of approval, if any:

Upon final approval, a course inventory form must be completed and forwarded to the Office for Academic Affairs.

ST 540 Statistical Programming and Computing with R

Text: *"R for everyone: advanced analytics and graphics" by Jared Lander, 2nd edition, 2017. This textbook provides a detailed introduction to R and will be a valuable resource after the course completion.*

Prerequisites: *Stat 260 or equivalent is required for the course enrollment; knowledge of programming concepts is not mandatory.*

Course description: *This course explores the syntax and capabilities of the R language. R commands, expressions, and matrix operations will be considered. Operations with internal built-in as well as user-written functions will be covered. Programming in R as well as optimization and graphical capabilities will be explored. Finally, the application of R to statistical problem solving, including linear and nonlinear regression, will be considered.*

Student learning objectives: *Every field of science relies on experiments supported by statistical analysis and fulfilled by means of statistical software. This course aims to provide students with necessary knowledge about the statistical package R. Upon the completion of the course, students will be able to: (i) use standard built-in R functions and write their own programming code, (ii) use basic random number generating commands to conduct simulation studies, (iii) use standard graphical tools, (iv) conduct standard statistical analysis using R, and (v) use R programming in a research project.*

Course Topics*:*

Topic:	*Week*
Installation and basic preliminaries	*1*
Syntax of R: commands, expressions	*1*
Data objects	*2*
Vector and matrix operations	*3-4*
Elements of programming	*5-6*
Standard built-in functions	*7-8*
Writing functions	*9*
Graphical capabilities	*10*
Optimization and root finding	*11*
Statistical problem solving	*12-15*
Basic statistical methods	*12*
Linear and logistic regression	*13*
Nonlinear regression	*14*
Other statistical methods	*15*

PROPOSAL TO OFFER A NEW COURSE

COLLEGE OF COMMERCE AND BUSINESS ADMINISTRATION
THE UNIVERSITY OF ALABAMA

Department: *ISM*
Date: *Jan 2018*
Course Number: *ST 545*
Course Title: *Introduction to Statistical Learning and Data Mining*
Effective Date: *Fall 2018*

PART ONE

(To be completed by the individual proposing the course.)

I. GENERAL INFORMATION

A. Description (25 words or less):

This course offers an introduction to the field of statistical learning, an essential toolkit for making sense of vast and complex data sets.

B. 1. Prerequisite(s): ST 452 or ST 552 or ST 560

2. Corequisite(s): None

3. Other: NA

C. Course Level: *Graduate I*
(Lower Division Undergraduate, Upper Division Undergraduate, Graduate I or Graduate II)

D. Format: 3 Hours of lecture per week

_____ Hours of discussion (recitation per week)

_____ Hours of laboratory (or field work) per week

Other instructional methods and modes: _____

_____

_____

E. Credit Hours: 3

II. ACADEMIC INFORMATION

A. Course Objectives:

This course offers an introduction to the field of statistical learning, an essential toolkit for making sense of the vast and complex data sets that have emerged in fields ranging from biology to finance to marketing to astrophysics in the past twenty years. Topics include linear and logistic regression, classification, resampling methods, shrinkage/penalized approaches, tree-based methods, generalized additive models, principal component analysis, and clustering.

B. What course or courses, if any, will this course replace? Implementation of this course, if it does not replace an existing course, may cause enrollment reductions in other courses. Please list all courses in which such enrollment declines may be expected.

It is possible that MS-APST students (in the Statistics Track) will opt to take this course over ST 531(Data Mining I) as an elective. Thus we anticipate a slight enrollment decrease in ST 531of up to 5 students per year.

C. What is the justification for proposing the course at this time?

The undergraduate version of this course will be an elective in the new Statistics Minor. It will also be part of a course sequence preparing Actuary students to take the new Statistics for Risk Modeling Exam offered by the SOA.

D. Name the current faculty who are qualified to teach this course. What specific qualifications and capabilities must an individual have in order to teach this course?

Qualified faculty includes Michael Porter, Volodymyr Melnykov, Jim Cochran

Instructors of this course should be familiar with theoretical and applied concepts in statistical learning and data mining as well as knowledge of the R programming language.

E. This course is designed for the following curricula (programs):

MS in Applied Statistics

F. This course will be required for the following majors and minors:

None. It is an elective for the MS in Applied Statistics.

G. Attach an outline of the course of at least one page in length and name any textbooks or principal readings that will be used. (This request is not intended to bind future instructors to a detailed program, but only to establish the general scope, nature and level of the course.)

See accompanying outline

PART TWO

(To be completed by the department head, alone or in consultation with the proposer.)

I. **BUDGETARY INFORMATION**

A. Anticipated frequency of offering:

_____ section(s) each fall semester __1__ section(s) each spring semester

_____ section(s) during summer school _____ according to demand

B. Estimated total enrollment (graduate):

First Year: _10_____

Second Year: _15_____

Third Year _15_____

C. Estimated capacity per section:

Lecture: _40_____

Discussion __0_____

Laboratory __0_____

D. How does this course impact on the mission of the College and department?

This course helps address the growing demand of statistical and computational proficiency in our students. It also helps to build up student capacity to support projects through the Business Analytics Institute.

E. What resources will be needed to teach this course and where will they come from?

With the addition of two new faculty lines in Applied Statistics (starting in Fall 2018), no additional resources are needed.

F. Is there agreement within the department that the course is needed and that resources will be available to teach this course?

Yes

G. Is there any indication that this course duplicates course work offered elsewhere in the College or University?

There is minimal overlap between the proposed course and ST531 (Data Mining I) in the areas of linear regression, decision trees, and classification. However these are a small component of the course (< 3 weeks).

II. EVALUATION

Describe the system of evaluation that will be used to determine whether this course should be continued in the departmental program. (It would be helpful to relate this system of evaluation to the kinds of information, requested in PART ONE, Section II-Academic Information and PART TWO, Section I-Budgetary Information).

Because this course can be used for several programs (undergraduate minor in statistics via a potential accelerated master's program, master's in applied statistics, potential elective for masters students across campus), meeting minimum enrollments is not a serious concern. However, after three years, we will evaluate the statistics minor and applied statistics MS programs to ensure that enrollment is meeting the requirements to justify resource investments in these programs.

Proposed by: Michael Porter — January 26, 2018
Name — Date

Approved by: John Mittenthal — March 7, 2018
Department Head/Director — Date

_____
Dean — Date

Conditions of approval, if any:

Upon final approval, a course inventory form must be completed and forwarded to the Office for Academic Affairs.

ST 545: *Introduction to Statistical Learning and Data Mining*

Course Prerequisites:

Students taking this course should be familiar with the concepts from introductory statistics including confidence intervals, hypothesis testing, and linear regression. This is satisfied with ST 260 and ST 452.

Course Description:

This course offers an introduction to the field of statistical learning, an essential toolkit for making sense of the vast and complex data sets that have emerged in fields ranging from biology to finance to marketing to astrophysics in the past twenty years. Topics include linear and logistic regression, classification, resampling methods, shrinkage/penalized approaches, tree-based methods, generalized additive models, principal component analysis, and clustering.

Student Learning Objectives:

Students will learn how and when to use statistical learning methods, understand their comparative strengths and weaknesses, and how to critically evaluate their performance. Students completing this course should be able to: (i) construct and apply novel statistical learning methods for predictive modeling, (ii) use unsupervised learning methods to find structure in data, (iii) properly select, tune, and assess models, and (iv) use statistical learning methods in a research project.

Required Textbooks:

- *An Introduction to Statistical Learning: with Applications in R* by James, Witten, Hastie and Tibshirani. An electronic version of this book is freely available at http://www-bcf.usc.edu/~gareth/ISL/.

Software:

This course requires the statistical software R and some additional document generation software.

- R (http://cran.us.r-project.org) is a free command-line based statistical language.
- RStudio is a free IDE for R (http://www.rstudio.com/ide).
- LaTex (http://www.tug.org) is a free typesetting system for producing technical documents (e.g., journal articles and presentations). Install MikTex for windows, MacTeX for mac, TeXLive for Linux.

All of these programs are free and cross-platform (Windows, Mac, Linux). Install R first, then RStudio. Use the latest versions of each. More detailed instructions can be found here: http://www.reed.edu/data-at-reed/resources/#R

Course Outline and Schedule:

The list below shows the assigned chapter from ISL, suggested schedule, and homework assignments.

1. Introduction (Week 1)
    - Install: R, RStudio, LaTex
    - Produce sample RMarkdown document in html and pdf formats
    - Install R packages: ISLR, MASS, ggplot2, dplyr, gbm, glmnet, rpart, e1071
2. Statistical Learning (Week 2)
    - Exercises 2.4: 1-10
3. Linear Regression (Week 3-4)
    - Exercises 3.7: 1-7, 9-10, 13-15
4. Classification (Week 5)
    - Exercises 4.7: 1-13
5. Resampling Methods (Week 6)
    - Exercises 5.4: 1-9
6. Linear Model Selection and Regularization (Week 7-8)
    - Exercises 6.8: 1-11
7. Moving Beyond Linearity (Week 9)
    - Exercises 7.9: 3-4, 6-7, 9-12
8. Tree-Based Methods (Week 10)
    - Exercises 8.4: 1-6, 7-8, 10-11
9. Support Vector Machines (Week 11)
    - Exercises 9.7: 1, 3, 5, 7-8
10. Unsupervised Learning (Week 12-13)
    - Exercises: 1-3, 7-11
11. Final Research Project (Weeks 14-15)

Statistics Minor

ISM Department
University of Alabama

Draft: 02/16/2018

1. Statistics Minor

The Statistics minor equips students with a general introduction to statistical theory followed by further training in statistical methods and computational statistics. Through this minor, students will gain the skills necessary to participate in statistical analysis and data science in business, engineering, or scientific fields and greatly enhance their preparedness for graduate school in disciplines involving quantitative analysis. The Statistics minor is an excellent counterpart to any undergraduate program at the University of Alabama.

2. Justification

There is a growing demand for students with statistical skills in industry and graduate school. For example, the Society of Actuaries (SOA) has redesigned their certification program to include several new statistical certifications (Mathematical Statistics, Statistics for Risk Modeling, Predictive Modeling). Many graduate programs also require their students to possess strong quantitative and statistical competencies. In response to these opportunities, the Applied Statistics (APST) faculty propose an undergraduate minor in Statistics.

According to the American Statistical Association (http://thisisstatistics.org/counselors/):

> The field of statistics has been around for centuries, yet its significance to society and the economy is possibly greater today than it has ever been. Advances in computing technology have increased the value of data, guiding critical decisions and directing new areas of inquiry in business, science, policy, government and so many other areas of society.
>
> Statisticians have become so important to so many fields that demand for their skills is leading to strong job growth. A report by McKinsey Global Institute predicts the U.S. will need up to 190,000 new professionals with analytical skills to help manage the Big Data movement and run data analytics and business intelligence operations in the private and public sectors. Additionally, the U.S. Bureau of Labor Statistics predicts that jobs for statisticians will grow 34 percent between 2016 and 2024, much faster than the growth rate of 7 percent for all occupations.
>
> This demand is also reflected in the pay of statisticians. The median salary for data scientists was $80,000 for those with less than three years of experience, and $150,000 for those with nine or more years of experience, according to a Burtch Works 2014 report.
>
> So it is no surprise the nation's top students are gravitating toward the field. The number of students taking the AP statistics exam doubled to more than 200,000 between 2006 and 2016. Last year, statistics was the fastest-growing degree on college campuses. Further, a large majority of college majors require statistics.

The expected growth in Statistics is also supported by the following:

- U.S. News came out with their 2017 job rankings. Statistics is:
  - #1 Best Business Job
  - #1 Best STEM Job
  - #4 Best overall Job
  - http://money.usnews.com/careers/best-jobs/statistician
- CareerCast.com has ranked "statistician" as the best job in 2017
  - http://www.careercast.com/jobs-rated/2017-jobs-rated-report
- Fortune, in 2015, ranked degree programs:
  - #1 PhD Statistics
  - #9 MS Statistics
  - http://fortune.com/2015/04/27/best-worst-graduate-degrees-jobs/
- Around the country Statistics programs and courses are seeing tremendous growth. The Daily Pennsylvanian reported in October 2015 that the statistics concentration at University of Pennsylvania's Wharton School is "bursting at the seams"" with growing demand from business students.

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  - http://www.thedp.com/article/2015/10/statistics-field-is-on-the-rise

3. Curriculum

Minimum of 15 Credit Hours:

- Core courses (12 hours): ST 260, ST 454, ST 455, ST 452
- One approved elective (3 hours)

Prerequisites:

- Math 227 or Math 247 (Calculus III)
- Math 237 (Linear Algebra)

Required Courses:

- ST 260: Statistical Data Analysis or GES 255: Engineering Statistics I
- ST 454: Mathematical Statistics I
- ST 455: Mathematical Statistics II
- ST 452: Applied Regression Analysis

Choose one approved elective:

- ST 440: Statistical Programming and Computing with R
- ST 445: Intro to Statistical Learning and Data Mining
- 500 level ST courses:
  - ST 521: Statistical Data Management
  - ST 531: Data Mining I
  - ST 540: Statistical Programming and Computing with R
  - ST 545: Intro to Statistical Learning and Data Mining
  - ST 553: Applied Multivariate Analysis
  - ST 561: Applied Design of Experiments
  - ST 575: Statistical Quality Control
  - ST 597: Special Topics in Statistics

Course Offerings

Fall	Spring
ST 260	ST 260
ST 454	ST 455
ST 452	ST 445
ST 440	

Course Descriptions

See Appendix.

4. Expected Enrollment

We anticipate the Statistics Minor will be of interest to undergraduate students from across campus. In particular, based on current enrollment trends in existing Statistics courses, we expect enrollment from students in: Actuarial Science, Engineering, Computer Science, Mathematics, Biology, Anthropology, Chemistry, Criminal Justice, and Psychology. The projected enrollment in this program over the next three years is as follows:

- Year 1: 15
- Year 2: 20

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- Year 3: 20

5. Resources

The ISM department is proposing two new courses (ST 440, ST 445) which could satisfy electives for the minor. This requires teaching two new sections per year. ISM has hired (Spring 2018) a non-tenure track assistant professor of statistics and has open searches for two Statistics faculty positions with a start date of Fall 2018.

6. Fit with College Mission and Broader Impact

a. Comparison to other programs in the college

The Department of Management offers the *Certificate in Analytical Excellence in Business* which includes two courses (ST 454, ST 455) in common with the proposed minor. However, these courses are only two of the 10 possible electives and the certificate allows these courses to be substituted by MATH 355 and MATH 451.

The minor would be good preparation for students seeking to pursue the MS in Applied Statistics as well as other graduate programs in the college.

b. Benefits to Actuarial Science Program

The Society of Actuaries (SOA) has redesigned their certification program to include new Statistics requirements. There will be three statistics related exams: *Probability*, *Statistics for Risk Modeling*, and *Predictive Analytics*. There is also a new VEE (Validation by Educational Experience) in *Mathematical Statistics*.

The curriculum included in the the minor will cover the required statistical concepts for 2 exams (*Probability*, *Statistics for Risk Modeling*) and the VEE (*Mathematical Statistics*) and will provide an introduction to the material required for the third exam (*Predictive Analytics*). As such, we expect the coursework in the minor will be of interest to Actuarial Science students.

Course		SOA Requirement
ST 454: Mathematical Statistics I	→	Exam P
ST 455: Mathematical Statistics II	→	VEE: Math Stat
ST 452: Applied Regression Analysis	→	Stat for Risk Modeling Exam
ST 445: Intro to Statistical Learning and Data Mining	→	Stat for Risk Modeling Exam Predictive Analytics Exam

c. Benefits to University

Data-driven, statistical approaches are being incorporated in virtually every academic discipline – hard sciences, social sciences, business, engineering and medicine. Funding agencies and top journals are requiring better statistical methodologies and novel approaches that involve computation, data analytics, predictive modeling, decision modeling, and data science. The proposed Minor in Statistics will also equip students who want to pursue graduate studies with a strong quantitative foundation.

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Appendix: Course Descriptions

A. Proposed Courses

ST 440: Statistical Programming and Computing with R

Introduction to basic concepts in computer programming and statistical computing techniques as they are applied to data extraction and manipulation, statistical processing, and visualization. Uses the R language.

Prerequisite(s): ST 260 or GES 255, {CS 150 or UA Computer Science Placement Test Score of 380}

ST 445: Intro to Statistical Learning and Data Mining

This course offers an introduction to the field of statistical learning, an essential toolkit for making sense of the vast and complex data sets that have emerged in fields ranging from biology to finance to marketing to astrophysics in the past twenty years. Topics include linear and logistic regression, classification, resampling methods, shrinkage/penalized approaches, tree-based methods, generalized additive models, principal component analysis, and clustering.

Prerequisite(s): ST 452

B. Current APST Undergraduate Courses

ST 260: Statistical Data Analysis

Introduction to the use of basic statistical concepts in business applications. Topics include extensive graphing; descriptive statistics; measures of central tendency and variation; regression, including transformations for curvature; sampling techniques; designs; conditional probability; random variables; probability distributions; sampling distributions; confidence intervals; and statistical inference. Computer software applications are utilized extensively. Emphasis throughout the course in on interpretation.

Prerequisite(s): MATH 112 or MATH 115 or MATH 121 or MATH 125 or MATH 126 or MATH 145 or MATH 146; and CS 102 or CS 150 or CS 100 or CS 120 or MIS 120 or CS 104 or GES 131 or GES 145

ST 450: Statistical Methods in Research I

Development of fundamental concepts of organizing, exploring, and summarizing data; probability; common probability distributions; sampling and sampling distributions; estimation and hypothesis testing for means, proportions, and variances using parametric and nonparametric procedures; power analysis; goodness of fit; contingency tables. Statistical software packages are used extensively to facilitate valid analysis and interpretation of results. Emphasis is on methods and on selecting proper statistical techniques for analyzing real situations.

Prerequisite(s): None listed.

ST 451: Statistical Methods in Research II

Analysis of variance and design of experiments, including randomization, replication, and blocking; multiple comparisons; correlation; simple and multiple regression techniques, including variable selection, detection of outliers, and model diagnostics. Statistical software packages are used extensively to facilitate valid analysis and interpretation of results. Emphasis is on appropriate analysis of data in real situations.

Prerequisite(s): ST 450 or GES 255

ST 452: Applied Regression Analysis

This course introduces modern methods of regression based data analysis. Topics include: a) models and methods of inference for simple and multiple regression; b) diagnostics, multicollinearity, influence, outliers, transformations, model selection, and dimension reduction; c) time series modeling, trends, random walks, autoregressive, exponential smoothing d) generalized linear models, binary and Poisson regression, hypothesis tests, confidence and prediction intervals.

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Prerequisite(s): ST 260 or GES 255, ST 455, MATH 237 (Linear Algebra)

ST 454: Mathematical Statistics I

Distributions of random variables, moments of random variables, probability distributions, joint distributions, and change of variable techniques.

Prerequisite(s): MATH 227 or MATH 247 (Calculus III)

ST 455: Mathematical Statistics II

Theory of order statistics, point estimation, interval estimation, and hypothesis testing.

Prerequisite(s): ST 454

C. Current Elective APST Graduate Courses

ST 521: Statistical Data Management

Introduction to the management of data using SAS. The collection and management of data from business or scientific research projects are emphasized.

Prerequisite(s): None listed.

ST 531: Data Mining I

Data mining is the process of selecting, exploring, and modeling large amounts of data to uncover previously unknown patterns of data. Techniques for accomplishing these tasks in a business setting will be discussed.

Prerequisite(s): ST 550 or ST 560 or ST 509

ST 553: Appld Multivariate Analy

Methods and business applications of multivariate analysis, discriminant analysis, canonical correlation, factor analysis, cluster analysis, and principal components.

Prerequisite(s): None listed.

ST 561: Applied Design Expermnts

An introduction to the design and analysis of experiments. Topics include factorial, fractional factorial, block, incomplete block, and nested designs. Other methods discussed include Taguchi Methods, response surface methods, and analysis of covariance.

Prerequisite(s): GES 400 or GES 500 or BER 540 or CHS 425 or CHS 525 or ST 509 or ST 550 or ST 560

ST 575: Statistl Quality Control

Statistical methods useful in control and improvement of manufactured products, including statistical process control with variables and attribute control charts, and process improvement with designed experiments. Emphasis is placed on design, implementation, and interpretation of the techniques.

Prerequisite(s): ST 550 or ST 560 or ST 509

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Culverhouse Journal List Revision Process and Guidelines
(Culverhouse Research Committee, Jan. 2018)

In order to continue to enhance the research productivity of the Culverhouse College of Commerce and increase the transparency with which the college evaluates faculty research productivity, each discipline maintains a journal list that is used to assess faculty research contributions. This document provides policies that govern the processes for revising the journal lists originally created by the Culverhouse College of Commerce in 2016 and classifying articles published in academic journals that are not included on these lists at the time of the articles acceptance. The document has two objectives:

(1) to provide a standardized process by which each discipline can modify its journal list

and

(2) to provide a standardized process by which faculty members can petition for classification of articles published in journals that are not included in any of the college's current journal lists at the time of the article's acceptance.

The policies in this document build on the definitions of the *Aspirational*, *Excellent*, *Good*, and *Solid* journal categories (provided in the Appendix) and the structure of the journal lists developed by the college in 2016.

Policy for Revising a Journal List

The Culverhouse College's journal lists may be revised periodically to reflect changes in the quality and stature of journals and changes in faculty research interests. The policy provides means for the faculty to propose revisions to the college's journal lists in order to reflect these changes.

A faculty member who proposes that

- a journal not currently on one of the college's journal lists be added to a journal list or
- a journal currently on one of the college's journal lists be reclassified

shall file a petition with her or his department chair by January 15. In this petition, the faculty member shall include

- an indication of the ramifications of the proposed change to the journal list (i.e., what journal(s) would be added to the journal list, reclassified, and/or dropped from the journal list as a result of the proposed change)
- a clear explanation of how the proposed change to the journal list supports department/college/university strategy
- a list of the Editor(s), Editorial Review Board members, and their host schools for the journal(s) that would be added to the journal list, reclassified, and/or dropped from the journal list as a result of the proposed change
- information on the ranking on other lists for the journal(s) that would be added to the journal list, reclassified, and/or dropped from the journal list as a result of the proposed change, including:
    - UT-Dallas
    - Financial Times
    - Association of Business Schools
    - Australian Business Deans Council List (ABDC)
    - Two lists from peer or better schools
- impact scores for the journal(s) that would be added to the journal list, reclassified, and/or dropped from the journal list as a result of the proposed change
- acceptance rates for the journal(s) that would be added to the journal list, reclassified, and/or dropped from the journal list as a result of the proposed change
- an indication of the category (Aspirational, Excellent, Good, or Solid) the faculty member proposes for the journal(s) to be added to the journal list and/or reclassified as a result of the proposed change
- justification for these changes (i.e., it should be clear to the research committee that a journal to be added will contribute substantial value over the journal(s) to be reclassified and/or dropped from the journal list).

Such a petition should only be made in instances where it is very likely that Culverhouse faculty members will continue to publish in the proposed journal on a relatively consistent basis.

- If a Department Head/Director receives one or more petitions by the January 15 deadline, the Department Head/Director shall ask the Department Research Committee to review the petition(s) and vote individually on each petition and all resulting changes to the journal list. The Department Research Committee will inform the Department Head/Director of the outcome by February 1. The Department Research Committee shall serve as the arbitrator in the event of conflicts between proposals at the department level.
- If a majority of all members of the Department Research Committee vote to approve the proposed change(s), the tenured/tenure-track faculty within the discipline shall vote on changes to the journal list that result from each proposal individually by February 15. Changes to the journal list that result from each individual proposal require approval by the majority of all tenured/tenure-track faculty within the discipline. The Department Head/Director will be responsible for administering this vote.
- The Department Head/Director will inform the Associate Dean for Research of
    - her or his recommendation on whether to approve the proposed reclassification of the journal

    and
    - the Department Research Committee's recommendation on whether to approve the proposed reclassification of the journal

  by February 18.
- The College Research Committee will review the recommendations of the Department Research Committee and Department Head/Director and decide whether to approve the proposed reclassification of the journal by March 1.
- Journals should not be moved to a higher classification in order to accommodate the addition of a new journal to the journal list. Reallocation to a higher classification should instead be considered independent of any other changes to the journal list and done so solely on the

merits of the journal that under consideration for reclassification. For example, if a faculty member proposes reclassifying a journal from the Solid to the Good category and the discipline list already includes the maximum number of journals in the Good category, the issue of the number of journals in the Good category cannot be resolved by simply moving one of the other journals in the Good category to the Excellent category (this change must be presented in an independent proposal).

- The Associate Dean for Research will inform the Dean and the Department Head/Director of changes to journal lists in her or his department on March 1, and the Department Head/Director will immediately notify all tenured and tenure track faculty in the affected discipline.
- Changes to journal lists will be effective on April 1 immediately following the conclusion of this process.
- Each discipline shall review its journal list during the spring semester every three years and propose whether any journals should be
    - added to/removed from the list
    - recategorized
- by January 15. Changes proposed as a result of this review must be approved by a majority of tenured/tenure-track faculty by February 15, the Department Head/Director by February 18, and the College Research Committee by March 1. It is acceptable for a discipline to conclude, following this review, that no changes are necessary.
- If a draft of an article is under review with a journal at the time the journal is reclassified, the article will be assigned the higher of these two categories if the review process results in publication of the article in question by the reclassified journal.

Under this process, the Aspirational category will rarely change, the Excellent category will change somewhat more frequently than the Aspirational category, the Good category will change somewhat more frequently than the Excellent category, and the Solid category will change somewhat more frequently than the Good category.

The College Research Committee will review and consider revisions to this process every five years or when circumstances dictate a need to do so.

Policy for Consideration of High-Quality Publications in Journals not included on Culverhouse Journal Lists

Culverhouse faculty also publish research in journals not included on the Culverhouse College's journal lists. This policy provides the means for recognizing such research when it is published in a high quality journal that *is not included* on the Culverhouse College's journal lists.

If a faculty member publishes an article in a journal not included on the college's lists and the likelihood of publishing additional articles in that journal is very low, it is unnecessary to formally add the journal to a journal list. In such cases, the faculty member may petition the Department Research Committee for the article to have merit equivalent to article published in journals at the Aspirational, Excellent, Good, or Solid level. In those instances, the journal in which this article has been published will not be permanently added to the list; however, depending on the outcome of the petitioning process, the article may be considered as published in an Aspirational, Excellent, Good, or Solid journal for consideration in decisions on academic qualifications, promotion, tenure, and merit.

A faculty member who proposes the classification of an article published in a journal not on the college's lists shall file a petition with her or his department chair by January 15 and no more than one year after the article in question was accepted for publication. In this petition, the faculty member shall include

- an indication of the proposed classification (Aspirational, Excellent, Good, or Solid) of the article
- a clear statement regarding how the article supports the department/college/university strategy
- a list of the Editor(s), Editorial Review Board, and their host schools for the journal in which the article has been accepted/published
- information on the ranking of journal in which the article has been accepted/published in other lists

    - impact score for the journal in which the article has been accepted/published
    - acceptance rate for the journal in which the article has been accepted/published
    - justification for the proposed classification of the article (this can include, but is not limited to, information on the number and quality of citations of the article in question)
- If a department chair receives one or more petitions by the January 15 deadline, the Department Head/Director shall ask the Department Research Committee to review the petition(s) and vote on a recommended classification for the journal in which the article has been accepted/published by February 1. The Department Research Committee shall serve as the arbitrator in the event of conflicts between proposals at the department level.
- Based on a committee vote, the members of the Department Research Committee will make a recommendation on whether to approve the proposed classification of the journal in which the article has been accepted/published to the Department Head/Director by February 15.
- The Department Head/Director will inform the Associate Dean for Research of
        - her or his recommendation on whether to approve the proposed classification of the article

    and

        - the Department Research Committee's recommendation on whether to approve the proposed classification of the article

    by February 18.
- The College Research Committee will review the recommendations of the Department Research Committee and Department Head/Director and decide whether to approve the proposed classification of the article by March 1.

All such petitions to the department head will be retained in a central database to be maintained by the Associate Dean for Research to allow for consistency in these decisions. Prior to consideration of any such petitions, the Department Head/Director should consult with the Associate Dean for Research to determine whether the journal in which the article has been accepted/published has been considered in the past.

Faculty members may appeal the College Research Committee's decision to the Associate Dean for Research within two weeks of the College Research Committees' decision. Appeals must be submitted electronically to the Associate Dean for Research and must include the information outlined above as well a statement explaining the justification for appealing the department College Research Committee's decision. The Associate Dean for Research will make the final decision on such appeals.

The College Research Committee will review and consider revisions to this process every five years or when circumstances dictate a need to do so.

Appendix – Definitions of Journal Classifications

Aspirational journals **(5 per discipline)** represent journals that few at top schools would question as being 'premier' journals. In other words, these journals are at the top of major journal lists (i.e., UT-Dallas, Financial Times 45, Australian Dean's). Aspirational publications increase the visibility of the college's research; however, expected publication rates in aspirational journals are expected to be low.

Excellent journals **(10 per discipline)** represent journals that most scholars accept as representing very high quality research with strong impact. Sometimes these are called "A-journals". These journals typically have high impact scores or are highly respected for publishing a specific kind of research, but there is *some debate* over whether they can be fairly put in the same category as the Aspirational journals. Some of the top/elite schools and all of the large state research-oriented schools reward their faculty for publishing in these journals.

Good journals **(15 per discipline)** are recognized for publishing high-quality research with strong impact, but perhaps not with as much consistency as the Excellent and Aspirational journals. Some articles are noticed and have impact, others less so. Elite schools do not reward their faculty for publishing in these journals, but most large state research-oriented schools do.

Solid journals **(15 per discipline)** publish competently executed research that has smaller impact. Research from these journals is not read and cited as often as the preceding categories. Large state research-oriented state schools do not reward, or offer only small rewards, for publishing in these journals.

Unusual journals have recognized merit as publication outlets, but serve purposes that fall outside the traditional peer-reviewed research journal's objectives and processes. Often, these journals publish invited papers by well-known authors, or go through some other non-traditional editorial or quasi-blind review process. An example is *Harvard Business Review*, which is perhaps the most impactful practitioner journal. However, it is not blind reviewed and thus should not be considered Aspirational.

Unlisted journals include all remaining journals**.** Unlisted journals are listed in Cabell's, but are not widely distributed, read, or cited. They have average or below-average 5-year impact scores and acceptance rates that typically exceed 20 percent when they are not manipulated. Their

editors are not widely known and rarely are found at elite or large state research institutions. These journals are only on the broadest journal lists and never in the top categories, although they might be in the second category in very broadly defined lists (e.g. Cabell's and Australian Dean's list).

ABSENCE FROM DUTY, MISSED CLASSES, AND REPORTING OF CONSULTING AND SUPPLEMENTAL COMPENSATION ACTIVITIES POLICY

Generally, all classes should meet at the scheduled time and be taught by the instructor assigned to the course. On occasion it may be necessary for a faculty member to miss a class. This policy summarizes and expands upon *The University of Alabama Faculty Handbook* requirements relating to missed classes and absence from duty. Because supplemental compensation and consulting activities are sometimes cited as reasons for absence from duty, this document also summarizes reporting requirements and establishes policies relating to missing and rescheduling classes for these purposes.

I. Missed Classes and Absence From Duty

A. The *UA Faculty Handbook* indicates that faculty are expected to conduct their classes as scheduled and seek approval prior to missing class (http://facultyhandbook.ua.edu/iii-class-scheduling-and-class-attendance.html)

B. Submission of a properly completed Coverage Approval Form to the Department Head/Director is the appropriate means for requesting prior approval to miss class or other duties. Except in unusual circumstances, the form should be submitted at least two weeks in advance. If the request is approved, a copy of the signed form will be returned to the faculty member in a timely manner.

C. Approval generally requires that the class be met at the scheduled time by a qualified substitute instructor or offered in another time or format.

D. In the event that an emergency causes a class to be missed, the faculty member should inform the department program assistant as soon as possible. The Coverage Approval Form should be submitted as soon as practical following the emergency.

II. Consulting and Supplemental Compensation

A. Because supplemental compensation activity may infringe upon a faculty member's teaching, research, and academic citizenship responsibilities, University policy requires prior approval from the Dean or the Dean's designated representative for any such activity. University policy limits the number of supplemental compensation days during any academic year and during the interim term and the summer term for faculty members with teaching assignments during these periods (http://facultyhandbook.ua.edu/vii-supplemental-compensation-policy.html).

B. It is the policy of the College that regularly scheduled classes take precedence over consulting and other activities, and that faculty should schedule these activities to avoid conflicts with regularly scheduled classes.

C. All internal supplemental compensation activities and any externally-compensated activities that exceed $100 or ½ day of time must be approved by the Department Head/Director and the Dean on the appropriate University supplemental compensation form prior to starting the activity. If the planned activity is expected to result in a missed

class or other assigned responsibility, the Coverage Approval Form also must be submitted and approved by the Department Head/Director.

D. Faculty who are not meeting academic qualifications criteria are not eligible for internal supplemental compensation. This includes overload teaching, EMBA programs, etc. Meeting academic qualifications criteria will also be a consideration in approvals of external supplementation compensation form.

E. Faculty members are strongly encouraged to consult the UA faculty handbook and Provost's website regarding the State of Alabama Ethics Law (http://provost.ua.edu/state-ethics-law.html) to ensure that their consulting or other external activities are not in violation of the policies or the law.

F. Temporary appointments at another university (such as short-term teaching assignments or research appointments) during the academic year must not conflict with the faculty member's regular UA duties. Compelling arguments should be made for these appointments and could, for example include; access to valuable and unique resources, such as data or special collaboration opportunities.

University policy requires that an academic appointment at any other institution of higher education requires written approval from the Executive Vice President/Provost. To request approval for an academic appointment at another institution, the faculty member should submit a request to his or her department head/director explaining why the appointment adds value to UA. If acceptable to the department head/director, he/she should submit the request to the Dean's office for approval and routing to the Office of Academic Affairs. The external supplemental compensation form is not an appropriate means to request academic appointments at another university.

Version History

1/12/18	Revised policy distributed to department heads to review.
2/14/18	Revised policy submitted to Faculty Executive Board for consideration
3/21/18	Revised policy (with additional changes) submitted to Faculty Executive Board for consideration