

Faculty Executive Board Meeting November 28, 2018 8:30-10:30 am Dean's Conference Room

Members Present: Dr. Tom Baker, Dr. Steve Buchheit, Dr. Jose Dula, Dr. Peter Magnusson, Dr. Robert McLeod, Prof. Joyce Meyer, Dr. Paul Pecorino, Dr. Uzma Raja, Dr. Ed Schnee, Dr. Marilyn Whitman, Dr. Eric Williams, Dr. Mesut Yavuz.

Non-Voting Members Present: Dr. David Mothersbaugh, Ms. Lauren Bennett, Ms. Danielle Clarke, Mrs. Kati Hardemon (serving as recorder)

Dr. Schnee opened the meeting at 8:35 am.

1. Approval of FEB Meeting minutes from 10/17/2018 - A motion was made by Dr. Williams to approve the minutes as written. The motion was seconded by Prof. Meyer and passed unanimously.

2. Items from EFLS

- a. EFLS Course Prerequisite Proposal This proposal adds prerequisites to the listed courses and mainly effects non-business students who are taking our minors. This proposal will standardize the prerequisite requirements for non-business students. A motion was made by Dr. Williams to approve this proposal and send it to the forum. The motion was seconded by Dr. Pecorino and passed unanimously.
- b. AMP Finance, AMP Economics There was an issue with the Economics AMP and the selected AC course which is AC 597. This is a special topics financial statement analysis which is not a permanent course. The FEB can approve and then strongly encourage the development of a permanent course. A motion was made by Dr. Pecoronio to approve the proposals and send to faculty forum with the accounting addendum. The motion was seconded by Dr. Buccheeit and passed with a vote of 11 in favor, 1 opposed.
- c. EC-FI AMP Admission Test Waiver This exception is to the level of score (600 or higher) needed and not to exempt students from taking the test completely. A motion was made by Dr. Magnussson to approve this proposal and send it to the faculty forum. The motion was seconded by Dr. Pecorino and passed with a vote of 11 in favor, 1 opposed.

- d. 300 Level Field Course Proposal There were Concerns from EFLS about the prerequisites for FIN 302 and in a CCC committee meeting. This proposal is to amend the original proposal to add EC 111 as a prerequisite for FI 302. The FI 302 coordinator agreed with this as well. This original was approved by the CCC if this was approved we would just amend the original proposal and send to the forum. A motion was made by Dr. Buchheit to approve this and send to the faculty forum. The motion was seconded by Dr. Pecorino and passed with a vote of 11 in favor, 1 opposed.
- 3. Item from AC Minor Grading Proposal This proposal requires a C- in all upper division accounting courses required for the accounting minor. This is already the case for the accounting majors and concentrations. A motion was made by Dr. Buchheit to approve this item and send it to the faculty forum. The motion was seconded by Dr. Raja and passed unanimously.
- 4. **Item from MKT** Course name change MKT 439: Key Account Management to MKT 439: Sales Strategy. A motion was made by Dr. Williams to approve this item as non-substantive. **The motion was seconded by Dr. Buchheit and passed unanimously.**
- 5. Item from MGT Change of MGT 322 to MGT 422. There were issues raised about moving this from a junior level to a senior level course as it had been noted that students were not prepared for the 300 level course. In changing this to a 400 level course it signals to students and advisors that they will need to be better prepared before taking a 400 level course. Also the section number 422 is already in use. A motion was made by Dr. Buchheit to table this item until the next meeting. The motion was seconded by Dr. Pecorino and passed with a vote of 11 in favor, 1 opposed.
- 6. **Statistics Minor** This will offer a more clear path for students outside of the major. A motion was made by Dr. Williams to approve this and send it to forum. **The motion was seconded by Dr. Pecorino and passed unanimously.**
- 7. **PhD Committee Document** This is the same policy on dissertation defense committees that the graduate school uses the Phd committee added the line. Individual departments reserve the right to require this outside member also be outside the student's discipline. A motion was made by Dr. Pecorino to approve this item and send it to forum. **. The motion was seconded by Yavuz and passed unanimously.**
- **8. UA Registrar Required University Honors Course Approach Proposal** Currently we used a section number to designate honors courses, the Registrar's office will no longer support the labeling of the courses in that way. Now we need to have a separate course with a different number, it is the same content with a different course number. If approved this will be handled administratively. Prerequisite requirements will be addressed in the system. A

motion was made by Dr. Buchheit to accept this as non-substantive. **The motion was** seconded Dr. Baker and passed unanimously.

Other Items

- P&T Committee 3rd Year P&T reviews involves a discussion of the process of promotion and tenure and if the items were handled fairly. It was discussed in the committee if this review should also look at the candidate. This would increase the consistency across the departments. It was decided that the P&T chair would email Dean Palan about this matter.
- Faculty Forum As it stands we are 8 days from the scheduled date from faculty forum. Usually documents must be distributed at least two weeks before the meeting. A motion was made by Dr. McLeod to allow the materials to be distributed today rather than delaying the faculty forum. The motion was seconded by Dr. Raja and passed unanimously.



Faculty Executive Board Meeting October 17, 2018 8:30-10:30 am Dean's Conference Room

Members Present: Dr. Anup Agrawal, Dr. Tom Baker, Dr. Steve Buchheit, Dr. Jose Dula, Dr. Peter Magnusson, Dr. Robert McLeod, Prof. Joyce Meyer, Dr. Paul Pecorino, Dr. Uzma Raja, Dr. Ed Schnee, Dr. Marilyn Whitman, Dr. Eric Williams, Dr. Mesut Yavuz.

Non-Voting Members Present: Dr. Jonathon Halbesleben, Ms. Danielle Clarke, Mrs. Kati Hardemon (serving as recorder)

Dr. Schnee opened the meeting at 8:35 am.

- 1. Items approved by the UPC
 - **a. HR Minor** A motion was made to approve and send this to the faculty forum by Dr. Williams and seconded by Dr. Baker. **The motion passed unanimously.**
- 2. Items from MIS
 - a. MIS Program numbering and name changes— MIS revised courses 220, 320, and 420 last year. When the changes were being incorporated into the catalog, the Registrar's office notified the Department that they would need to use different course numbers. MIS would like to change MIS 220, 320 and 420 to MIS 221, 321, and 421 with updates to the course descriptions. A motion was made by Dr. Raja to accept this change with Dr. Halbesleben confirming the necessity of the number change with the Registrar's office. The motion was seconded by Dr. Williams and passed unanimously.
- 3. PhD Dissertation Committee Composition A FEB committee member proposed that the working rules for the composition of dissertation committees be made more formal. After some discussion, a motion was made by Dr. Baker to send the proposed document to the PhD Committee, to revise to be consistent with the rules set forth by the Graduate School. The motion was seconded by Prof. Meyer and passed unanimously.
- 4. Updates from the Dean's Office
 - a. At the November meeting the new Director of Undergraduate Programs will join the FEB, future proposals will go through her and she take minutes.
 - b. We have not received any new faculty position allocations yet; there have been some changes to how positions are being allocated for this year. We also still have 6 positions from last year that need to be filled.

c. NTRC – The Provost's office has approved the implementation of our NTRC policy which was passed last spring. The Dean's office is reviewing the financial implications of the policy prior to implementing it.

5. FEB Member Items

- a. Dr. McLeod asked if we had a current organizational chart for the college. Dr. Halbesleben will be adding it the faculty resources page on the website.
- b. It was mentioned that the FEB should begin approving the prior meetings minutes. A motion was made by Dr. McLeod to approve the October meeting minutes. The motion was seconded by Dr. Pecorino and passed unanimously.

Proposals for pre-requisite changes to EFLS courses > Inbox ×



Wed, Nov 7, 9:32 AM (9 days ago)





Laura Razzolini

to me, Danielle, Lauren 🕶

Hello David.

The EFLS department would like to submit the following prerequisite changes

- Remove OM 300 as a prerequisite for EC 400. The only needed pre-regs are EC 110 and EC 111.
- . FI 360: Add EC 110 and EC 111 as needed pre-regs.
- . LGS 403: Add EC 110 and EC 111 as needed pre-reqs.
- · LGS 407: Add EC 110 and EC 111 as needed pre-reqs.

The rationale for these prerequisites changes is that these courses can be taken by non business students selecting a Minor in Real Estate or in Personal Wealth Management . Thus the need to make sure that basic principles of economics are taken by the students before taking these upper level courses.

Thanks, and please let me know if you need anything else from me. Best, L.

Laura Razzolini | Department Chair

Department of Economics, Finance, and Legal Studies Culverhouse College of Commerce

Accelerated Master's Program Proposal

The Accelerated Master's Program (AMP) is designed to incentivize our best undergraduate students to pursue their graduate studies at The University of Alabama. It is anticipated that many students entering UA with significant AP credit can graduate with a Master's degree in 4 years. If such a student is on a UA four year scholarships (e.g. the Presidential Scholarship), it is possible that the tuition scholarship will cover both the undergraduate and graduate degrees. This will help to raise the quality of our graduate classes, national profile, and ranking. By committing to the AMP program, it is expected that departments will publicize the AMP program widely to all new undergraduate students. Bama Bound is a great time to start.

Department	Economics, Finance and Legal Studies
Constituent programs	
Bachelor's Degree	Economics (BS)
Graduate Degree	Finance (MSF)
Submitted by	Dr. Laura Razzolini, Chair
	Dr. Robert Brooks, MSF Graduate Program Coordinator
Date	November 6, 2018
Number of Full Time Tenured	31
Faculty	
Number of undergraduate majors	271
Number of Master's students	37
Number of Doctoral students	13 PhD students in Finance
ADMISSION CRITERIA (in addi	tion to minimum requirements for graduate admission)
Admission test score waiver?	Yes
Minimum GRE/GMAT if required	GMAT score of 600 (or equivalent GRE score)
Minimum GPA	3.3
Maximum Number of Hours to	12
Double Count	
Additional pre-requisite	Calculus sequence (Math 125, Math 126, Math 227)
requirements	
Other requirements	

^{*}Complete a separate proposal for each program. This can include accelerated bachelors/doctoral programs also.

Application Process

Students may start the AMP program once they have earned 90 or more undergraduate hours. Typically, this would mean that an AMP student will apply to the Graduate School in the final semester of their junior year. An AMP student must meet the minimum requirements for regular graduate admission as described in the graduate catalog and in the table above.

Classification of AMP Students

AMP students are classified as undergraduates until they complete the requirements for their undergraduate degrees. AMP students may therefore not receive UA Graduate Assistantships, or fellowships and scholarships awarded by Graduate School, until they have completed their undergraduate degree.

Assistantships, Fellowships, and Scholarships

Upon completion of an undergraduate degree an AMP student becomes eligible for Graduate Assistantships (including Research Assistantships and Teaching Assistantships), graduate fellowships, and graduate scholarships administered by Graduate School. This includes travel and research funding. If an AMP student is offered an assistantship while still eligible for tuition support under an undergraduate scholarship, departments may use the assistantship tuition line to support another deserving graduate student. A student needs to meet the SACS requirement of 18 graduate hours completed in the teaching field before holding a Teaching Assistantship as the primary instructor of an undergraduate course and/or to assign undergraduate grades.

Fulfilling the Requirements of the Undergraduate and Graduate Degrees

The AMP program fulfills the credit hour and curricula requirements for both the undergraduate and graduate degrees. It will differ from the two standard programs (Bachelor's and Master's) only in terms of (a) timeline and (b) substitution of graduate coursework (maximum as given in the table above) that can be double counted for undergraduate requirements. This curriculum will be appropriate for very well prepared students who have excelled in the first two or three years of their UA undergraduate studies, and demonstrate that they can satisfy the course requirements and still successfully complete graduate courses during their senior year. **Upon receipt of the undergraduate degree, the student will continue taking graduate courses until requirements for the master's degree are met.**

Advising Requirements

It is understood that prospective AMP students will meet with the Graduate Program Coordinator and/or the Advising Specialist for their AMP program at the beginning of their junior year, and it is highly recommended that such meetings occur well in advance of this point to allow students to structure a curriculum that allows the student to meet all of the requirements as early as possible. Programs may have specific coursework requirements and graduate class prerequisites for which an AMP student must be prepared.

Example Curriculum to Meet the Requirements for Both the Undergraduate and Graduate degrees

Year 1

Course	Credits	Course	Credits
Math 125	4	Math 126	4
EN 101	3	EN 102	3
EC 110	3	EC 111	3
HU/L/FA	3	HU/L/FA	3
HI/SB	3	HI/SB	3
		TOTAL	32

Year 2

Course	Credits	Course	Credits
Math 227	4	AC 210	4
Natural Science	4	Natural Science	4
ST 260 (C)	3	Elective	3
HU/L/FA	3	HU/L/FA	3
HI/SB	3	HI/SB	3
		TOTAL	66

Year 3

Course	Credits	Course	Credits
FI 302	3	OM 300	3
EC 308	3	EC 309	3
MGT 300	3	FI 301	3
GBA 300 (W)	3	FI 389 (C)	3
MKT 300	3	EC elective	3
		TOTAL	96

Year 4

Course	Credits	Course	Credits
FI 510	3	FI 512	3
FI 515	3	FI 522	3
EC elective	3	EC elective	3
EC elective	3	GBA 490 (W)	3
		TOTAL	120

B.S. Complete

Year 5

Course	Credits	Course	Credits
AC 597	3	FI 505	3
EC 571	3	FI 506	3
EC 509	3	FI 596	3
		TOTAL	30

M.A. Complete

The master's degree will be awarded after all 30 credits are completed. The curriculum shown here is based upon a student selecting corporate track—of the MSF in Finance program. Students may wish to select Financial Engineering track or Real Estate track, instead of this, but the sequence would be very similar.

Accelerated Master's Program Proposal

The Accelerated Master's Program (AMP) is designed to incentivize our best undergraduate students to pursue their graduate studies at The University of Alabama. It is anticipated that many students entering UA with significant AP credit can graduate with a Master's degree in 4 years. If such a student is on a UA four year scholarships (e.g. the Presidential Scholarship), it is possible that the tuition scholarship will cover both the undergraduate and graduate degrees. This will help to raise the quality of our graduate classes, national profile, and ranking. By committing to the AMP program, it is expected that departments will publicize the AMP program widely to all new undergraduate students. Bama Bound is a great time to start.

AMP PROGRAM DETAILS Department	Economics, Finance and Legal Studies
Constituent programs	Leonomies, I manee and Legar Studies
Bachelor's Degree	Finance (BS)
Graduate Degree	Economics (MA)
Submitted by	Dr. Laura Razzolini, Chair
	Dr. Matt Van Essen, MA Graduate Program Coordinator
Date	November 6, 2018
Number of Full Time Tenured	31
Faculty	
Number of undergraduate majors	652
Number of Master's students	45
Number of Doctoral students	27 PhD students in Economics
ADMISSION CRITERIA (in addi	tion to minimum requirements for graduate admission)
Admission test score waiver?	Yes
Minimum GRE/GMAT if required	GMAT score of 600 (or GRE score of 300)
Minimum GPA	3.3
Maximum Number of Hours to	12
Double Count	
Additional pre-requisite	Calculus sequence (Math 125, Math 126, Math 227)
requirements	
Other requirements	

^{*}Complete a separate proposal for each program. This can include accelerated bachelors/doctoral programs also.

Application Process

Students may start the AMP program once they have earned 90 or more undergraduate hours. Typically, this would mean that an AMP student will apply to the Graduate School in the final semester of their junior year. An AMP student must meet the minimum requirements for regular graduate admission as described in the graduate catalog and in the table above.

Classification of AMP Students

AMP students are classified as undergraduates until they complete the requirements for their undergraduate degrees. AMP students may therefore not receive UA Graduate Assistantships, or fellowships and scholarships awarded by Graduate School, until they have completed their undergraduate degree.

Assistantships, Fellowships, and Scholarships

Upon completion of an undergraduate degree an AMP student becomes eligible for Graduate Assistantships (including Research Assistantships and Teaching Assistantships), graduate fellowships, and graduate scholarships administered by Graduate School. This includes travel and research funding. If an AMP student is offered an assistantship while still eligible for tuition support under an undergraduate scholarship, departments may use the assistantship tuition line to support another deserving graduate student. A student needs to meet the SACS requirement of 18 graduate hours completed in the teaching field before holding a Teaching Assistantship as the primary instructor of an undergraduate course and/or to assign undergraduate grades.

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The AMP program fulfills the credit hour and curricula requirements for both the undergraduate and graduate degrees. It will differ from the two standard programs (Bachelor's and Master's) only in terms of (a) timeline and (b) substitution of graduate coursework (maximum as given in the table above) that can be double counted for undergraduate requirements. This curriculum will be appropriate for very well prepared students who have excelled in the first two or three years of their UA undergraduate studies, and demonstrate that they can satisfy the course requirements and still successfully complete graduate courses during their senior year. **Upon receipt of the undergraduate degree, the student will continue taking graduate courses until requirements for the master's degree are met.**

Advising Requirements

It is understood that prospective AMP students will meet with the Graduate Program Coordinator and/or the Advising Specialist for their AMP program at the beginning of their junior year, and it is highly recommended that such meetings occur well in advance of this point to allow students to structure a curriculum that allows the student to meet all of the requirements as early as possible. Programs may have specific coursework requirements and graduate class prerequisites for which an AMP student must be prepared.

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HU/L/FA	3	HU/L/FA	3
HI/SB	3	HI/SB	3
		TOTAL	32

Year 2

Course	Credits	Course	Credits
Math 227	4	AC 210	4
Natural Science	4	Natural Science	4
ST 260 (C)	3	Elective	3
HU/L/FA	3	HU/L/FA	3
HI/SB	3	HI/SB	3
		TOTAL	66

Year 3

Course	Credits	Course	Credits
FI 302	3	OM 300	3
EC 308	3	EC 309	3
MGT 300	3	FI 301	3
GBA 300 (W)	3	FI 389 (C)	3
MKT 300	3	FI 410	3
		TOTAL	96

Year 4

Course	Credits	Course	Credits
EC 508	3	EC 509	3
EC 571	3	EC 513	3
FI 412	3	FI elective	3
FI 414	3	GBA 490 (W)	3
		TOTAL	120

B.S. Complete

Year 5

Course	Credits	Course	Credits
ST 521	3	ST 522	3
ST 531	3	ST 532	3
EC 570	3	EC 596	3
		TOTAL	30

M.A. Complete

The master's degree will be awarded after all 30 credits are completed. The curriculum shown here is based upon a student selecting Track II—Applied Economics—of the MA in Economics program. Students may wish to select Track III, the Policy Track, instead of this, but the sequence would be very similar. Students wishing to pursue Track I, the PhD Preparation Track, should consult with the MA program coordinator, since this track involves completing the first-year sequence of courses in the PhD in economics.

<u>Proposal to waive the GMAT/GRE score requirement for participants in the Economics or</u> Finance AMP programs

Submitted by: Economics, Finance and Legal Studies Department For review by the Graduate Council

Admission Test Score Waiver for Students in the Economics (MA) and the Finance (MSF) Accelerated Master's Program

Students applying to the AMP must take the MAT or GRE test. Normally a score of 600 or higher is required on the GMAT (or 300 or higher in the GRE) for admission to the Economics or Finance Graduate Programs.

Request:

We would like to request a waiver of such <u>score</u> requirement specifically for those students applying through the Accelerated Master's Program (AMP), for the following reasons:

- 1) Students applying to the AMP are required to have a minimum GPA of 3.30, which is a more robust indicator of academic potential and track record than a single test score.
- 2) Students applying to the AMP are juniors who have spent significant time in the Department and have met with our academic advisors twice every academic year. We have, therefore, ample opportunities to evaluate these students, as opposed to standard graduate school applicants who come from outside UA and are unknown to us.

We will retain, however, the graduate school requirement for regular admission and submission of reference letters and a Statement of Purpose.

Core Curriculum Committee EFLS Proposal

(From Laura Razzolini - Department Head Econ, Finance, & Legal Studies - November 6th)

I have gotten consistent feedback from my EFLS reps on CCC and FEB related to the prerequisites for FI 302 in the 300-Level Field Course Prerequisite Proposal passed by CCC and FEB.

The feedback relates to the need to add EC 111 as an additional (in addition to AC 210) prerequisite for FI 302. The determination (and I agree) is that materials in EC 111 are important precursors to materials taught in FI 302.

The following modified prerequisite justification provided by Chris Whaley, the FI 302 Core Course Coordinator, reflects and incorporates this feedback as follows:

Revised Course Prerequisites Justification for FI 302:

FI 302 is a basic foundational finance class. AC 210 is an important prerequisite because it contains the most comprehensive amount of material needed for FI 302, namely that relating to a basic understanding and ability to read financial statements. EC 111 is also an important prerequisite because it contains fundamental materials (e.g. interest rates, inflation, and the Federal Reserve System) that are important precursors to materials covered in FI 302. Additional courses currently required of business students prior to FI 302 (e.g., ST 260 and LGS 200) are not deemed as necessary for success in FI 302 as the overlapping material can be covered without significant impact on the course. Thus, AC 210 and EC 111 are deemed as the appropriate and sufficient prerequisites for FI 302.

Because of this, I am asking CCC to consider the following amendment to the 300-Level Field Course Prerequisite Proposal as follows:

Proposed Amendment to the 300-Level Field Course Prerequisite Proposal:

Add EC 111 as a prerequisite (in addition to sophomore standing and AC 210) to FI 302.

Culverhouse School of Accountancy Proposal to Change Grading for Major Courses

The Culverhouse School of Accountancy would like to amend current policy to require students to receive grades of C- or above in all upper division accounting courses required for the accounting major, accounting concentration, and accounting minor.

Presently a grade of C- or better is required only in 300-level courses, and the minor is new. The faculty sentiment is that grades in the D range allows students with a low and unsatisfactory grasp of material to graduate as an accounting major, with an accounting concentration, or with an accounting minor.

Department of Marketing

Proposal to Change the Name of MKT 439

The Department of Marketing would like to change the name of MKT 439: Key Account Management to MKT 439: Sales Strategy.

The course itself will remain unchanged. The course is being renamed to better reflect industry practice and course content.



Kati Hardemon < kfhardemon@cba.ua.edu>

FEB meeting votes from sub-committees - and getting all materials ready for next week FEB

1 message

David Mothersbaugh dmothers@cba.ua.edu

Mon, Nov 19, 2018 at 8:32 AM

To: Kati Hardemon <kfhardemon@cba.ua.edu>, Lauren Bennett <labennett@cba.ua.edu>, David Mothersbaugh <dmothers@cba.ua.edu>

Hey Kati,

CCC approved the EFLS 300 level field course prerequisite amendment proposal (10 voted of 11, unanimous).

UPC approved the ISM Statistics Minor proposal - (5 voted of 6, unanimous).

GPC approved the 3 EFLS AMP and AMP related proposals (7 of 8 voted, 6 yes, 1 no).

So, all of the materials I sent you are OK to go to FEB and on the agenda.

PLUS the following I just sent you:

- 1. Dissertation committee proposal from Ph.D. Comm
- 2. Course number change from MGT Department

That is it for now - if you can make sure all is done that is needed on this for all of this to be considered by FEB next week, that would be great.

Thanks.

Dave

David L. Mothersbaugh, Ph.D.

Associate Dean for Undergraduate and International Programs

Office of the Dean The University of Alabama 422 Alston Hall Box 807223 Tuscaloosa, AL 35487 Phone 205-348-7449 dmothers@cba.ua.edu





Kati Hardemon < kfhardemon@cba.ua.edu>

Re: Welcome to our New Undergrad Director and FEB materials flow reminder

David Mothersbaugh <dmothers@cba.ua.edu>

Mon, Nov 19, 2018 at 8:21 AM

To: Lou Marino <lmarino@cba.ua.edu>, Kati Hardemon <kfhardemon@cba.ua.edu> Cc: Lauren Bennett <labennett@cba.ua.edu>

Hi Kati,

Please see below - can you make sure that this proposal gets submitted to FEB and that it is on the agenda for next week?

Thanks!

Dave

On Mon, Nov 19, 2018 at 8:20 AM Lou Marino lmarino@cba.ua.edu wrote:

Hi Lauren,

I hope you had a great weekend. I wanted to submit this request to IRB as a nonsubstanative change. Perhaps it is something they could consider by email.

Thanks!

Lou

FEB Request

RE: Change a course number

We wish to change MGT 322 Effective Negotiations to MGT 422 Effective Negotiations. Nothing else will be changed. The course is being renumbered to better fit with the revisions to the management curriculum.

Thank you for considering the renumbering.

Lou Marino

Lou Marino | Professor of Entrepreneurship & Strategic Management

Chair, Department of Management The University of Alabama Culverhouse College of Business 104 Alston Hall, Tuscaloosa, AL 35487 Office 205-348-8946 | mobile 205-792-6693 Imarino@cba.ua.edu |

"Tell me and I forget, teach me and I may remember, involve me and I learn."

Benjamin Franklin

David L. Mothersbaugh, Ph.D.

Associate Dean for Undergraduate and International Programs

Office of the Dean

The University of Alabama

422 Alston Hall Box 807223 Tuscaloosa, AL 35487 Phone 205-348-7449 dmothers@cba.ua.edu



Statistics Minor

ISM Department University of Alabama

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 STEMJob
 - #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.
 - 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 452, ST 454, ST 455
- 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 452: Applied Regression Analysis
- ST 454: Mathematical Statistics I
- ST 455: Mathematical Statistics II

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
- Year 3: 20

5. Resources

The ISM department proposed two new courses (ST 440, ST 445), which were approved in the spring 2018 Faculty Forum meeting, and which may be taken as electives for the minor. This requires teaching two new sections per year. ISM has hired a non-tenure track assistant professor of statistics (Spring 2018), a tenured associate professor of statistics (Fall 2018), and is in the process of filling two open tenure track faculty positions with a start date of Fall 2019.

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 minor will cover the required statistical concepts for two 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 Sciencestudents.

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

Appendix: Course Descriptions

A. Recently Approved 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.

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

Current UA Graduate School Guidelines

A dissertation committee, with the director of the dissertation as its chairperson, supervises the preparation of the dissertation. The committee shall have not fewer than five members, all of whom are appointed by the dean of the Graduate School. The graduate dean's approval of the proposed dissertation committee is expected to be obtained before significant progress is made on the dissertation-typically just before or just after the dissertation proposal meeting. For this purpose, the student submits the form for Appointment/Change of a Doctoral Dissertation Committee.

All members of a dissertation committee must be members of the UA Graduate Faculty. The committee chair must be a full member of the Graduate Faculty, as described in the Catalog's section on Qualifications of the Graduate Faculty. One member must be from outside the student's major department. Individual departments reserve the right to require this outside member also be outside the student's discipline. If the outside member is not a full or associate member of the UA Graduate Faculty (e.g., a highly qualified person from another university, a business or industry), the graduate dean needs to appoint that member by approving Temporary Graduate Faculty status for the specific purpose of serving on the student's dissertation committee.

From: David Mothersbaugh, AD of Undergraduate Programs

To: Culverhouse College of Business FEB

Re: Non-substantive Administratively Required Course Number and Name Changes for

Existing Honors Courses in Accounting, Marketing, and EFLS.

Date: November 16, 2018

The UA Registrar recently made us aware that they no longer permit us to name sections of courses differently from the courses except for special topics courses.

Unfortunately, this is how we had been handling UA Honors courses taught in our college.

The solution, which has been adopted by UA and is being required of our college by the UA Registrar moving forward is as follows:

- 1. Change the number of the course to a unique course number
- 2. Change the title of the class by adding "Honors" to the name

This is a non-substantive change in that the only difference is in how we keep track of the UA Honors courses by offering a unique designated honors course rather than a unique honors designated section.

The courses in question (the non-honors and honors versions) are already being offered and have been approved and offered as UA Honors courses for many years.

The current courses affected and the proposed new UA Honors name and number are as follows:

Accounting:

Current: AC 188 Culverhouse LIFT Class Leader

Honors: AC 189 Honors Culverhouse LIFT Class Leader

Current: AC 210 Introduction to Accounting

Honors: AC 211 Honors Introduction to Accounting

Marketing:

Current: IBA 350 Introduction to World Business

Honors: IBA 352 Honors Introduction to World Business

EFFLS:

Current: EC 110 Principles of Microeconomics

Honors: EC 112 Honors Principles of Microeconomics

Current: EC 111 Principles of Macroeconomics

Honors: EC 113 Honors Principles of Macroeconomics

Current: EC 308 Intermediate Microeconomics

Honors: EC 310 Honors Intermediate Microeconomics

Current: EC 309 Intermediate Macroeconomics

Honors: EC 311 Honors Intermediate Macroeconomics

Current: LGS 200 Legal Environment of Business

Honors: LGS 201 Honors Legal Environment of Business

PROPOSAL: We are asking FEB to approve that we do the UA Registrar required conversion from UA Honors sections to UA Honors unique courses for all of the above listed courses as a non-substantive change. Which means that we will administratively create and submit and gain UA approval for the new unique course number and title for each of the above UA Honors classes. Since nothing else (including course content and requirements) will change, this is being submitted as non-substantive.

NOTE: The administrative component of making these changes will be handled by the departments, our college registrar, and the UA Registrar office.