

DOCUMENT N: COURSE AND PROGRAM DEVELOPMENT COVER SHEET

See Course and Program Development Policy and Procedures for Instructions

SCHOOL: LAW <input type="checkbox"/> MSB <input checked="" type="checkbox"/> YGCLA <input type="checkbox"/>	Contact Name: <i>Jaya Singhal</i>	Phone: 410-837- 5256
DEPARTMENT / DIVISION: MSB Economics, Finance and Management Science Department		
SHORT DESCRIPTION OF PROPOSAL (state action item 1-23 and course name & number or program affected):		
<i>Replace APST 287 with OPRE 201 (new course title, description, prerequisites) affects MSB and CLA</i>		
PROPOSED SEMESTER OF IMPLEMENTATION: Fall <input checked="" type="checkbox"/> Spring <input checked="" type="checkbox"/> Year: 2008 <i>JK</i>		

Box 1: TYPE OF ACTION	ADD(NEW) <input type="checkbox"/>	DEACTIVATE <input type="checkbox"/>	MODIFY <input checked="" type="checkbox"/>	OTHER <input type="checkbox"/>
Box 2: LEVEL OF ACTION	Non-Credit <input type="checkbox"/>	Undergraduate <input checked="" type="checkbox"/>	Graduate <input type="checkbox"/>	OTHER <input type="checkbox"/>

Box 3: ACTION ITEM (check appropriate boxes)	DOCUMENTS REQUIRED (see box 4 below)	IMPACT REVIEWS (see box 5 on back)	APPROVAL SEQUENCE (see box 6 on back)
<input type="checkbox"/> 1. Experimental Course ¹	NOP	a, c, e	AC
<input checked="" type="checkbox"/> 2. Course Title	NO		ABCD
<input type="checkbox"/> 3. Course Credits	NO		ABCD
<input checked="" type="checkbox"/> 4. Course Number	NO		ABCD
<input type="checkbox"/> 5. Course Level	NO		ABCD
<input checked="" type="checkbox"/> 6. Pre & Co-Requisite	NO		ABCD
<input checked="" type="checkbox"/> 7. Course Description	NOP		ABCDEF
<input type="checkbox"/> 8. New Course	NOP		ABCDEF
<input type="checkbox"/> 9. Deactivate a Course	NO		ABCDEF
<input type="checkbox"/> 10. Program Requirements	NO	b, c, d, e	ABCDEF
<input type="checkbox"/> 11a. UG Specialization (24 credits or less)	NO	a, b, c, d, e	ABCDEF
<input type="checkbox"/> 11b. Masters Specialization (12 credits or less)	NO	a, b, c, d, e	ABCDEF
<input type="checkbox"/> 11c. Doctoral Specialization (18 credits or less)	NO	a, b, e	ABCDEF
<input type="checkbox"/> 12. Closed Site Program	NOT	e	ABCDHIK
<input type="checkbox"/> 13. Program Suspension ⁹	NO,5	a, e	ABCDEGIK
<input type="checkbox"/> 14a. Certificate Program (ug/g) exclusively within existing degree program	NO	a, c, e	ABCDEFHIK
<input type="checkbox"/> 14b. Certificate Program (ug/g) where degree programs do not exist or where courses are selected across degree programs (12 or more credits)	NOQR, 6	a, c, e	ABCDEFHJL
<input type="checkbox"/> 15. Off-Campus Delivery of Existing Program	NO, 4	a, b, c, e	ABCDHIL
<input type="checkbox"/> 16a. UG Concentration (exceeds 24 credit hours)	NO, 5	a, c, d, e	ABCDEFHJL
<input type="checkbox"/> 16b. Masters Concentration (exceeds 12 credit hours)	NO, 5	a, c, d, e	ABCDEFHJL
<input type="checkbox"/> 16c. Doctoral Concentration (exceeds 18 credit hours)	NO, 5	a, c, d, e	ABCDEFHJL
<input type="checkbox"/> 17. Program Title Change	NO, 5	a, c, d, e	ABCDEFHJL
<input type="checkbox"/> 18. Program Termination	NO, 10	d, e	ABCDEFHIK
<input type="checkbox"/> 19. New Degree Program	NOQR, 3,8	a, c, d, e	ABCDEFHJL
<input type="checkbox"/> 20. Other	Varies	Varies	Varies

Box 4: DOCUMENTATION (check boxes of documents included)			
<input checked="" type="checkbox"/> N. This Cover Sheet	<input type="checkbox"/>	<input type="checkbox"/> Q. Full 5-page MHEC Proposal	<input type="checkbox"/> T. Other
<input checked="" type="checkbox"/> O. Summary Proposal	<input type="checkbox"/>	<input type="checkbox"/> R. Financial Tables (MHEC)	<input type="checkbox"/>
<input checked="" type="checkbox"/> P. Course Definition Document	<input type="checkbox"/>	<input type="checkbox"/> S. Contract	<input type="checkbox"/>

- Approval of experimental course automatically lapses after two offerings unless permanently approved as a new course.
- Codes: a) Library Services (Langsdale or Law) b) Office of Technology Services c) University Relations d) Admissions
- Letter of Intent is required by USM at least 30 days before a full proposal can be submitted. Letter of Intent requires only the approval of the dean and the provost and is forwarded to USM by the Office of the Provost.
- One-page letter to include: Program title & degree/certificate to be awarded; resources requirements; need and demand; similar programs; method of instruction; and oversight and student services (MHEC requirement)
- One-page letter with description and rationale (MHEC requirement)
- One or two-page document that describes: centrality to mission; market demand; curriculum design; adequacy of faculty resources; and assurance program will be supported with existing resources. (MHEC requirement)
- Learning objectives, assessment strategies; fit with UB strategic plan
- Joint Degree Program or Primary Degree Programs require submission of MOU w/ program proposal. (MHEC requirement)
- Temporary suspension of program to examine future direction; time not to exceed two years. No new students admitted during suspension, but currently enrolled students must be given opportunity to satisfy degree requirements.

DOCUMENT N: COURSE AND PROGRAM DEVELOPMENT COVER SHEET (Page 2 of 2)

SCHOOL: LAW <input type="checkbox"/> MSB <input checked="" type="checkbox"/> YGCLA <input type="checkbox"/>
SHORT DESCRIPTION OF PROPOSAL (state name of action item 1-20 and course name, code & number / program affected):
Replace APST 287 with OPRE 201 (new course title, description, prerequisites) affects MSB and CLA

10. Provide:
- evidence that the action is consistent with UB mission and can be implemented within the existing program resources of the institution.
 - proposed date after which no new students will be admitted into the program;
 - accommodation of currently enrolled students in the realization of their degree objectives;
 - treatment of all tenured and non-tenured faculty and other staff in the affected program;
 - reallocation of funds from the budget of the affected program; and
 - existence at other state public institutions of programs to which to redirect students who might have enrolled in the program proposed for abolition.
11. University Council *review* (for a recommendation to the President or back to the Provost) shall be limited to curricular or academic policy issues that may potentially affect the University's mission and strategic planning, or have a significant impact on the generation or allocation of its financial resources.

Box 5: IMPACT REVIEW	SIGNATURES (see procedures for authorized signers)	DATE
a. Library <input type="checkbox"/> No impact <input type="checkbox"/> Impact statement attached	Director or designee:	
b. OTS <input type="checkbox"/> No impact <input type="checkbox"/> Impact statement attached	CIO or designee:	
c. University Relations <input type="checkbox"/> No impact <input type="checkbox"/> Impact statement attached	Director or designee:	
d. Admissions <input type="checkbox"/> No impact <input type="checkbox"/> Impact statement attached	Director or designee:	
e. Records <input type="checkbox"/> No impact <input type="checkbox"/> Impact statement attached	Registrar or designee:	

Box 6: APPROVAL SEQUENCE	APPROVAL SIGNATURES	DATE
A. Department / Division	Chair: <i>Deborah Ford</i>	4/2/07
B. Final faculty review body within each School	Chair: <i>Don E. Thom</i>	3/25/07
C. College Dean	Dean: <i>Susan Zaccu</i>	3/29/07
D. Provost and Senior Vice President for Academic Affairs	Provost: <i>Judith M. Ardull</i>	4/3/07
E. Curriculum Review Committee (UFS subcommittee)	Chair: <i>Angela Galligan</i>	4/3/07
F. University Faculty Senate (UFS option)	Chair:	
G. University Council (see # 11 above)	Chair:	
H. President	President:	
I. Board of Regents – notification only		
J. Board of Regents – approval		
K. MHEC – notification only		
L. MHEC – approval		
M. Middle States Association notification	Required only if the mission of the University is changed by the action	

DOCUMENT O: SUMMARY PROPOSAL

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SCHOOL: LAW <input type="checkbox"/> MSB <input checked="" type="checkbox"/> YGCLA <input type="checkbox"/>	Contact Name: <i>Jaya Singhal</i>	Phone: 410-837- 5256
DEPARTMENT / DIVISION: <i>MSB: Economics, Finance and Management Science Department</i>		
SHORT DESCRIPTION OF PROPOSAL (state action item 1-23 and course name & number or program affected):		
<i>Change existing course APST 287 to OPRE 201 with a new title and a new syllabus affects MSB and CLA</i>		
PROPOSED SEMESTER OF IMPLEMENTATION: Fall <input checked="" type="checkbox"/> Spring <input type="checkbox"/> Year: 2007		

O-1: Briefly describe what is being requested:

1. *Change the introductory course in business statistics from an YGCLA offering to an MSB offering.*
 - *Change HEGIS Code and course number from APST 287 to OPRE 201.*
 - *Change course title and revise and update syllabus.*
 - *Change pre-requisite based on new placement testing/developmental math offerings.* A level of intermediate algebra is required (satisfactory score on placement test or successful completion of MATH 095, Intermediate Algebra developmental course).
2. *Use the revised course OPRE 201 to satisfy the general education mathematics requirement.*

For new courses or changes in existing courses (needed by Registrar)		
OLD Title: <i>Statistics for Business</i>	Course # / HEGIS Code: <i>APST 287</i>	Credits: <i>3</i>
NEW Title: <i>Introduction to Business Statistics</i>	Course # / HEGIS Code: <i>OPRE 201</i>	Credits: <i>3</i>

O-2: Set forth the rationale for the proposal:

1. *The Merrick School of Business has been staffing and offering the course for the past few semesters. Changing the HEGIS Code will be of benefit to MSB students, faculty, and staff in scheduling and administering the course.*
2. *We want to bring this course in line with general education math requirements by MHEC and the State of Maryland. We also want to update the course syllabus to reflect changes in the field.*

Document P: Required Format for Course Definition Document

1. Date Prepared: February 25, 2007
2. Prepared by: Jaya Singhal
3. Department: Economics, Finance, and Management Science
4. Course Number(s), including HEGIS code(s): **OPRE 201**
5. Course Title: ***Introduction to Business Statistics***
6. Credit Hours: 3
7. Catalog Description (Paragraph should reflect general aims and nature of the course):

An introductory course in descriptive and inferential statistical concepts and techniques used in business. The study of probability concepts includes discrete and continuous probability distributions. Topics in descriptive statistics explore measures of location and dispersion and the correlation coefficient. The study of inferential statistics includes sampling distributions of statistics, confidence interval estimation, and an introduction to hypothesis testing.
8. Prerequisites: ***Adequate placement test scores or successful completion of DVMA 095 Intermediate algebra.***
9. Faculty qualified to teach course: ***Hossein Arsham, Marilyn Oblak, Jaya Singhal.*** Some other faculty members in MSB also qualify to teach this course.
10. Course Type / Component (clinical, continuance, discussion, field studies, independent study, laboratory, lecture, seminar, supervision, thesis research, workshop): ***Lecture***
11. Suggested approximate class size: ***30 - 40***
12. Content Outline:
 - a. Introduction and data collection
 - b. Presenting data in tables and charts
 - c. Numerical descriptive measures of central tendency (mean, median, mode, and quartiles)
 - d. Numerical descriptive measures of variation (range, variance, standard deviation)
 - e. Basic probability concepts
 - f. Probability distributions, expected value, and variance
 - g. Discrete probability distributions including Binomial distribution
 - i. Continuous probability distributions including Normal distribution
 - j. Samples and populations

- k. Sampling distribution of the mean and proportion
 - l. Introduction to confidence interval estimation
 - m. Confidence interval of the mean
 - n. Confidence interval of the proportion
 - o. Fundamentals of Hypothesis Testing: forming a hypothesis, testing a hypothesis, Type I and Type II errors.
13. Learning Goals:
At the conclusion of the course students should be able to:
- a. Identify sources and types of data needed to perform appropriate statistical analysis.
 - b. Present data in tables and charts.
 - c. Calculate and interpret measures of central tendency to summarize data.
 - d. Calculate and interpret measures of variation.
 - e. Recognize and apply basic probability concepts.
 - f. Calculate probabilities from the binomial distribution and understand its application to solve business problems.
 - g. Calculate the expected value and variance of a discrete probability distribution and understand its application to solve business problems.
 - h. Calculate probabilities from the normal distributions and understand its application to solve business problems.
 - i. Understand the concept of sampling distribution and Central Limit Theorem.
 - j. Create a confidence interval estimate of the population mean and explain its meaning.
 - k. Create a confidence interval estimate of the population proportion and explain its meaning.
 - l. Establish and test a hypothesis for the mean.
 - m. Recognize and analyze ethical issues in statistical analysis.
14. Assessment Strategies:
- Frequent graded assessment and feedback is an integral requirement for student success in mastering the content and applications of the course.
 - Class assignments are given to enhance learning and practice. Some of these may be graded.
 - Homework assignments are encouraged for additional practice. Some of these may be graded.
 - Quizzes may be given to measure progress when a topic is completed.
 - Midterm Exam(s) are given to assess learning at different intervals.
 - A final exam is required.
15. Suggested Text(s) and Materials (example: textbooks, equipment, software, etc.):
- a. *Basis Business Statistics*, 10th edition, Berenson, Levine, and Krehbiel, Prentice Hall, 2006.
 - b. *First Course in Statistics*, 9th edition, McClave and Sincich, 2006.
 - c. *Statistics for Business and Economics*, 9th edition, Anderson, Sweeney, and Williams, South Western, 2005.

**General Education Approval Record
Business**

Merrick School of

(to be used for "certifying" new and existing courses; use information about proposed course)

Course: Subject and Number OPRE 201

Course Name: ***Introduction to Business Statistics***

Department: Economics, Finance and Management Science (Entrepreneurship)

THIS COURSE SATISFIES 3 CREDITS OF THE **MATHEMATICS** GENERAL EDUCATION REQUIREMENT.

1. Interpret mathematical models given verbally, or by formulas, graphs, tables, or schematics, and draw inferences from them,
2. Represent mathematical concepts verbally, and where appropriate, symbolically, visually, and numerically,
3. Use arithmetic, algebraic, geometric, technological, or statistical methods to solve problems,
4. Use mathematical reasoning, e.g. to solve problems, to formulate and test conjectures, to judge the validity of arguments, to formulate valid arguments, and to communicate the reasoning and the results,
5. Estimate and check answers to mathematical problems in order to determine reasonableness,
6. Recognize and use connections within mathematics and between mathematics and other disciplines.

Signature (Marguerite Weber)

date