Business Analytics - M.S.

College College of Business Administration

Department Department of Management and Information Systems
Room A432, Business Administration Building
E-mail: mis@kent.edu
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Web: http://business.kent.edu/departments/management-and-information-systems

Description The Master of Science degree in Business Analytics is for those interested in turning data into meaningful information that a business can use to improve its competitive advantage. The Business Analytics program is an amalgamation of curricula in business analysis and other disciplines, and provides excellent preparation for analytics careers in banking, healthcare, retail markets, manufacturing, finance and the public sector, among others. The program also incorporates communications, decision-making and leadership through case analysis projects and internship opportunities.

Courses in the program are designed to achieve a balance between the technologies, analytical methods, and the business and personal acumen needed in order to effectively implement analytical methods and interpret, communicate, and act on the results. This “Three-Foci Model” of the program—information and data management, data analysis, and decision-making and leadership—strives to strike a balance between providing students with a firm grasp of the most important analytical techniques along with the general business knowledge to lead teams and make decisions. Graduates of the program understand and are ready to implement, interpret and communicate business analytical methods in a variety of realistic business contexts.

Admission Requirements Students entering the program will be expected to have completed a bachelor’s degree in science, technology, engineering, mathematics or business where they would have gained the requisite backgrounds in statistics, mathematics, information systems and business required for the program. At a minimum, students should have general knowledge of inferential statistics, adequate general business knowledge, basic knowledge of business information systems and technologies, and a solid understanding of algebra and general mathematics with some exposure to calculus.

- Students who have not passed at least an undergraduate course (B minimum grade) that has substantial coverage of inferential statistics cannot be admitted into the program. Such students may fulfill that requirement by taking the graduate course MIS 64005 Statistics for Management before they may be considered for admission.
- Students must have completed at least 3 credit hours of mathematics that includes linear algebra (B minimum grade) before they can be admitted into the program. Deficiencies in mathematics must be met with appropriate undergraduate course(s) (such as MATH 21001 Linear Algebra with Applications).
- Deficiencies in business information systems and technologies, as well as partial fulfillment of the business knowledge requirement, can be obtained by taking the graduate course MIS 64042 Globalization and Technology Strategy.
- Students who have at least three years of experience working in industry may have the academic business requirement waved.
- Students entering without any business coursework or experience can fulfill that requirement by taking the undergraduate course MIS 24163 Principles of Management and/or the graduate course MIS 64158 Leadership and Managerial Assessment.
- Students must complete these requirements before they start on the related program curriculum. The Business Analytics program director may consider concurrent enrollment according to the strength of the student’s baccalaureate curriculum and preparedness, and the courses proposed to take concurrently with the prerequisite courses.

Students who have met these requirements may apply for admission into the program by submitting the following:

- A current résumé and three letters of recommendation.
- An official transcript(s) of all undergraduate coursework with proof of bachelor’s degree from the graduating institution and a minimum 3.000 overall GPA.
- An official GMAT report with minimum 500 overall (40th percentile in verbal and 60th percentile in quantitative sections minimum) or the GRE; and.
- A goal statement explaining why the student is pursuing this degree and her/his plans for it.
- Results from a TOEFL, if applicable. TOEFL may be waived for applicants who completed their bachelor’s degree in the United States or an English-speaking country.

Please refer to the university policy for graduate admission.

Graduation Requirements The Business Analytics program requires the successful completion of a minimum of 30 semester hours of coursework that includes a capstone project. The 30 credits are comprised of 24 hours of required courses and 6 hours of elective courses that give students the flexibility to explore their special interests in analytics.

Program Learning Outcomes Graduates of the program will be able to:

1. Develop proficiencies in the framing of both the business problem and the analytics problem.
2. Provide leadership and decision-making abilities using analytics tools in different business contexts throughout the model lifecycle.
3. Develop competencies in identifying data needs and sources, data acquisition and the cleaning and refining of data for analytical processing.
4. Develop competencies in analytical model selection, software selection and model building.
5. Develop competencies in deploying, validating and interpreting analytical solutions.
6. Develop competencies in problem-solving skills and effective verbal and written communications of results to diverse audiences.

Accreditation The Association to Advance Collegiate Schools of Business (AACSB), International

Business Analytics - M.S. Program Requirements

	PROGRAM REQUIREMENTS (30 credits)			
	Course		**Title**	**Credits**
	CS	63015	Data Mining Techniques	3
new	CS	63016	Big Data Analytics	3
revised	MIS	64018	Quantitative Management Modeling	3
new	MIS	64036	Business Analytics	3
new	MIS	64037	Advanced Data Mining and Predictive Analytics	3
new	MIS	64038	Analytics in Practice	3
revised	MIS	64082	Database Management and Database Analytics	3
new	MIS	64098	Capstone Project in Business Analytics	3
	Major Electives, choose from the following:			6
	DSCI	61010	Enterprise Architecture (3)	
	DSCI	64210	Data Science (3)	
	ECON	62054	Econometrics I (3)	
revised	IAKM	60370	Semantic Analysis Methods and Technologies (3)	
revised	IAKM	60411	Clinical Analytics (3)	
revised	MIS	64011	Systems Simulation (3)	
revised	MIS	64028	Global Supply Chain Business Models (3)	
revised	MIS	64160	Leadership and Organizational Change (3)	
new	MIS	64092	Internship in Business Analytics (3)	
	MKTG	65057	Marketing Research (3)	
			MINIMUM TOTAL	**30**

NOTE: The 30 credit hours assume that a student does not have any unmet requirements she/he needs to be successful in the program. The Business Analytics program coordinator may make further determination of a student's preparedness for the program and what prerequisite courses, if any, may be required.

Name:	Onyebuchi Felix Offodile	Submission Date:	3/23/2015
Organization:	Management & Information Systems		

Course Catalog Update

<< Go back to Course Catalog Update form **Print**

Course Catalog Update Information: **STU0004**

Reference Number: CCU008470 **Date:** 19-FEB-15

Level: 1.00 of 2.00 **Currently On The Worklist Of:** Onyebuchi Offodile, foffodil

Owner: Office of Curriculum Services, 330-672-8558 or 330-672-8559, curriculum@kent.edu

Basic Course Data		
Change type: Revise		
Faculty member submitting this proposal: Alan Brandyberry		
Requested Effective Term: 201580		
Campus: Kent		
College: BU-Business Administration and Graduate School of Management		
Department: MIS-Management and Information Systems		
Course Subject: MIS-Management and Information Systems		
New Course Subject: MIS-Management and Information Systems		
Course Number: 64018		
New Course Number:		
Course Title: QUANTITATIVE MANAGEMENT MODELING		
Title Abbreviation: QUANT MANAGEMENT MODELING		
Slash Course and Cross-list Information: MIS 64018 + MIS 74018		
Credit Hours		
Minimum Credit/Maximum Credit: 3 to 3		
Contact Hours: Lecture - Minimum Hours/Maximum Hours: 3 to 3		
Contact Hours: Lab - Minimum Hours/Maximum Hours:		
Contact Hours: Other - Minimum Hours/Maximum Hours:		
Attributes		
Is this course part of the LER, WIC or Diversity requirements: No		
If yes, course attributes: 1. 2. 3.		
Can this course be repeated for credit: No Repeat	**Course Limit:**	**OR Maximum Hours:**
Course Level: Graduate	**Grade Rule:** B-Standard letter	
Rationale for an IP grade request for this course (if applicable):		
Schedule Type(s): 1. LEC-Lecture 2. 3.		
Credit by Exam: N-Credit by exam-not approved		
Prerequisites & Descriptions		
Current Prerequisite/Corequisite/Catalog Description: Advanced techniques including interior-point methods in linear programming; branch-and-bound and cutting-plane methods; traveling salesman and knapsack models in integer programming. Prerequisite: graduate standing.		
Catalog Description (edited): A variety of optimization and heuristic modeling techniques are explored. Decision-making environments, model selection, and interpretation are emphasized. Various linear and nonlinear mathematical programming techniques are the primary topic but are supplemented with other optimization and heuristic techniques.		
Prerequisites (edited): Graduate Standing		
Corequisites (edited):		

Registration is by special approval only: No

Content Information

Content Outline:

Content Hours per Course Topic	Topic Description
3	Decision Analysis
2	Model Selection
6	Linear Programming
5	Dual Simplex Method, Parametric LP, Interior Point Methods
4	Transportation and Assignment
4	Integer and Goal Programming
5	Network Optimization
4	Dynamic Programming
6	Nonlinear Programming
6	Metaheuristics: Simulated Annealing, Tabu Search, Genetic Algorithms

Display/Hide Delimited Course Outline

Total Contact Hours: 45

Textbook(s) used in this course: Example: Introduction to Operations Research, 10th Edition ISBN-13: 9780073523453 Author(s): Hillier, Frederick

Writing Expectations: Students will write analysis reports.

Instructor(s) expected to teach: Brandyberry, Shanker, Guiffrida, others

Instructor(s) contributing to content: Alan Brandyberry

Proposal Summary

Explain the purpose for this proposal:

Part of a new proposed MS in Business Analytics

Explain how this proposal affects program requirements and students in your unit:

No effect is anticipated.

Explain how this proposal affects courses, program requirements and student in other units:

None.

Explain how this proposal affects enrollment and staffing:

Current staff have the expertise to teach this course.

Units consulted (other departments, programs or campuses affected by the proposal):

In the context of a current MS proposal, this has been discussed with representatives of the college's departments, DSCI, SLIS, IAKM, CS.

Revisions made to form (if applicable):

- [x] Course Content
- [ ] Credit by Exam
- [ ] Credit Hours
- [ ] Cross-Listed / Slash
- [x] Description
- [ ] Diversity
- [ ] Grade Rule
- [ ] Liberal Education Requirement (LER)
- [ ] Number
- [x] Prerequisites
- [ ] Schedule Type
- [ ] Subject
- [x] Title
- [x] Title Abbreviation
- [ ] Writing-Intensive (WIC)
- [ ] Other

Comments (500 Character Maximum):

NOTE: Please do not use the following restricted characters: (~ * / \ --)

KENT STATE UNIVERSITY

Name: Onyebuchi Felix Offodile
Submission Date: 3/23/2015
Organization: Management & Information Systems

Course Catalog Update

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Course Catalog Update Information:

STU0004

Reference Number: CCU008563

Date: 18-MAR-15

Level: 1.00 of 2.00

Currently On The Worklist Of: Onyebuchi Offodile, foffodil

Owner: Office of Curriculum Services, 330-672-8558 or 330-672-8559, curriculum@kent.edu

Basic Course Data		
Change type: Revise		
Faculty member submitting this proposal: Alan Brandyberry		
Requested Effective Term: 201580		
Campus: Kent		
College: BU-Business Administration and Graduate School of Management		
Department: MIS-Management and Information Systems		
Course Subject: MIS-Management and Information Systems		
New Course Subject:		
Course Number: 74018		
New Course Number:		
Course Title: QUANTITATIVE MANAGEMENT MODELING		
Title Abbreviation: QUANT MANAGEMENT MODELING		
Slash Course and Cross-list Information: MIS 64018 + MIS 74018		
Credit Hours		
Minimum Credit/Maximum Credit: 3 to 3		
Contact Hours: Lecture - Minimum Hours/Maximum Hours: 3 to 3		
Contact Hours: Lab - Minimum Hours/Maximum Hours:		
Contact Hours: Other - Minimum Hours/Maximum Hours:		
Attributes		
Is this course part of the LER, WIC or Diversity requirements: No		
If yes, course attributes: 1. 2. 3.		
Can this course be repeated for credit: No Repeat	**Course Limit:**	**OR Maximum Hours:**
Course Level: Graduate	**Grade Rule:** B-Standard letter	
Rationale for an IP grade request for this course (if applicable):		
Schedule Type(s): 1. LEC-Lecture 2. 3.		
Credit by Exam: N-Credit by exam-not approved		
Prerequisites & Descriptions		
Current Prerequisite/Corequisite/Catalog Description: Advanced techniques including interior-point methods in linear programming;branch-and-bound and cutting-plane methods; traveling salesman and knapsack models in integer programming. Prerequisite: doctoral standing.		
Catalog Description (edited): A variety of optimization and heuristic modeling techniques are explored. Decision-making environments, model selection, and interpretation are emphasized. Various linear and nonlinear mathematical programming techniques are the primary topic but are supplemented with other optimization and heuristic techniques.		
Prerequisites (edited): Graduate Standing.		
Corequisites (edited):		

Registration is by special approval only: No

Content Information

Content Outline:

Content Hours per Course Topic	Topic Description
3	Decision Analysis
2	Model Selection
6	Linear Programming
5	Dual Simplex Method, Parametric LP, Interior Point Methods
4	Transportation and Assignment
4	Integer and Goal Programming
5	Network Optimization
4	Dynamic Programming
6	Nonlinear Programming
6	Metaheuristics: Simulated Annealing, Tabu Search, Genetic Algorithms

Display/Hide Delimited Course Outline

Total Contact Hours: 45

Textbook(s) used in this course: Example: Introduction to Operations Research, 10th Edition ISBN-13: 9780073523453 Author(s): Hillier, Frederick

Writing Expectations: Students will write analysis reports.

Instructor(s) expected to teach: Brandyberry, Shanker, Guiffrida, others

Instructor(s) contributing to content: Alan Brandyberry

Proposal Summary

Explain the purpose for this proposal:

Part of a new proposed MS in Business Analytics

Explain how this proposal affects program requirements and students in your unit:

No effect is anticipated.

Explain how this proposal affects courses, program requirements and student in other units:

None.

Explain how this proposal affects enrollment and staffing:

Current staff have the expertise to teach this course.

Units consulted (other departments, programs or campuses affected by the proposal):

In the context of a current MS proposal, this has been discussed with representatives of the college's departments, DSCI, SLIS, IAKM, CS.

Revisions made to form (if applicable):

- [x] Course Content
- [ ] Credit by Exam
- [ ] Credit Hours
- [ ] Cross-Listed / Slash
- [x] Description
- [ ] Diversity
- [ ] Grade Rule
- [ ] Liberal Education Requirement (LER)
- [ ] Number
- [x] Prerequisites
- [ ] Schedule Type
- [ ] Subject
- [x] Title
- [x] Title Abbreviation
- [ ] Writing-Intensive (WIC)
- [ ] Other

Comments (500 Character Maximum):

NOTE: Please do not use the following restricted characters: (~ * / \ --)

KENT STATE UNIVERSITY

Name: Onyebuchi Felix Offodile
Submission Date: 3/23/2015
Organization: Management & Information Systems

Course Catalog Update

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Course Catalog Update Information:

STU0004

Reference Number: CCU008466

Date: 19-FEB-15

Level: 1.00 of 2.00

Currently On The Worklist Of: Onyebuchi Offodile, foffodil

Owner: Office of Curriculum Services, 330-672-8558 or 330-672-8559, curriculum@kent.edu

Basic Course Data		
Change type: Establish		
Faculty member submitting this proposal: Alan Brandyberry		
Requested Effective Term: 201580		
Campus: Kent		
College: BU-Business Administration and Graduate School of Management		
Department: MIS-Management and Information Systems		
Course Subject: MIS-Management and Information Systems		
Course Number: 64036		
Course Title: BUSINESS ANALYTICS		
Title Abbreviation: BUSINESS ANALYTICS		
Slash Course and Cross-list Information:		
Credit Hours		
Minimum Credit/Maximum Credit: 3 to 3		
Contact Hours: Lecture - Minimum Hours/Maximum Hours: 3 to 3		
Contact Hours: Lab - Minimum Hours/Maximum Hours:		
Contact Hours: Other - Minimum Hours/Maximum Hours:		
Attributes		
Is this course part of the LER, WIC or Diversity requirements: No		
If yes, course attributes: 1. 2. 3.		
Can this course be repeated for credit: No Repeat	**Course Limit:**	**OR Maximum Hours:**
Course Level: Graduate	**Grade Rule:** B-Standard letter	
Rationale for an IP grade request for this course (if applicable):		
Schedule Type(s): 1. LEC-Lecture 2. 3.		
Credit by Exam: N-Credit by exam-not approved		
Prerequisites & Descriptions		
Current Prerequisite/Corequisite/Catalog Description:		
Catalog Description (edited): This course provides an overview of business analytics and its appropriate applications in various industries and functional areas. Critical thinking, problem definition, problem solving, effective communication, and leadership are emphasized. Methods such as data visualization and descriptive, predictive, and prescriptive analytics are covered from a broad perspective. This course is applied, hands-on, and case-based. Cases emphasize the communication of quantitative solutions to laypeople and required leadership during decision-making and implementation stages.		
Prerequisites (edited): Graduate Standing.		
Corequisites (edited):		
Registration is by special approval only: No		
Content Information		

Content Outline:

Content Hours per Course Topic	Topic Description
1	Introduction
6	Analytics: Strategic and Managerial Perspectives
2	History and Scope of Analytics
4	Problem Solving and Decision Making
2	Leadership and Communication
3	Data and Business Decisions
3	Intro to Data Visualization
6	Intro to Descriptive Analytics
6	Intro to Predictive Analytics
6	Intro to Prescriptive Analytics
6	Integrative Case

Display/Hide Delimited Course Outline

Total Contact Hours: 45

Textbook(s) used in this course: examples: (1) Laursen. Business Analytics for Managers. Wiley (2010); (2) Evans. Business Analytics: Methods, Models, Decisions. Pearson (2012).

Writing Expectations: Students will write analysis reports.

Instructor(s) expected to teach: Brandyberry and Others

Instructor(s) contributing to content: Alan Brandyberry

Proposal Summary

Explain the purpose for this proposal:

Part of a new proposed MS in Business Analytics

Explain how this proposal affects program requirements and students in your unit:

No effects except the addition of a new course

Explain how this proposal affects courses, program requirements and student in other units:

None.

Explain how this proposal affects enrollment and staffing:

Current staff have the expertise to teach this course.

Units consulted (other departments, programs or campuses affected by the proposal):

In the context of a current MS proposal, this has been discussed with representatives of the college's departments, DSCI, SLIS, IAKM, CS.

Comments (500 Character Maximum):

NOTE: Please do not use the following restricted characters: (~ * / \ --)

Approve | Return To Initiator | Deny

Comments:

Date	User	Comment

KENT STATE UNIVERSITY

Name: Onyebuchi Felix Offodile
Submission Date: 3/23/2015
Organization: Management & Information Systems

Course Catalog Update

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Course Catalog Update Information:

STU0004

Reference Number: CCU008468

Date: 19-FEB-15

Level: 1.00 of 2.00

Currently On The Worklist Of: Onyebuchi Offodile, foffodil

Owner: Office of Curriculum Services, 330-672-8558 or 330-672-8559, curriculum@kent.edu

Basic Course Data		
Change type: Establish		
Faculty member submitting this proposal: Alan Brandyberry		
Requested Effective Term: 201580		
Campus: Kent		
College: BU-Business Administration and Graduate School of Management		
Department: MIS-Management and Information Systems		
Course Subject: MIS-Management and Information Systems		
Course Number: 64037		
Course Title: ADVANCED DATA MINING AND PREDICTIVE ANALYTICS		
Title Abbreviation: ADV DATA MINING AND ANALYTICS		
Slash Course and Cross-list Information:		
Credit Hours		
Minimum Credit/Maximum Credit: 3 to 3		
Contact Hours: Lecture - Minimum Hours/Maximum Hours: 3 to 3		
Contact Hours: Lab - Minimum Hours/Maximum Hours:		
Contact Hours: Other - Minimum Hours/Maximum Hours:		
Attributes		
Is this course part of the LER, WIC or Diversity requirements: No		
If yes, course attributes: 1. 2. 3.		
Can this course be repeated for credit: No Repeat	**Course Limit:**	**OR Maximum Hours:**
Course Level: Graduate	**Grade Rule:** B-Standard letter	
Rationale for an IP grade request for this course (if applicable):		
Schedule Type(s): 1. LEC-Lecture 2. 3.		
Credit by Exam: N-Credit by exam-not approved		
Prerequisites & Descriptions		
Current Prerequisite/Corequisite/Catalog Description:		
Catalog Description (edited): This course extends the coverage of data mining and predictive analytics. Topics will focus on the applied use of these techniques in realistic settings. Statistical and machine learning techniques will be covered.		
Prerequisites (edited): MIS 64036, MIS 64082, CS 63015, and Graduate Standing		
Corequisites (edited):		
Registration is by special approval only: No		
Content Information		
Content Outline:		

Content Hours	

per Course Topic	Topic Description
3	Getting to know your data, advanced data preprocessing
3	Problem selection and specification
3	Advanced data visualization
6	Neural Networks, Multilayer Perceptron (MLP), Radial basis functions
3	k-nearest neighbors
3	Support vector machines
4	Geospatial predictive modeling
3	Local polynomial regression
4	Multinominal logistic regression
4	Dimension reduction: factor analysis
5	Survival analysis
4	Other selected techniques. New or emerging techniques.

Display/Hide Delimited Course Outline

Total Contact Hours: 45

Textbook(s) used in this course: Textbook examples: (1) Ledolter, Data Mining and Business Analytics with R, Wiley, (2013) ISBN:9781118447147 (2) Han, Kamber, Pei, Data Mining: Concepts and Techniques, 3rd Edition, Elsevier, (2012), ISBN:978-0-12-381479-1

Writing Expectations: Students will write analysis reports.

Instructor(s) expected to teach: Shanker, Guiffrida, Brandyberry, others

Instructor(s) contributing to content: Alan Brandyberry

Proposal Summary

Explain the purpose for this proposal:

Part of a new proposed MS in Business Analytics

Explain how this proposal affects program requirements and students in your unit:

No effects except the addition of a new course and concentration option.

Explain how this proposal affects courses, program requirements and student in other units:

None.

Explain how this proposal affects enrollment and staffing:

Current staff have the expertise to teach this course.

Units consulted (other departments, programs or campuses affected by the proposal):

In the context of a current MS proposal, this has been discussed with representatives of the college's departments, DSCI, SLIS, IAKM, CS.

Comments (500 Character Maximum):

NOTE: Please do not use the following restricted characters: (~ * / \ --)

Approve | Return To Initiator | Deny

Name: Onyebuchi Felix Offodile
Submission Date: 3/23/2015
Organization: Management & Information Systems

Course Catalog Update

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Course Catalog Update Information:

STU0004

Reference Number: CCU008467

Date: 19-FEB-15

Level: 1.00 of 2.00

Currently On The Worklist Of: Onyebuchi Offodile, foffodil

Owner: Office of Curriculum Services, 330-672-8558 or 330-672-8559, curriculum@kent.edu

Basic Course Data		
Change type: Establish		
Faculty member submitting this proposal: Alan Brandyberry		
Requested Effective Term: 201580		
Campus: Kent		
College: BU-Business Administration and Graduate School of Management		
Department: MIS-Management and Information Systems		
Course Subject: MIS-Management and Information Systems		
Course Number: 64038		
Course Title: ANALYTICS IN PRACTICE		
Title Abbreviation: ANALYTICS IN PRACTICE		
Slash Course and Cross-list Information:		
Credit Hours		
Minimum Credit/Maximum Credit: 3 to 3		
Contact Hours: Lecture - Minimum Hours/Maximum Hours: 3 to 3		
Contact Hours: Lab - Minimum Hours/Maximum Hours:		
Contact Hours: Other - Minimum Hours/Maximum Hours:		
Attributes		
Is this course part of the LER, WIC or Diversity requirements: No		
If yes, course attributes: 1. 2. 3.		
Can this course be repeated for credit: No Repeat	**Course Limit:**	**OR Maximum Hours:**
Course Level: Graduate	**Grade Rule:** B-Standard letter	
Rationale for an IP grade request for this course (if applicable):		
Schedule Type(s): 1. LEC-Lecture 2. 3.		
Credit by Exam: N-Credit by exam-not approved		
Prerequisites & Descriptions		
Current Prerequisite/Corequisite/Catalog Description:		
Catalog Description (edited): This course focuses on supporting techniques and managerial and professional skills necessary to being an effective business analyst. Other topics include project management, requirements analysis, change management, team dynamics, leadership, ethics, and effective communication between all stakeholders.		
Prerequisites (edited): MIS 64036, MIS 64082, CS 63015, and Graduate Standing.		
Corequisites (edited):		
Registration is by special approval only: No		
Content Information		
Content Outline:		

Content Hours per Course Topic	Topic Description
4	Ethics and Social Responsibility
6	Project Management
9	Analytic Problem Life Cycle (Problem Identification, Requirements Analysis, Problem Design, Implementation, Deployment, Review)
5	Decision-Making and Problem Solving
3	Pareto Analysis
3	Negotiation and Persuasion Skills
6	Leadership and Team Dynamics
4	Communicating to Stakeholders
5	Change Management

Display/Hide Delimited Course Outline

Total Contact Hours: 45

Textbook(s) used in this course: Delivering Business Analytics: Practical Guidelines for Best Practice. February 26, 2013 by Evan Stubbs (Author). Publisher: Wiley; 1 edition (February 26, 2013) ISBN-10: 1118370562 ISBN-13: 978-1118370568

Writing Expectations: Students will write essays on exams and will write analysis reports

Instructor(s) expected to teach: Arikan, Brandyberry, Others

Instructor(s) contributing to content: Alan Brandyberry

Proposal Summary

Explain the purpose for this proposal:

Part of a new proposed MS in Business Analytics

Explain how this proposal affects program requirements and students in your unit:

No effects except the addition of a new course.

Explain how this proposal affects courses, program requirements and student in other units:

None.

Explain how this proposal affects enrollment and staffing:

Current staff have the expertise to teach this course.

Units consulted (other departments, programs or campuses affected by the proposal):

In the context of a current MS proposal, this has been discussed with representatives of the college's departments, DSCI, SLIS, IAKM, CS.

Comments (500 Character Maximum):

NOTE: Please do not use the following restricted characters: (~ * / \ --)

Approve | Return To Initiator | Deny

Comments:

Date	User	Comment
		No comments available.

KENT STATE UNIVERSITY

Name: Onyebuchi Felix Offodile

Submission Date: 3/23/2015

Organization: Management & Information Systems

Course Catalog Update

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Course Catalog Update Information:

STU0004

Reference Number: CCU008465

Date: 19-FEB-15

Level: 1.00 of 2.00

Currently On The Worklist Of: Onyebuchi Offodile, foffodil

Owner: Office of Curriculum Services, 330-672-8558 or 330-672-8559, curriculum@kent.edu

Basic Course Data		
Change type: Revise		
Faculty member submitting this proposal: Alan Brandyberry		
Requested Effective Term: 201580		
Campus: Kent		
College: BU-Business Administration and Graduate School of Management		
Department: MIS-Management and Information Systems		
Course Subject: MIS-Management and Information Systems		
New Course Subject:		
Course Number: 64082		
New Course Number:		
Course Title: DATABASE MANAGEMENT AND DATABASE ANALYTICS		
Title Abbreviation: DATABASE MANAGEMENT/ANALYTICS		
Slash Course and Cross-list Information: MIS 64082 + MIS 74082		
Credit Hours		
Minimum Credit/Maximum Credit: 3 to 3		
Contact Hours: Lecture - Minimum Hours/Maximum Hours: 3 to 3		
Contact Hours: Lab - Minimum Hours/Maximum Hours:		
Contact Hours: Other - Minimum Hours/Maximum Hours:		
Attributes		
Is this course part of the LER, WIC or Diversity requirements: No		
If yes, course attributes: 1. 2. 3.		
Can this course be repeated for credit: No Repeat	**Course Limit:**	**OR Maximum Hours:**
Course Level: Graduate	**Grade Rule:** B-Standard letter	
Rationale for an IP grade request for this course (if applicable):		
Schedule Type(s): 1. LEC-Lecture 2. 3.		
Credit by Exam: N-Credit by exam-not approved		
Prerequisites & Descriptions		
Current Prerequisite/Corequisite/Catalog Description: In-depth investigation of intelligent database management systems in support of business decision making. An understanding of relational databases is assumed. Object-oriented and semantic database will be explored. Prerequisite: graduate standing and special approval.		
Catalog Description (edited): The design, implementation and management of database management systems within organizations are studied from an applied perspective. Additional emphases include data warehousing, structured query language for analytics, and introductions to NoSQL databases and big data analytics.		
Prerequisites (edited): Graduate Standing.		
Corequisites (edited):		

Registration is by special approval only: No

Content Information

Content Outline:

Content Hours per Course Topic	Topic Description
10	Structured Query Language - Data Manipulation Language (SQL-DML)
5	The Relational Model and Normalization
6	Data Modeling
4	Transforming Logical Models to Database Designs
6	Structured Query Language - Data Definition Language (SQL-DDL)
3	Managing Multiuser Databases
5	Big Data, NoSQL, Data Warehouses, and Business Intelligence Systems
6	Advanced Structured Query Language for Analytics

Display/Hide Delimited Course Outline

Total Contact Hours: 45

Textbook(s) used in this course: Examples: (1) Kroenke, Auer, Database Processing 2014. (2) Oracle Database and Data warehousing Guide (Web): SQL for Analysis and Reporting; SQL for Aggregation in Data Warehouses; SQL for Pattern Matching; SQL for Modeling; Advanced Analytical SQL

Writing Expectations: Students will write analysis reports.

Instructor(s) expected to teach: Alan Brandyberry, Greta Polites, Dong-Heon (Austin) Kwak

Instructor(s) contributing to content: Alan Brandyberry

Proposal Summary

Explain the purpose for this proposal:

Revision is primarily to make this course relevant as both a standard Database Management Systems course and as an introductory Business Analytics course. The course will also benefit students and programs needing either standard database coverage. Also, the addition of analytic content is a natural update to the general topic of data management and databases.

Explain how this proposal affects program requirements and students in your unit:

No effects are anticipated.

Explain how this proposal affects courses, program requirements and student in other units:

None.

Explain how this proposal affects enrollment and staffing:

Current staffing served the previous version of this course and the same staff (and others) can easily incorporate the new topics.

Units consulted (other departments, programs or campuses affected by the proposal):

In the context of a current MS proposal, this has been discussed with representatives of the college's departments, DSCI, SLIS, IAKM, CS.

Revisions made to form (if applicable):

- [x] Course Content
- [ ] Credit by Exam
- [ ] Credit Hours
- [ ] Cross-Listed / Slash
- [x] Description
- [ ] Diversity
- [ ] Grade Rule
- [ ] Number
- [ ] Prerequisites
- [ ] Schedule Type
- [ ] Subject
- [x] Title
- [x] Title Abbreviation
- [ ] Writing-Intensive (WIC)

KENT STATE UNIVERSITY

Name: Onyebuchi Felix Offodile

Submission Date: 3/23/2015

Organization: Management & Information Systems

Course Catalog Update

<< Go back to Course Catalog Update form

Print

Course Catalog Update Information:

STU0004

Reference Number: CCU008562

Date: 18-MAR-15

Level: 1.00 of 2.00

Currently On The Worklist Of: Onyebuchi Offodile, foffodil

Owner: Office of Curriculum Services, 330-672-8558 or 330-672-8559, curriculum@kent.edu

Basic Course Data		
Change type: Revise		
Faculty member submitting this proposal:		
Requested Effective Term: 201580		
Campus: Kent		
College: BU-Business Administration and Graduate School of Management		
Department: MIS-Management and Information Systems		
Course Subject: MIS-Management and Information Systems		
New Course Subject:		
Course Number: 74082		
New Course Number:		
Course Title: DATABASE MANAGEMENT AND DATABASE ANALYTICS		
Title Abbreviation: DB MANAGEMENT/ANALYTICS		
Slash Course and Cross-list Information: MIS 64082 + MIS 74082		
Credit Hours		
Minimum Credit/Maximum Credit: 3 to 3		
Contact Hours: Lecture - Minimum Hours/Maximum Hours: 3 to 3		
Contact Hours: Lab - Minimum Hours/Maximum Hours:		
Contact Hours: Other - Minimum Hours/Maximum Hours:		
Attributes		
Is this course part of the LER, WIC or Diversity requirements: No		
If yes, course attributes: 1. 2. 3.		
Can this course be repeated for credit: No Repeat	**Course Limit:**	**OR Maximum Hours:**
Course Level: Graduate	**Grade Rule:** B-Standard letter	
Rationale for an IP grade request for this course (if applicable):		
Schedule Type(s): 1. LEC-Lecture 2. 3.		
Credit by Exam: N-Credit by exam-not approved		
Prerequisites & Descriptions		
Current Prerequisite/Corequisite/Catalog Description: In-depth investigation of intelligent database management systems in support of business decision making. An understanding of relational databases is assumed. Object oriented and semantic database will be explored. Prerequisite: doctoral standing and special approval.		
Catalog Description (edited): The design, implementation and management of database management systems within organizations are studied from an applied perspective. Additional emphases include data warehousing, structured query language for analytics, and introductions to NoSQL databases and big data analytics.		
Prerequisites (edited): Graduate Standing		
Corequisites (edited):		

Registration is by special approval only: No

Content Information

Content Outline:

Content Hours per Course Topic	Topic Description
10	Structured Query Language - Data Manipulation Language (SQL-DML)
5	The Relational Model and Normalization
6	Data Modeling
4	Transforming Logical Models to Database Designs.
6	Structured Query Language - Data Definition Language (SQL-DDL)
3	Managing Multiuser Databases
5	Big Data, NoSQL, Data Warehouses, and Business Intelligence Systems
6	Advanced Structured Query Language for Analytics

Display/Hide Delimited Course Outline

Total Contact Hours: 45

Textbook(s) used in this course: Examples: (1) Kroenke, Auer, Database Processing 2014. (2) Oracle Database and Data warehousing Guide (Web): SQL for Analysis and Reporting; SQL for Aggregation in Data Warehouses; SQL for Pattern Matching; SQL for Modeling; Advanced Analytical SQL

Writing Expectations: Students will write analysis reports.

Instructor(s) expected to teach: Alan Brandyberry, Greta Polites, Dong-Heon (Austin) Kwak

Instructor(s) contributing to content: Alan Brandyberry

Proposal Summary

Explain the purpose for this proposal:

Revision is primarily to make this course relevant as both a standard Database Management Systems course and as an introductory Business Analytics course. The course will also benefit students and programs needing either standard database coverage. Also, the addition of analytic content is a natural update to the general topic of data management and databases.

Explain how this proposal affects program requirements and students in your unit:

No effects are anticipated.

Explain how this proposal affects courses, program requirements and student in other units:

None.

Explain how this proposal affects enrollment and staffing:

Current staffing served the previous version of this course and the same staff (and others) can easily incorporate the new topics.

Units consulted (other departments, programs or campuses affected by the proposal):

In the context of a current MS proposal, this has been discussed with representatives of the college's departments, DSCI, SLIS, IAKM, CS.

Revisions made to form (if applicable):

- [x] Course Content
- [ ] Credit by Exam
- [ ] Credit Hours
- [ ] Cross-Listed / Slash
- [x] Description
- [ ] Diversity
- [ ] Grade Rule
- [ ] Number
- [ ] Prerequisites
- [ ] Schedule Type
- [ ] Subject
- [x] Title
- [x] Title Abbreviation
- [ ] Writing-Intensive (WIC)

Name: Onyebuchi Felix Offodile
Submission Date: 3/23/2015
Organization: Management & Information Systems

Course Catalog Update

<< Go back to Course Catalog Update form

Print

Course Catalog Update Information:

STU0004

Reference Number: CCU008481

Date: 26-FEB-15

Level: 1.00 of 2.00

Currently On The Worklist Of: Onyebuchi Offodile, foffodil

Owner: Office of Curriculum Services, 330-672-8558 or 330-672-8559, curriculum@kent.edu

Basic Course Data		
Change type: Establish		
Faculty member submitting this proposal: Alan Brandyberry		
Requested Effective Term: 201580		
Campus: Kent		
College: BU-Business Administration and Graduate School of Management		
Department: MIS-Management and Information Systems		
Course Subject: MIS-Management and Information Systems		
Course Number: 64092		
Course Title: Internship in Business Analytics		
Title Abbreviation: Business Analytics Internship		
Slash Course and Cross-list Information:		
Credit Hours		
Minimum Credit/Maximum Credit: 3 to 3		
Contact Hours: Lecture - Minimum Hours/Maximum Hours:		
Contact Hours: Lab - Minimum Hours/Maximum Hours:		
Contact Hours: Other - Minimum Hours/Maximum Hours: 3 to 3		
Attributes		
Is this course part of the LER, WIC or Diversity requirements: No		
If yes, course attributes: 1. 2. 3.		
Can this course be repeated for credit: No Repeat	**Course Limit:**	**OR Maximum Hours:**
Course Level: Graduate	**Grade Rule:** B-Standard letter	
Rationale for an IP grade request for this course (if applicable):		
Schedule Type(s): 1. PRA-Practicum or Internship 2. 3.		
Credit by Exam: N-Credit by exam-not approved		
Prerequisites & Descriptions		
Current Prerequisite/Corequisite/Catalog Description:		
Catalog Description (edited): A supervised field experience at a cooperating organization. Requires regular contact with instructor and preparation of an internship report connecting academic coursework to on-the-job experiences.		
Prerequisites (edited): Graduate standing and special approval.		
Corequisites (edited):		
Registration is by special approval only: Yes		
Content Information		
Content Outline:		

Content Hours	

per Course Topic	Topic Description
3	Introduction to Internship and Requirements
3	Identification and approval of Internship projects; and internship outline
3	Business cultures and professional etiquette.
100	Internship execution and solution delivery. Work logs, report, hours worked in internship.
100	Relating and interfacing with organizations and understanding their cultures.
60	Results analyses and delivery technologies.
6	Internship Report and Presentation for evaluation.

Display/Hide Delimited Course Outline

Total Contact Hours: 275

Textbook(s) used in this course: None

Writing Expectations: Students write a final report and submit work logs.

Instructor(s) expected to teach: All MSBA faculty

Instructor(s) contributing to content: Alan Brandyberry

Proposal Summary

Explain the purpose for this proposal:

Part of a new proposed MS in Business Analytics

Explain how this proposal affects program requirements and students in your unit:

No effects except the addition of a new course.

Explain how this proposal affects courses, program requirements and student in other units:

None.

Explain how this proposal affects enrollment and staffing:

Current staff have the expertise to teach this course.

Units consulted (other departments, programs or campuses affected by the proposal):

In the context of a current MS proposal, this has been discussed with representatives of the college's departments, DSCI, SLIS, IAKM, CS.

Comments (500 Character Maximum):

NOTE: Please do not use the following restricted characters: (~ * / \ --)

Approve | Return To Initiator | Deny

Comments:

KENT STATE UNIVERSITY

Name: Onyebuchi Felix Offodile

Submission Date: 3/23/2015

Organization: Management & Information Systems

Course Catalog Update

<< Go back to Course Catalog Update form

Print

Course Catalog Update Information:

STU0004

Reference Number: CCU008469

Date: 19-FEB-15

Level: 1.00 of 2.00

Currently On The Worklist Of: Onyebuchi Offodile, foffodil

Owner: Office of Curriculum Services, 330-672-8558 or 330-672-8559, curriculum@kent.edu

Basic Course Data		
Change type: Establish		
Faculty member submitting this proposal: Alan Brandyberry		
Requested Effective Term: 201580		
Campus: Kent		
College: BU-Business Administration and Graduate School of Management		
Department: MIS-Management and Information Systems		
Course Subject: MIS-Management and Information Systems		
Course Number: 64098		
Course Title: CAPSTONE PROJECT IN BUSINESS ANALYTICS		
Title Abbreviation: CAPSTONE PROJECT IN ANALYTICS		
Slash Course and Cross-list Information:		
Credit Hours		
Minimum Credit/Maximum Credit: 3 to 3		
Contact Hours: Lecture - Minimum Hours/Maximum Hours:		
Contact Hours: Lab - Minimum Hours/Maximum Hours:		
Contact Hours: Other - Minimum Hours/Maximum Hours: 3 to 3		
Attributes		
Is this course part of the LER, WIC or Diversity requirements: No		
If yes, course attributes: 1. 2. 3.		
Can this course be repeated for credit: No Repeat	**Course Limit:**	**OR Maximum Hours:**
Course Level: Graduate	**Grade Rule:** C-Standard letter-in progress (IP)	
Rationale for an IP grade request for this course (if applicable): Allows students to work on large projects that take longer than one semester to complete.		
Schedule Type(s): 1. MPR-Masters Project 2. 3.		
Credit by Exam: N-Credit by exam-not approved		
Prerequisites & Descriptions		
Current Prerequisite/Corequisite/Catalog Description:		
Catalog Description (edited): In this culminating project, students draw on the breadth and depth of the curriculum to address an industry supplied problem individually or in small teams. Projects will explore prescriptive analytics as is appropriate to their design project.		
Prerequisites (edited): MIS 64036, MIS 64082, CS 63015, Special Approval, and Graduate Standing.		
Corequisites (edited):		
Registration is by special approval only: Yes		
Content Information		

Content Outline:

Content Hours per Course Topic	Topic Description
45	Planning and implementation of the capstone project.

Display/Hide Delimited Course Outline

Total Contact Hours: 45

Textbook(s) used in this course: none

Writing Expectations: Students will write capstone project analysis reports.

Instructor(s) expected to teach: All MSBA faculty

Instructor(s) contributing to content: Alan Brandyberry

Proposal Summary

Explain the purpose for this proposal:

Part of a new proposed MS in Business Analytics

Explain how this proposal affects program requirements and students in your unit:

No effects except the addition of a new course.

Explain how this proposal affects courses, program requirements and student in other units:

None.

Explain how this proposal affects enrollment and staffing:

Current staff have the expertise to teach this course.

Units consulted (other departments, programs or campuses affected by the proposal):

In the context of a current MS proposal, this has been discussed with representatives of the college's departments, DSCI, SLIS, IAKM, CS.

Comments (500 Character Maximum):

NOTE: Please do not use the following restricted characters: (~ * / \ --)

Approve | Return To Initiator | Deny

Comments:

Date	User	Comment
		No comments available.

History:

Date	User	Status
2/19/2015	Alan A Brandyberry	Initially Saved As Draft

KENT STATE UNIVERSITY

Name: Onyebuchi Felix Offodile

Submission Date: 3/23/2015

Organization: Management & Information Systems

Course Catalog Update

<< Return to Search Results

Course Catalog Update Information: **STU0004**

Reference Number: CCU008546 **Date:** 16-MAR-15

Level: 2.00 of 2.00 **Currently On The Worklist Of:** Mary Haley, mhaley

Owner: Office of Curriculum Services, 330-672-8558 or 330-672-8559, curriculum@kent.edu

Basic Course Data

Change type: Establish

Faculty member submitting this proposal: Arden Ruttan

Requested Effective Term: 201580

Campus: Kent

College: AS-Arts and Sciences

Department: CS-Computer Science

Course Subject: CS-Computer Science

Course Number: 63016

Course Title: Big Data Analytics

Title Abbreviation: Data Analytics

Slash Course and Cross-list Information: 73016

Credit Hours

Minimum Credit/Maximum Credit: 3 to 3

Contact Hours: Lecture - Minimum Hours/Maximum Hours: 3 to 3

Contact Hours: Lab - Minimum Hours/Maximum Hours: 3 to

Contact Hours: Other - Minimum Hours/Maximum Hours: to 3

Attributes

Is this course part of the LER, WIC or Diversity requirements: No

If yes, course attributes: 1. 2. 3.

Can this course be repeated for credit: No Repeat	**Course Limit:**	**OR Maximum Hours:**
Course Level: Graduate	**Grade Rule:** B-Standard letter	

Rationale for an IP grade request for this course (if applicable):

Schedule Type(s): 1. LEC-Lecture 2. 3.

Credit by Exam: N-Credit by exam-not approved

Prerequisites & Descriptions

Current Prerequisite/Corequisite/Catalog Description:

Catalog Description (edited): This course will introduce the state-of-arts computing platforms with the focus on how to utilize them in processing (managing and analyzing) massive datasets. The course will utilize several key data processing tasks, including simple statistics, data aggregation, join processing, frequent pattern mining, data clustering, information retrieval, pagerank, and massive graph analytics as the case study for large scale data processing.

Prerequisites (edited): Graduate Standing

Corequisites (edited): None

Registration is by special approval only: No

Content Information

Content Outline:

Content Hours	Topic Description

per Course Topic	
3	Basic Statistics
5	Sampling
5	Exploratory Data Analysis with existing software tools.
5	OLAP analysis
5	Association Rule
6	Classification
6	Clustering
6	Graph Mining
7	Feature Selection, Dimension Reduction

Display/Hide Delimited Course Outline

Total Contact Hours: 48

Textbook(s) used in this course: None, due to the volatile nature of the material

Writing Expectations: Programs, exams, papers.

Instructor(s) expected to teach: Ruoming Jin

Instructor(s) contributing to content: Ruoming Jin

Proposal Summary

Explain the purpose for this proposal:

To provide a course on this important new area.

Explain how this proposal affects program requirements and students in your unit:

This course will provide an elective for students to take

Explain how this proposal affects courses, program requirements and student in other units:

This course will be available for other area such as business analytical to take.

Explain how this proposal affects enrollment and staffing:

Similar courses have been offered regularly as special topics courses. This course will be offered in lieu of one of those courses

Units consulted (other departments, programs or campuses affected by the proposal):

Department of Management and Information Systems

Curriculum Services Information:

Approved by EPC:	**Curriculum Bulletin:**
Cross-list Banner Code:	**OBR Course Level:**
OBR Program Code:	**OBR Subsidy Code:**
CIP Code:	**Term Start:**
	Term End:

Comments (500 Character Maximum):

NOTE: Please do not use the following restricted characters: (~ * / \ --)

Comments:

Date	User	Comment
3/16/2015	Arden G. Ruttan	No comments available.