15-80

UWUCC AP 1/19/16
Senate App 2/2/16

Course Revision/Deletion Template

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Proposing Depart/Unit:	Information Systems and Decision Science	Phone:	724-357-5750

Course Revisions *(Check all that apply; fill out categories below as specified; i.e. if only changing a course title, only need to complete Category A information; if Category B need information in both A and B; For Category C, complete entire form)*:

Category A: ☐ Course Prefix/Number Change ☒ Course Title Change ☐ Course Deletion

Category B: ☐ Catalog Description Change ☐ Modify Prerequisite(s)

Category C: ☒ Add Dual Level ☐ Add Liberal Studies *(Complete Template C)* ☐ Change in Class/Lab Hours

☐ Add Distance Education *(Complete Template E)* ☐ Add/Revise TECC *(Complete Template D)* ☒ Course Revision

☐ Credit Hour Change ☐ Other - Click here to enter text.

Current Course Information		Proposed Changes	
Category A *(if not changed leave blank)*			
Current Prefix	IFMG	Proposed Prefix	Click here to enter text.
Current Number	455	Proposed Number	455/555
Current Course Title	Data Warehouse and Data Mining	Proposed Course Title	Business Data Mining
Prerequisite(s)	IFMG 390 or 261 or COSC 441, and MATH 214 or 216	Proposed Prerequisite(s)	IFMG 390
Category B *(if not changed leave blank)*			

Template B

Current Catalog Description	Introduces the strategies, technologies, and techniques associated with this growing MIS specialty area. Composed of two main parts: (1) learn the basic methodology for planning, designing, building, using, and managing a data warehouse, and (2) learn how to use different data mining techniques to derive information from the data warehouse for strategic and long term business decision making	Proposed Catalog Description	Introduces the strategies, technologies, and techniques associated with this growing MIS specialty area. Consists of three main parts: (1) the basic methodology for designing, using, and managing a data warehouse, (2) integrating different sources of data using Non-relational Technologies, and (3) using different data mining techniques to derive information from data for strategic and long term business decision making.
Category C *(if not changed leave blank)*			
Number of Credits	(UG) Class Hours – Click here to enter text. (UG) Lab Hours – Click here to enter text. Credits - Click here to enter text.	Number of Credits	(UG) Class Hours – Click here to enter text. (UG) Lab Hours – Click here to enter text. Credits - Click here to enter text.
Current Course (Student Learning) Outcomes	Students will be able to 1. Develop a data model for a data warehouse 2. Explain how legacy systems, data warehouses, data marts, and operational data stores fit into that data architecture. 3. Follow the process by which data warehouses are designed, built and managed. 4. Apply the variety of end user tools for mining the data contained in the data warehouse 5. Select an appropriate visualization approach to present the results in an understandable way.	Proposed Course (Student Learning) Outcomes	Students will be able to: 1. Identify which data mining tools best fit for different sources of data 2. Apply appropriate steps in data analysis. 3. Blend data mining tools to analyze a mixture of data from different sources. 4. Utilize a variety of visualization tools to analyze the data mining results.
Brief Course Outline *(it is acceptable to copy this from the old syllabus)*	Introduction to data warehouse Planning the data warehouse Designing the Data Warehouse Building the Data Warehouse Using the Data Warehouse Managing the Data Warehouse Variations on the Data Warehouse Data Mining Introduction	Brief Course Outline *(Give sufficient detail to communicate the content to faculty across campus. It is not necessary to include specific readings, calendar, or assignments.*	Relational Data Warehouse Design Non-relational Data Warehouse Big Data and Hadoop Platform DynamoDb and MongoDB Web Data Data Cube Technologies Data Warehousing and Online Analytic Processing Data Mining

The data mining process Statistical Analysis of Data Market Basket Analysis Memory Based Reasoning Cluster Detection Link Analysis Decision Trees and Rule Induction Artificial Neural Networks Genetic Algorithms Online Analytic Processing Visualization Techniques Case Studies Testing and Evaluation		Introduction The Data mining process Statistical Analysis of Data Bayesian Classification Market Basket Analysis Memory Based Reasoning Cluster Detection Near Neighboring Analysis Outlier Detection Link Analysis Decision Trees and Rule Induction Artificial Neural Networks Genetic Algorithms Online Analytic Processing Visualization Techniques Case Studies Testing and Evaluation

Rationale for Proposed Changes (All Categories)	
Why is the course being revised/deleted:	In the past 17 years since the course was first approved, there have been progresses and many breakthroughs in data management technologies and data mining techniques. Relational Data warehouse data is not the only source of data for data mining. Today's data mining also uses data from many other sources such as web data, social media data, textual data, etc. Actually only a small portion of data from data mining is from data warehouses. .
Implication of the Change on: - Program - Other programs - Students	The change certainly update the course to what is current in the industries and will prepare our students better when they apply for jobs in data analysis areas. The change also provides our MBA students a new option to focus on. Together with our approved course work in data analytics, there are enough courses for a data analysis concentration for MBA students.
For Dual Listed Courses	*List additional learning objectives for the higher-level course* Additional objectives for MBA students: 1. Know which data mining tools best fit for different sources of data and apply appropriate steps in data analysis. 2. Know how to mingle data mining tools to analyze a mixture of data from different sources. 3. Know a variety of visualization tools to visualize the data mining results.

For Dean's Review

- Are resources available/sufficient for this course? ☐ Yes ☐ No ☐ NA

- Is the proposal congruent with college mission? ☐ Yes ☐ No ☐ NA

- Has the proposer attempted to resolve potential conflicts with other academic units? ☐ Yes ☐ No ☐ NA

Template B

Comments: Click here to enter text.