Updated 11/30/2020

Governors State UNIVERSITY

College of Business
Program Package

Program/Degree: Master of Science in Business Analytics

Division: Accounting, Finance, MIS, & Economics

Revision Date: 11/30/2020

Coordinator: Dr. David Green, Associate Professor of Management Information Systems

Program Website: www.govst.edu/MSBA

University Catalog: http://catalog.govst.edu/

Fall 2020 start for MSBA Program

Mission:

The Master of Science in Business Analytics program is designed to prepare students to use data to add value to organizations. Business analytics is the intersection of business and data science. Data allows organizations to make better decisions, improve business performance, and create efficiencies in business operations. Organizations benefit by improving their ability to compete and formulate strategy in a competitive marketplace that is constantly changing.

Program Learning Goals and Objectives:

Upon successful completion of this program, graduate should be able to:

Program Learning Goals		Program Learning Objectives
MSBA1	**Decision Making** Solve business problems and make decisions informed by data	1a. Analyze business cases
		1b. Apply data analysis for decision making in a business problem.
		1c. Recognize the benefits, applications, and limitations of analytics techniques as well as the social and ethical impact of decisions.
MSBA2	**Analytics Methodologies and Tools** Access, collect, extract, manipulate and analyze data to support analysis for business.	2a. Apply correct methodology and approach
		2b. Identify and use software and analytics tools
		2c. Prepare data for analysis
		2d. Conduct exploratory, descriptive, predictive, and prescriptive analysis
MSBA3	**Communication Skills** Communicate business problems, analysis, and results to key stakeholders	3a. Utilize data visualization tools to present results.
		3b. Present complex business cases, analyses and results to key stakeholders in an effective, consumable, and actionable way.
MSBA4	**Collaboration and Teamwork** Lead and participate in projects with diverse teams to reach common goals.	4a. Apply project management tools and techniques to achieve success.
		4b. Collaborate with team members to achieve effective deliverables.

Updated 11/30/2020

MSBA Degree Requirements

Students must meet all university requirements for a master's degree.
Students must meet all collegial graduation requirements listed at the beginning of this section.

Business Core Requirements (15 Hours)

- BAN 6100 Foundations of Business for Analytics
- MGMT 6700 Foundations of Managerial Statistics
- MIS 6201 Information Systems Project Management
- MIS 7101 Information Systems and Technology
- MIS 7700 ERP Systems

Analytics Core Requirements (18 Hours)

- BUS 7101 Business Analytics
- BAN 7201 Data Visualization
- BUS 8101 Predictive Analytics
- MIS 7401 Database Development and Application
- CPSC 6730 Big Data Analytics
- CPSC 6790 Data Mining and Business Intelligence

Capstone Experience (3 Hours)

- BAN 8900 Business Analytics Capstone Project

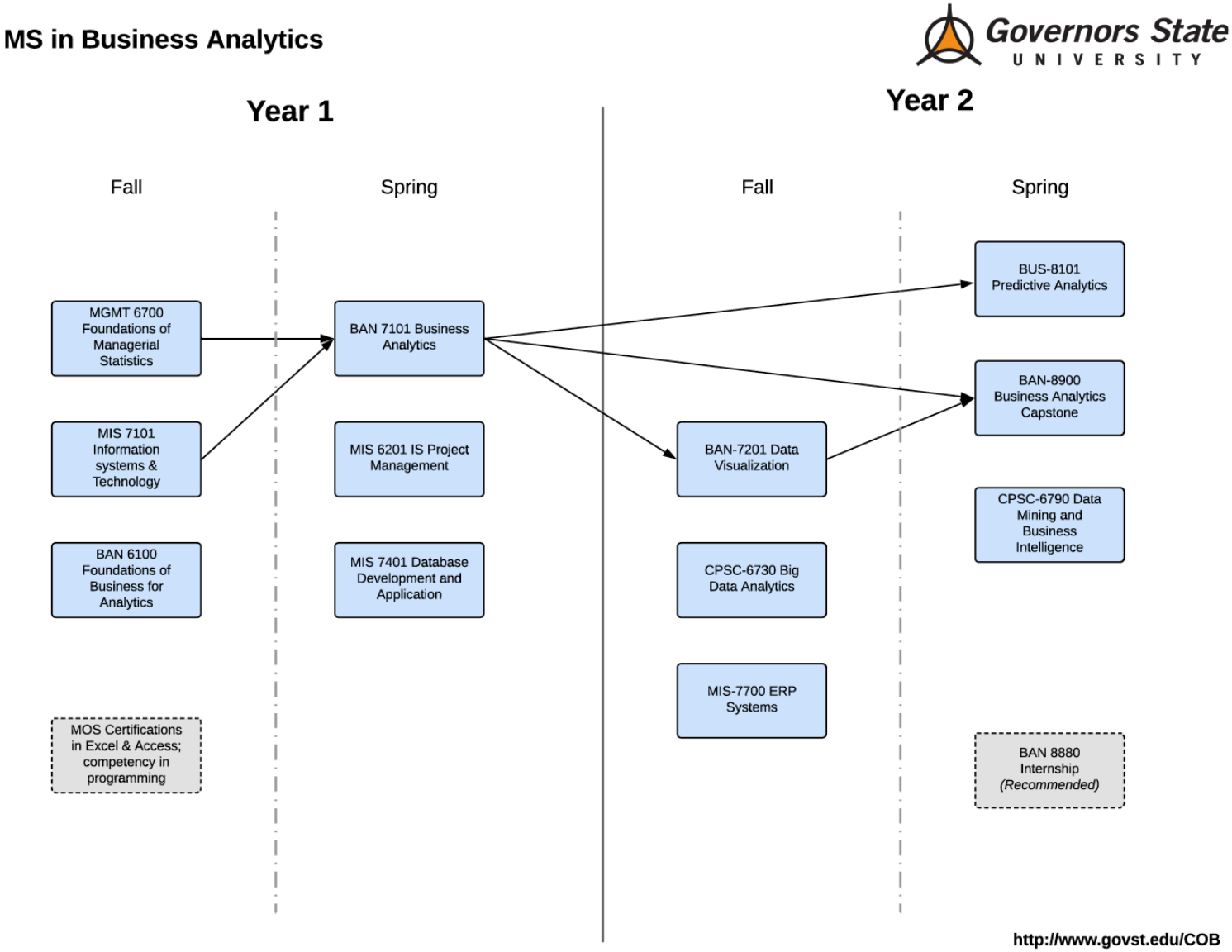
Internship for Academic Credit (Optional 3 Hours)

- Students in the MSBA program may choose to complete an internship (BAN-8880) for academic credit during the final year of study. The optional internship is an additional 3 credit hours to the 36 hour degree program.

Total – 36 Hours

Updated 11/30/2020

Program Map – MS in Business Analytics



Assessment of Student Learning Outcome Objectives:

Program assessment will largely take place via the capstone course to assess student performance in meeting the program learning goals and objectives. The program is AACSB accredited and requires the same Assurance of Learning standards as other business degree programs.

MSBA Curriculum Map & Assessment Plan

	Decision Making			Analytics Methodologies and Tools				Communication Skills		Collaboration and Teamwork	
Course	1a	1b	1c	2a	2b	2c	2d	3a	3b	4a	4b
MIS-7101 Information Systems & Technology	I	I	I					I	I	I	I
MGMT-6700 Foundations of Managerial Statistics	I	I	I	I	I	I	I	I			
BAN-6100 Foundations of Business for Analytics	I	I	I	I				I	I	I	I
BUS - 7101 Business Analytics	R	R	R	R	R	R	R	I	R		
MIS-7401 Database Development and Application	R	R	R	R	R	R	R				
MIS-6201 Information Systems Project Management	R								R	R*	R*
BAN-7201 Data Visualization	R	R	R	R	R	R	R	R	R		
CPSC-6730 Big Data Analytics				R	R	R					
MIS-7700 ERP Systems		R			R			R	R	R	R
CPSC-6790 Data Mining and Business Intelligence	R	R	R	R	R	R	R		R		
BUS-8101 Predictive Analytics	R	R	R	R	R	R	R	R			
BUS-8900 Business Analytics Capstone Project	M*	M*	M*	M*	M*	M*	M*	M*	M*	M	M

I-Introduced, R-Reinforced, M-Mastered, *-Where Assessed

Updated 11/30/2020

Master Course/Program Schedule:

Term*	Course	Description	CH	Business Core	Analytics Core
FA1	**MIS-7101 Information Systems & Technology**	Prepares students to participate in an organization's information systems and technology decisions. Emphasizes the strategic value of information resources, alignment of IT and business strategies, the role of the IT department in an organization, performance and process improvements through information systems, data and analytics for decision-making, and ethical use of information resources.	3	X	
FA1	**MGMT-6700 Foundations of Managerial Statistics**	Provides the student with sufficient statistical background for the graduate programs in CBPA. Includes descriptive statistics, probability, sampling theory, interval estimations, significance testing, the analysis of variance, correlation, and regression.	3	X	
FA1	**BAN-6100 Foundations Business for Analytics**	Provides students with the business concepts and terminology that will allow them to frame business problems within the context of business analytics.	3	X	
SP1	**BUS - 7101 Business Analytics**	Applies case-based examples of business and data analytics in organizational and business settings with a focus on reporting, visualization and prediction in a business environment. Prerequisites:	3		X
SP1	**MIS-7401 Database Development and Application**	Introduction to development and implementation of databases and use of database management systems. Several commercial software packages will be reviewed. A major development project will provide hands-on experience with at least one particular database package.	3		X
SP1	**MIS-6201 Information Systems Project Management**	Emphasizes project management principles, techniques, and software tools in an information systems setting.	3	X	
FA2	**BAN-7201 Data Visualization**	Applies principles and techniques to visualize data in a that can improve comprehension, communication, and decision-making for individuals and organizations.	3		X
FA2	**CPSC-6730 Big Data Analytics**	Explores the fundamental concepts required for storing, processing, and analyzing Big Data of structured and unstructured data. Topics include: Big Data applications, Hadoop, Dimensionality reduction, Data streams, unstructured data processing, NoSQL, and NewSQL	3		X
FA2	**MIS-7700 ERP Systems**	Focuses on integrating business processes in an enterprise resource planning (ERP) system. Students will experience both the end-user and configuration perspectives of an ERP system implementation	3	X	
SP2	**CPSC-6790 Data Mining and Business Intelligence**	Provides an in-depth investigation of the indicated topic from computer science. Participants examine the special selected topic in a workshop setting. Topics vary, ranging from the design of solutions to particular problems to reviews of existing software and hardware solutions.	3		X
SP2	**BUS-8101 Predictive Analytics**	Focuses on theory and application of predictive analytics in managerial decision making. Topics include linear regression, decision trees, discriminant analysis, multidimensional scaling, factor analysis, cluster analysis, and categorical data analysis	3		X
SP2	**BUS-8900 Business Analytics Capstone Project**	Integrates business analytics concepts in an applied setting for students in the MS in Business Analytics program.	3		

MSBA Assessment plan AY20-21 – AY23-24

Program Learning Goals		**Where Assessed**	**AY2020-21**	**AY2021-22**	**AY2022-23**	**AY2023-24**
MSBA1	**Decision Making** Solve business problems and make decisions informed by data	BAN-6100 Foundations of Business for Analytics	Pre-test FA20 Analysis SP21	Intervention FA21 Post test FA21 Analysis SP22		
MSBA2	**Analytics Methodologies and Tools** Access, collect, extract, manipulate and analyze data to support analysis for business.	BAN-8900 Business Analytics Capstone Project		Pre-test -SP22	Analysis FA22 Intervention SP23 Post test SP23	Analysis FA23
MSBA3	**Communication Skills** Communicate business problems, analysis, and results to key stakeholders	BAN-7201 Data Visualization		Pretest FA21 Analysis SP22	Intervention FA22 Post test FA22 Analysis SP23	
MSBA4	**Collaboration and Teamwork** Lead and participate in projects with diverse teams to reach common goals.	MIS-6201 IS Project Management		Pretest SP22	Analysis FA22 Intervention SP23 Post test SP23	Analysis FA23