Marketing and Business Analytics

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Marketing and Business Analytics Web Site (https://www.tamuc.edu/programs/marketing-and-marketing-analytics-ms/)

Business Analytics - MS

The MS in Business Analytics program is designed to prepare students entering the workforce in the rapidly emerging field of business analytics, which involves collecting, organizing, analyzing, optimizing, and interpreting "Big Data" (huge datasets collected by modern companies) for the purposes of problem solving and decision making. The program is intended to help students identify opportunities hidden in big data and apply these findings to real-world business challenges. Data analysts provide organizations with ideas for smarter strategic management, improved financial performance and better operational efficiencies. Students will prepare for specific jobs as computer systems analysts, management analysts (business analysts and process analysts), market research analysts, logisticians, and operations research analysts in a wide range of organizations and industries.

The Master of Science in Business Analytics program offers students from business and non-business backgrounds with an opportunity to develop expertise in the art and science of business analytics. Students complete 30 hours of graduate courses (33 if they choose the cyber security minor).

Admission Process (https://www.tamuc.edu/programs/business-analytics-ms/#Admission)

Successful completion of the Comprehensive Exam is required of all students.

Marketing and Marketing Analytics - MS

The Mission of the MS Marketing and Marketing Analytics Program is to provide quality academic and practical learning experiences to equip students with the knowledge to apply the marketing concepts and theories of marketing management, business-to-business (B2B) marketing, international marketing, and marketing research in a variety of organizations (e.g., businesses and not-for-profit organizations). The MS Marketing and Marketing Analytics program is designed to meet the needs of students in order to prepare them for higher level positions in marketing as well as for students who wish to pursue post-masters graduate programs.

The Master of Science in Marketing and Marketing Analytics program offers students from business and non-business backgrounds with an opportunity to develop expertise in the art and science of business marketing. Students complete 30-42 hours of graduate courses depending on their backgrounds.

Admission Process (https://www.tamuc.edu/programs/marketing-and-marketing-analytics-ms/#tamuc-section-44196)

Successful completion of the Comprehensive Exam is required of all students.

Note: Individual departments may reserve the right to dismiss from their programs students who, in their judgment, would not meet the professional expectations of the field for which they are training.

Business Analytics MS (https://coursecatalog.tamuc.edu/grad/colleges-and-departments/business/marketing-business-analytics/busa/)

Business Analytics Minor (https://coursecatalog.tamuc.edu/grad/colleges-and-departments/business/marketing-business-analytics/business-analytics-minor/)

Cyber Security Minor (https://coursecatalog.tamuc.edu/grad/colleges-and-departments/business/marketing-business-analytics/cyber-security-minor/)

Marketing and Marketing Analytics MS (https://coursecatalog.tamuc.edu/grad/colleges-and-departments/business/marketing-business-analytics/marketing-ms/)

Digital Marketing Minor (https://coursecatalog.tamuc.edu/grad/colleges-and-departments/business/marketing-business-analytics/digital-marketing-minor/)

Marketing Decision Analytics Minor (https://coursecatalog.tamuc.edu/grad/colleges-and-departments/business/marketing-business-analytics/marketing-decision-analytics-minor/)

Business Analytics Graduate Certificate (https://coursecatalog.tamuc.edu/grad/colleges-and-departments/business/marketing-business-analytics/business-analytics-graduate-certificate/)

BUSA 511 - Business Analytics for Managers
Hours: 3
This course provides students an opportunity to understand the underlying framework of business analytics, the role of big data in today's dynamic organizational environment and using analytical models in business operations and decision making. Through a combination of lectures and business case studies (using SAP®), graduate students will learn how big data can support manager's decision making and how business analytics can be leveraged by organizations to gain a competitive advantage. The case studies explored will illustrate how companies take advantage of different sources of data with different analytical techniques to improve performance, gain an understanding of optimizing results for better decisions, and employing analytical methods to translate data into key insights.

BUSA 516 - Emerging Technologies and Business Innovations
Hours: 3
This course covers emerging technology applications in business analytics and management. The hands-on course contents include the mechanisms of new technologies and how managers can integrate technology innovations into their decision making process.

BUSA 521 - Business Analytics Capstone
Hours: 3
This course addresses problem-solving of complex projects where the use of data driven analytical skills yields real-world experience. As a team, students will be given the context of a business situation, and then asked to identify relevant tools and analytic frameworks to gain both insights into past and present operations, as well as predictions of future performance. Topics include but are not limited to resource management (time, money, and people), change management, quality control, risk management, leadership, and communication. Prerequisites: Must be taken in last semester. All core courses must be completed, ECO/MKT/BUSA 595, BUSA 511, BUSA 523, BUSA 542, BUSA 526, BUSA 532, BUSA 537.

BUSA 522 - Business Forecasting
Hours: 3
Statistical methods are used in the course to create forecasts for business data. The definition of a forecast and the methods for assessing alternative forecasts are covered at the start of the course. After introducing a number of forecasting techniques, the focus is eventually shifted to modeling the statistical characteristics of the data under examination. Early on, we'll talk about straightforward approaches devoid of complex modeling, such as naive predictions, forecasts based on averages, and exponential smoothing. The models get more complex as the course goes on since we'll cover forecasts based on regression models, so-called "ARMA" and "SARIMA" models, and ultimately multivariate approaches.

BUSA 523 - Business Analytics Programming
Hours: 3
Introduces graduate students to programming business applications in the large enterprise system environment. Programming logic and design, documentation, debugging and testing. This course primarily uses Python.

BUSA 526 - Database Management
Hours: 3
This course provides a foundation for the design, implementation, and management of database systems. Students will study both design and implementation issues with an emphasis on database management issues. SQL is used in this class.

BUSA 530 - Informatics in Health Care
Hours: 3
This course focuses on the application of computer technology to healthcare management of individuals and groups, with recognition of the social, ethical, and legal issues involved. Available resources useful in patient care and educational settings are emphasized. The opportunity for application of specific concepts is provided. Crosslisted with: NURS 5207.

BUSA 532 - Data Warehousing
Hours: 3
This course covers the fundamentals of data warehousing architecture and the issues involved in how IT tools and techniques can allow managers to extract analytics and patterns from numeric data. Specific topics covered include the logical design of a data warehouse, the data staging area and extract-transform-load processing, the use of multi-dimensional analysis using OLAP techniques, and other techniques. The course will explore how to support informed decision making and extract predictive analytics and patterns from nonnumeric data by leveraging tools and techniques to analyze unstructured data. Prerequisites: BUSA 526.

BUSA 533 - Cyber Security and IT Auditing
Hours: 3
An examination of the technical and managerial aspects of Cyber Security and IT Auditing nature of the course. An IT audit is the examination and evaluation of an organization's information technology infrastructure, policies and operations which is critical to understanding cyber security and assurance. This course provides the foundation for understanding the key issues associated with protecting information assets, identifying threats to information assets and planning responses to threats. Addresses the use of analytics tools and techniques to enhance the ability of quality management approaches to improve information and security processes.

BUSA 535 - Ethical Hacking
Hours: 3
In this course, students will develop and gain an understanding of the principles, concepts, and methods to prevent and detect outside attacks in a business environment.

BUSA 537 - Business Data Science
Hours: 3
This course covers the applications of advanced analytical techniques. Students learn to analyze data sets, and identify critical business success factors under uncertainties. Topics include linear regression, decision trees, time series analysis as well as techniques for non-linear data such as text mining.

BUSA 539 - Cyber Forensics and Information Security Policy Governance
Hours: 3
This course provides a foundation in the use of cyber forensic tools and procedures necessary to collect and analyze digital information that might be used in administrative, civil or criminal cases. Special emphasis will be placed upon ensuring that organizational information security policies meet all applicable laws and regulation requirements.

BUSA 541 - Global Network Design
Hours: 3
This course teaches students the core modules such as logistics and customer relationship management in enterprise resources planning activities. The course introduces modern quality management approaches including Six Sigma. Students learn global supply chain system design and implementation techniques and practices through class discussions and case analyses.

BUSA 542 - Applied Decision Modeling
Hours: 3
This course covers the development, implementation, and utilization of optimization models for managerial decision making. Students will learn linear programming models such as network model, integer optimization, goal programming as well as data mining models in this course. Examples include optimization analysis for strategic planning, financial portfolio management, operations, project management, and marketing research.

BUSA 545 - Machine Learning
Hours: 3
This course is aimed at developing practical machine learning and data science skills which are quintessential for future professionals in the field of analytics. The course will cover theoretical concepts of broad range of machine learning and deep learning concepts and methods. The tutorials, assignments and projects provide students with practical knowledge to solve real world problems. Prerequisites: BUSA 523.

BUSA 547 - Data Visualization
Hours: 3
In this digital age, it is becoming essentials for people to understand how to leverage data and generate insights that have the power to change the world. Data Analysis, visualization and storytelling are indispensable skills for communications, engineering, managing and marketing professionals. Student will learn the fundamentals of storytelling concepts, narrative theories, methods for research, cleaning and analyzing datasets, and focus on developing stories using Tableau and other creative data tools.

BUSA 580 - Internship in Business Analytics - BUSA
Hours: 0-4
The goal of this course is to gain relevant work experience in the student's field of study by developing specific work related skills to improve marketability upon graduation. Students will also build a "network" of professional contacts. Prerequisites: Departmental approval.

BUSA 589 - Independent Study
Hours: 0-4
One to four individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. Prerequisites: Consent of department head.

BUSA 595 - Business Research Methods and Analytics
Hours: 3
This course is designed to help students learn the key elements in the process of designing and conducting a research project: writing an introduction; stating a purpose or research aims for the study; identifying research questions and hypotheses; and advancing methods and procedures for data collection, analysis, and interpretation. Through a combination of lectures and business case studies, graduate students will learn how big data can support manager’s decision making and how business analytics can be leveraged by organizations to gain a competitive advantage. The case studies explored will illustrate how companies take advantage of different sources of data with different analytical techniques to improve performance, gain an understanding of optimizing results for better decisions, and employing analytical methods to translate data into key insights. This course will also cover a variety of research methods commonly used by business students, from survey design to advanced statistical analysis. Emphasis will be placed on the role of technology in research and current business analytics tools.

BUSA 597 - Special Topics
Hours: 1-3
Organized class. May be repeated when topics vary.

MKT 501 - Marketing Environment
Hours: 3
Marketing Environment. Three semester hours. A study of the marketing environment of business with emphasis on major aspects of sociocultural, demographic, technological, global, legal, political, and ethical issues. The study of marketing emphasizes the functional areas of marketing including product and service selection and development, marketing channels, promotion, and pricing. Marketing research, consumer behavior, industrial buying and international implications are also considered.

MKT 521 - Marketing Management and Analytics
Hours: 3
A comprehensive study of the effective application of marketing strategies in international and domestic organizations. A case analysis approach and current professional literature are utilized.

MKT 524 - Consumer and Buyer Behavior Analytics
Hours: 3
The course examines how to analyze data that can be used to describe past buying behaviors, predict future ones, and be able to develop new strategies to influence future purchasing decisions. Students are expected to gain knowledge on key marketing problems in customer acquisition, development, and retention. The course introduces data analytics techniques tailored to those problems, including predictive analytics and large-scale testing. Students apply each technique to a large consumer-level database, learning how to target consumers individually, and how to derive customer insights. Prerequisites: ECO 595.

MKT 529 - Data-Driven Marketing Decisions
Hours: 3
The course focuses on the study of marketing problems. Problem areas to be studied include market and profitability analysis, marketing planning, strategy, and control. The course will also examine the key parts of a business strategy and a marketing strategy. The issues such as conflicting strategic objectives, particularly under risk and uncertainty, will be evaluated and decision making processes will be studied. Prerequisite: MKT 521, Mkt 572, MKT 547, MKT 524.

MKT 540 - Social Media Marketing
Hours: 3
Social Media Marketing (SMM) is the use of social media by marketers to increase brand awareness, identify key audiences, generate leads and build meaningful relationships with customers. Social media allows businesses to gain a competitive advantage through the creation and distribution of valuable, relevant and consistent content to attract and retain clearly-defined audiences. The overarching goal of this course is to obtain a clear perspective on what's really going on in social media marketing so that you can begin to appreciate its true value to consumers, to managers, and to other corporate stakeholders. It will equip you with the relevant knowledge, perspectives, and practical skills required to develop marketing strategies that leverage the opportunities inherent in social media and consumer-to-consumer social interactions for achieving business and marketing goals.

MKT 545 - Key Small Business Insights
Hours: 3
This course is a study of the core concepts of marketing as applied to small and medium sized enterprises (SMEs) with emphasis on effectively branding the business. It is designed to prepare students with the skills and requisite knowledge that are necessary to start and run a small business. You also are exposed to important business principles and tools that make the foundation of organizational settings. Prerequisites: MKT 521.

MKT 547 - Product Innovation and Supply Chains
Hours: 3
The course focuses on how to deal strategically with supply chain issues and challenges. Successful supply chain management requires cross-functional integration of key business processes within the firm and across the network of firms. The challenge is to determine how to successfully accomplish this integration. Other topics covered include, logistics, forecasting, inventory management, supply contracts, strategic alliances, supply chain integration and design, procurement and outsourcing, customer value and value chains, international issues, as well as product innovation and product life cycles.

MKT 567 - Consumer Marketing
Hours: 3
This course is designed to provide MBA students with the KNOWLEDGE, UNDERSTANDING and/or APPRECIATION of the mindset of the global consumer. This involves looking into the dynamic environment of the consumer, the consumer buying process and the important psychological as well as sociological variables that influence and motivate today's global consumer.

MKT 568 - Integrated Marketing Communication (IMC) and Promotion
Hours: 3
The course examines various communication modes available to reach out to the target customer as well as planning and execution of promotional programs, strategy development, segmenting and positioning. In addition, the course will examine elements of the marketing communications mix, the latest trends and tools that are used in integrated marketing communications. Students will gain knowledge on how to design promotion campaigns, public relations, cause related marketing, crisis management, social media marketing, and search engine optimization for products and services.

MKT 569 - Interactive and Digital Marketing
Hours: 3
This course integrates social media, search marketing, e-commerce, and mobile, other emerging formats of digital Marketing . Students will gain an understanding of how to apply these formats to achieve business objectives and how to assess emerging trends. Contemporary challenges surrounding acquiring customers, generating leads, customer loyalty, brand building, customer relationships, analytics, and analyzing consumer behavior in the digital marketplace will be investigated. Current professional and scholarly literature will be utilized.

MKT 570 - Marketing Analytics & Intelligence
Hours: 3
This course emphasizes the processes and technologies necessary for measuring marketing performance. The student will learn to use the processes and tools needed to gather and analyze data from multiple marketing channels over a specific time period to allow for better marketing strategy decisions.

MKT 571 - Business to Business Marketing
Hours: 3
Business-to-Business Marketing. Three semester hours. This course gives students a thorough understanding of how key marketing concepts apply to institutional markets. Students will learn to develop an appreciation of the way standard marketing approaches can be modified to fit the needs of a customer base comprised of large corporations and entrepreneurial enterprises. The course focuses on the managerial process involved in identifying and evaluating marketing opportunities to effectively serve industrial markets.

MKT 573 - Internet Marketing
Hours: 3
This course exposes students to key marketing applications relevant to the use of Internet technologies. The goal of the course is to give students the necessary background of concepts, technologies, and applications required for marketing-related activities in the rapidly growing electronic commerce industry. Example topic areas: Topics around which discussions may focus include: E-Corporation, Internet technologies, online advertising, online retailing, customer acquisition, customer service, and marketing to e-customers.

MKT 574 - Customer Relationship Management
Hours: 3
This class will explore the opportunities and challenges presented by a popular business practice - Customer Relationship Management (CRM). CRM is considered the new "mantra" of marketing. It focuses on maximizing customer value. This is accomplished by the development and management of cooperative and collaborative relationships. MKT 521

MKT 575 - Search Engine Optimization
Hours: 3
This course helps an organization leverage digital marketing and data analytics to drive measurable ROI. Students will gain the knowledge of data-driven decision-making in the latest digital marketing area. Digital marketing utilizes internet and online based digital technologies such as computers, mobile phones and other digital media and platforms to promote products and services.

MKT 580 - Marketing - Internship
Hours: 0-4
The goal of this course is to gain relevant work experience in the student's field of study by developing specific work related skills to improve marketability upon graduation. Students will also build a "network" of professional contacts.

MKT 586 - International Marketing
Hours: 3
A study of the significance of international trade for imports and exports. Adaptation to different cultures and ethics for global competition in U.S. markets are extensively analyzed.

MKT 589 - Independent Study
Hours: 0-3
Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisites: Consent of department head.

MKT 595 - Business Research Methods
Hours: 3
The Marketing Research Methods course emphasizes techniques of research process and methods as applied to business and its marketing. Students will be engaged in defining research problems and in collecting, analyzing, recording and interpreting data. In addition, an analysis of pertinent research literature in business will be provided. This course will provide an understanding of quantitative methods applied on data including statistics, regression, optimization, and other applied analytic methods where decision making results will be interpreted and presented to senior management or the client in making better decisions moving forward. Thus, students gain experience in defining the research problems, designing the research project, determine and collect required source data, run the appropriate analysis based on the method employed, and then present findings to senior management in formal written format and verbally.

MKT 597 - Special Topics
Hours: 1-4
Organized class. May be repeated when topics vary.