

COURSE DESCRIPTIONS OF DEPARTMENTAL SPECIALIZATION COURSES (MBA)

BUSINESS ANALYTICS (BA)

BA 6001: Visualization and Communication of Business Data

Pre-requisite: MBA 5104

The application of business analytics can uncover latent insights within data, thus furnishing enterprises with a strategic advantage over their rivals. Many organizations have large quantities of data related to their customers and business operations, requiring skilled analysts to uncover meaningful insights and make informed predictions. This module utilizes data visualization as a methodology to analyze and examine datasets of varying sizes. Furthermore, it familiarizes the student with various business analytical frameworks that aid in interpreting and forecasting. The course will offer a suitable software platform for the purpose of data visualization and analytics. The platform will cover visualization and analysis techniques for categorical and numerical variables. The present study will discuss various visualization techniques, including but not limited to Box-and-whisker plots, Mosaics, Rotatable 3D scatter plots, Heat maps, Motion charts, cluster and association charts. The discourse will encompass linear regression models, classification and regression trees, and random forests. The discussion will involve an analysis of methods employed in evaluating the effectiveness of models. Examples from marketing, finance, economics, and their related fields will be included for illustrative purposes.

BA 6002: Analytics for Sports Management

Pre-requisite: MBA 5104

The course will involve a scholarly discussion on the theoretical foundations, evolutionary path, and pragmatic application of analytics within the sports domain. The syllabus will encompass the utilization of analytics in sports about diverse domains such as in-game strategies, player aptitude, team management, sports operations, and fantasy competitions, among other spheres. The curriculum will consist of instructional lectures and talks delivered by notable figures from the athletic sector and scholarly community and culminate in a joint undertaking by the cohort.

BA 6003: Legal and Ethical Issues in Data Management

Pre-requisite: MBA 5104

The course investigates the legal and ethical structures that oversee the implementation of counseling and psychotherapy, emphasizing professional counseling guidelines and standards. This course examines the substance of the aforementioned codes and the underlying principles that serve as their foundation.

BA 6004: Analyzing Exploratory Data in Business

Pre-requisite: MBA 5104

This course's curriculum comprises essential exploratory methodologies to present data succinctly. Before the commencement of formal modeling, these techniques are frequently utilized and can offer valuable insights for developing complex statistical models. The application of exploratory methods is of great importance in refining or discarding potential hypotheses about the world that can be efficiently scrutinized through data analysis. The curriculum will thoroughly examine the plotting mechanisms within the R programming language in conjunction with essential concepts related to developing visual representations of data. The upcoming lecture will provide a comprehensive summary of commonly used multivariate statistical techniques to visualize data with high dimensionality.

BA 6005: Analytics for Healthcare and Medical Industries

Pre-requisite: MBA 5104

The curriculum has been customized to meet the requirements of individuals who aim to acquire a thorough comprehension of the techniques utilized in scrutinizing patient information, genomic repositories, and digital medical records. (EHR). The principal aim of this course is to augment the quality of patient care and optimize the operational efficiency of both public and private healthcare systems. The present course explores the concept of clinical intelligence and the importance of analytics in enabling a healthcare system based on knowledge and data. The aim is to redirect the focus away from simple data collection towards scrutinizing pre-existing data and converting it into actionable insights. The main topics under consideration include the value-driven healthcare system, the assessment of health system performance, the existing quality and performance measurement frameworks (such as HEDIS), the Analytics maturity model (DELTA), the comparison of healthcare delivery, the distinguishing features of high-performing healthcare systems, and the essential IT

infrastructure and human resources needed to leverage analytics for health improvement. Furthermore, a scrutiny of open-source and web-based warehousing tools will be carried out to enable the pragmatic implementation of healthcare analytics.

BA 6006: Data and Web Analytics

Pre-requisite: MBA 5104

The analysis of data to gain insights into user behavior on a website or multiple web pages is an essential aspect of online marketing, commonly referred to as web analytics. This pertains to the procedures of overseeing, assessing, and recording data to measure the degree of digital involvement. The practice of website analytics involves the observation and analysis of website traffic, which includes various metrics such as the number of visitors, the length of their stay, the number of pages they accessed, and the source of their arrival, whether it be through direct access or via a hyperlink. Businesses are employing sophisticated web analytics techniques to establish a standard for their website's performance. Web analytics data can monitor performance indicators, including purchase conversion rate. The utilization of web analytics is a significant technique for conducting market and business research, improving the efficacy of business websites, and comprehending and quantifying web traffic volume. The utilization of web analytics empowers enterprises to optimize website traffic, customer loyalty, and customer revenue.

BA 6007: Social Media and Digital Marketing

Pre-requisite: MBA 5104

The main aim of this course is to equip students with a thorough understanding of how marketing strategies and tactics are being transformed in various industries due to the emergence of social media and digital technologies. The educational program encompasses the attainment of knowledge related to marketing principles that are relevant in the digital domain, analysis of exemplary cases of successful marketing tactics, and refinement of skills in developing, distributing, and communicating value through digital marketing tools and social media platforms. The course includes additional aims that involve understanding current trends in digital marketing and social media and educating students on incorporating both digital and traditional marketing tactics. This academic course delves into digital strategies and tactics from the brand management perspective, building upon conventional marketing courses. This course will offer a thorough examination of the digital marketing and social media phenomena, with a specific focus on critical elements crucial for leveraging social media's capabilities. The aforementioned strategies encompass content management, developing a robust social media profile, mobile marketing, and viral marketing. This discourse aims to analyze the transfer of power from brands to consumers, explicate tactics for proficiently involving consumers through social media, and investigate the correlation between social media and other digital marketing initiatives.

BA 6008: Financial Analytics

Pre-requisite: MBA 5104

The primary focus of this course is on the practical application of concepts, with a notable emphasis on utilizing real-time data for most exercises. The curriculum will encompass a comprehensive examination of fundamental principles in computational finance, succeeded by the pragmatic implementation of these concepts through utilizing contemporary data. The objective of this course is to furnish a thorough initiation to the multifarious functionalities of the R environment and its computational algorithms for the field of finance.

BA 6009: Supply Chain Analytics

Pre-requisite: MBA 5104

Analytics examines data to develop business insights and draw reasonable conclusions based on different patterns. In the past few years, the use of analytics has become increasingly important in business in general, as well as in supply chain management. This course addresses the whole idea in three broad segments: First, the theoretical foundation to build various models that incorporate both the power of predictive analytics and the trends and autocorrelation patterns identified from historical data. Second, using these models on multiple transactions, e.g., point-of-sale information, to build demand forecasts as an aggregation of models across the enterprise. Third, this course also discusses using predictive dynamic models for aggregate supply chain planning, local distribution decision-making, and influencing and shaping demand.

BA 6010: Analytics for Talent Management

Pre-requisite: MBA 5104

Data is collected throughout the complete talent cycle, which includes multiple systems like applicant tracking systems, human resource information systems, learning management platforms, and performance assessments. What factors contribute to HR practitioners' ineffective utilization and implementation of this information?

The "Analytics for Talent Management" course addresses the aforementioned predicament by offering a two-day, interactive instructional curriculum. The program aims to provide HR professionals with the essential lexicon, competencies, and expertise to navigate data and analytics effectively. The curriculum aims to equip students to think analytically, comprehend critical statistical methodologies, and establish a correlation between talent management initiatives and their resultant business impact.

BA 6011: Capstone Project (Business Analytics)

Pre-requisite: MBA 5104

The capstone project module provides students the chance to demonstrate their acquired knowledge and competencies from previous modules by carrying out a medium-scale research and development endeavor. The students are mandated to execute a variety of duties, which encompass the identification of problems that are specific to the project, the provision of a rationale and a delineation of the requisite activities to tackle the aforementioned problems, the creation of a software-intensive resolution, the dissemination of the results to various project stakeholders, and the identification of supplementary inquiries that are necessary. The results of the conducted inquiry should exhibit the qualities that qualify them to