

ANALYTICS (BNA)

BNA 2103 Systems Analysis (3-1-3)

Traditional systems development life cycle (SDLC) and alternative methodologies are reviewed. Focus is on planning, specification of structured requirements, methods, techniques, and tools used to determine information requirements, and documentation. Systems design methods and implementation issues are also introduced.

BNA 3003 Systems Analysis (3-1-3)

Traditional systems development life cycle (SDLC) and alternative methodologies are reviewed. Focus is on planning, specification of structured requirements, methods, techniques, and tools used to determine information requirements, and documentation. Systems design methods and implementation issues are also introduced.

Prerequisites: CIS 2103

Corequisites: BIS 3003

BNA 3103 Business Intelligence and Knowledge Management (3-1-3)

Focuses on knowledge and value building for the organisation using business intelligence and analytics. As an introductory course it covers a broad range of technologies, applications, and processes for gathering, storing, accessing, and analysing data to help users make new analytical models outside traditional frameworks. Specifically, it covers, knowledge fundamentals and management, business performance management, new models generation as support for decisions and value creation, and others. Hands-on experience is provided through projects that use several technologies and software.

Prerequisites: BNA 2103

BNA 3133 Database Design and Implementation (3-1-3)

Through case studies, readings, and hands-on experience this course facilitates an in-depth study of database design to underpin decision support systems and related knowledge-based technologies. Additional focus is on organisational decision-making and its data, information, and knowledge-based support systems.

Prerequisites: BNA 2103

BNA 4023 Big-Data and Advanced Data Mining (3-1-3)

Develop an understanding of the quantitative techniques and tools to solve issues related to resource allocation, optimisation, process management and decision analysis problems in organisations. Apply linear programming, simulation modelling, network modelling and decision analysis tools to complex quality management processes using specialised software.

Prerequisites: BNA 3133

BNA 4033 Data Visualisation Techniques and Tools (3-1-3)

Covers advanced techniques for communicating complex business analytics information, as a key element of modern data engineering. Visual, perceptive and cognitive issues relating to the use of data visualisation systems is discussed. Additionally, the influence of visualisation channel and messaging properties such as entropy, information rate and channel capacity is investigated. Frameworks for optimal selection and structured design of visualisation pipeline elements are treated, as well as the design aspects of visualisation schemes for supporting high-end business analytics.

Prerequisites: BNA 3003

BNA 4103 Advanced Business Analytics (3-1-3)

Advances students' understanding of how manage and analyse business data to gain competitive advantage. Focus is on expanding student learning to ensure expansion of student experience to cover: i) a wider breadth of analytical software packages ii) the interpretation of outputs, and iii) resulting improvements in decision-making. It includes case studies, projects, and real-world business problems to present students with opportunities to apply business analytics skills and to use business analytics software applications.

Prerequisites: BNA 3103

BNA 4113 Applied Marketing Analytics and Reporting (3-1-3)

Provides an in-depth understanding of contemporary business analytics tools and systems used to measure, analyse and report digital and non-digital marketing performance. Topics include a range of open-source and proprietary analytic tools used in social and digital marketing schemes. Additionally, strategic issues pertaining to the use of high-end analytics for assessing marketing campaign efficacy is examined, coupled with frameworks for structured deployment of marketing analytics solutions, and marketing performance reporting.

Prerequisites: STS 2003, MRK 1103

BNA 4123 Ethics and Security in Analytics (3-1-3)

Provides an in-depth understanding of diverse topics related to Security, Privacy and Ethics in business analytics. The key tools and frameworks available to analysts to examine security infrastructure in a business analytics project and identify the potential ethical issues that may arise. It also includes a range of functions and measures the analyst needs to ensure the security and privacy of proprietary data and the measures necessary for de-identification and privacy safeguards. In addition, strategic issues and concerns pertaining to analytic solutions and data sources are examined

Prerequisites: MGT 3003

BNA 4133 ERP Systems (3-1-3)

Develop a sophisticated understanding of the concept of ERP systems. The course illustrates how business processes interact in an ERP system in areas of: Procurement, Materials Management, Production Planning and Execution, Goods Movement, Sales Order Management, Financial Accounting, HCM and Controlling, and Enterprise Asset Management. The course Develops in-depth theoretical and practical knowledge regarding ERP systems through exercises and case studies.

Prerequisites: MRK 1103

BNA 4203 Business Analytics Research Project (3-1-3)

Demonstrating mastery of the program learning outcomes, this capstone final semester course requires the application of in-depth knowledge and research skills gained across the Business Analytics Program to be evidenced in the industry-based project and report. The purpose is to integrate previously taught stand-alone courses in order to identify opportunities for the application and critical review of theory and practice in a business environment.