

Master of Science Program in Business Informatics

Core Component

BI501 Statistics and Modeling for Business

This course provides an introduction to business statistics and decision modeling. Topics will include: Data collection and presentation, probability and probability distributions, sampling, forecasting, statistical quality control, risk analysis, hypothesis testing, decision analysis, optimisation modeling, and simple financial economics.

BI502 Business Information Systems

This course addresses information use and the need to understand the different technologies available, the risk associated with the use of these information, the fundamental ethical and social implications for using information, and the possible view that information itself is a centered product within an organization. Topics will include: the systems approach, models of information in organisations, structures of organisational information systems such as transactional systems, decision support systems and distributed information systems, information systems policy, information and communications technology, analysis tools, databases and development life cycles, electronic commerce, artificial intelligence, and ethics and social factors.

BI503 Business Data Communications

This course provides a foundation for business managers to leverage their data communication networks. Topics will include: Introduction to data communications, Business information, Telecommunication architectures and standards, Network fundamentals, The OSI model, Network devices, Local Area Networks, LAN components, Wide Area Networks, The Internet, Network Security, Network Design Considerations and Network management.

BI504 Business Systems Analysis

This course is designed to prepare advanced Business students to be effective managers of Information Analysis teams. It presents an overview of the various Systems Analysis Life Cycles and their strengths and limitations; and then focuses on a comparison of the Structured Analysis Life Cycle, and the Rapid Prototyping Life Cycle. Topics will include: what is analysis, what is a methodology, checklists, strengths and weaknesses of different methodologies, structured approach, prototyping approach, UML, Soft Systems methodology, CASE tools, stakeholder analysis, risk assessment, Boehm's spiral, JAD/RAD, extreme programming, database schemas, and data migration/conversion

BI505 Databases for Business

This course discusses the issues concerned with database design and implementation. Good database design helps ensure that the integrity of data is maintained; that the database operates efficiently and that the database effectively serves its business purpose. Topics will include: types of databases, SQL, Entity relationship modeling, distributed databases, object oriented databases and database administration.

Elective Component

BI601 Business Decision Analysis

The aim of this course is to expose students to various methods identifying, defining and analyzing decision-making problems. Topics will include: payoff matrices, multifactor evaluation techniques, decision trees, AHP, SMART, influence diagrams, causal diagrams, mindmaps, and group decision making techniques.

BI602 Business Strategic Management

This course primarily examines the inextricable link between strategic planning and the process of management. Also discussed is the shifting focus of management from operations to strategy. Finally, attention is given to the different fundamental approaches to strategic

planning that can support management decision making. Topics will include: different strategic planning approaches, scenario planning, Delphi technique, morphological analysis, soft systems methodology, and qualitative and quantitative tools.

BI603 Electronic Business

This course provides business managers with an overview of the key business practices and technologies of e-business. Topics will include: Introduction to e-business, Business models, E-business infrastructure, E-environment, E-business strategy, Supply chain management, E-procurement, Customer relationship management, E-business design & security and E-business implementation.

BI604 Business Enterprise Architectures

This course is designed to prepare advanced Business students to be effective managers within organizations that are expected to grow increasingly dependent on information technologies. As such, it presents an overview of Information Technology and how it can be applied; followed by details on how to acquire and manage Information Technology. Topics will include: information resource assessment, strategic information vision, agile systems, netcentric systems, e-business directions, reactive versus proactive architectures, reusable software components, outsourcing, risk assessment, and integration issues.

BI605 Data Warehousing and Data Mining

This course exposes the students to different database technologies such as data warehousing, on-line analytical processing (OLAP), and on-line analytical mining (OLAM). It will also teach students different data manipulation techniques including data extraction and cleaning and present the students with a variety of data mining tools to enable them to use these tools in practice. Topics will include: knowledge discovery in databases, artificial neural networks, classification, clustering, association rules, web mining, and spatial and temporal data mining.

BI606 Business Systems Evaluation

This course will help you to plan wisely for the use of Information and Communication Technology (ICT) services in your organisation. By the end of the course, you will know how to prepare business cases or to evaluate proposals, such as tenders, that ensure that ICT provides benefit to the business. Topics will include: Cost-benefit analysis, including net present value, Statement of Purpose, based upon stakeholder analysis, and Risk-remedy assessment.

BI607 Business Systems and Network Administration

This course introduces students to the skills, methodologies and activities required to administer a network of computer systems which consists of various hardware, software and users within an organisational infrastructure. In particular, students will be introduced to ethics, user, device, and file system administration, computer and network security, system monitoring, performance tuning, administrative support tools, network, server and client administration. Topics will include: ethics, user, device, and file system administration, computer and network security, system monitoring, performance tuning, administrative support tools, network, server and client administration, LINUX, TCP/IP, routing.

BI 608- 610 Special Topics in Business Informatics

Special topics will be made available to students when internationally acclaimed academics visit DPU and are encouraged to provide a course on a currently important topic of interest within business informatics community.

Research Component

BI701 Independent Study

This course is a self-study course under the supervision of an advisor on a topic agreed to by the MSc. (BI) committee.

BI702 Research Methodology and Techniques

This course aims to provide students undertaking their research project with an understanding of basic frameworks in research. The course covers research techniques for gathering information, developing a research proposal and evaluating research carried out by others. Major areas include scientific and interpretivist approaches, design, survey methods and instruments, case study, field study, experimentation, data collection and analysis.

BI710 Thesis