

Bachelor of Computing and Information Technology (BCIT) Course Description

ARAB 101: Communication Skills in Arabic

This course teaches students basic communication skills in Arabic language, including verbal communication and presentation skills.

Pre-requisite: None

ARAB 202: Writing Skills in Arabic

The course provides students with skills necessary for scientific and technical writing. Students have the opportunity to learn about writing in clear and concise Arabic and to apply the specific strategies learned to writing business reports, articles, and memos.

Pre-requisite: ARAB 101

ARAB 404: Selected Topics in Arabic Literature

This course addresses selected topics in contemporary Arabic literature. Students are introduced to the literary work of a selected number of famous poets, writers.

Pre-requisite: ARAB 202

CIT 101: Programming Fundamentals I

Introduction to programming in Java and problem solving. Variables, data types, input/output, using objects and methods from the standard classes (such as String and Scanner), control structures, writing methods, arrays. Solving problems with algorithms and implementing algorithms in Java. Writing Java programs with multiple classes: constructors, visibility modifiers, static members, accessor and mutator methods, and arrays of objects.

Pre-requisite: Orientation year

CIT 102: Programming Fundamentals II

Advanced object-oriented programming; inheritance; polymorphism; abstract classes and interfaces, container/collection classes, packages, object-oriented design, software modeling, event-driven programming, recursion, use of stacks, queues and lists from API, searching and sorting.

Pre-requisite: CIT 101

CIT 112 IT Systems

This course focuses on the operational aspects of information systems in organizations by examining the concepts, tools and techniques available to CIT professionals responsible for the delivery of CIT services. Topics include the organization of the CIT services; the procurement of hardware, software and vendor services; operation of data centers, help desks and user training, the development and use of RFPs (Request for Proposals) and SLAs (Service Level Agreements), the integration of services and operations with application development project needs, and the role of capital and operating budgets.

Pre-requisite: MIS 101

CIT 201: Data Structures

Sorting arrays of primitive data and arrays of objects. Exception handling. Design, implementation, application, and analysis of algorithms on a variety of data structures, including stacks, queues, lists, trees, binary heaps, hash tables, and graphs. Algorithmic analysis includes computation of running times and asymptotic analysis.

Pre-requisite: CIT 102

CIT 221 Computer Architecture

A course on computer systems topics, focusing on machine-level programming and architecture and their relevance for application programming. Information representations, assembly language and debuggers, processor architecture, program optimization, memory hierarchy and caching.

Pre-requisite: CIT 102

CIT 251: Fundamentals of Web Design

This course introduces basic concepts of the Internet and World-Wide Web. Students will learn how to create web pages with HTML, and use JavaScript for dynamic effects. Major topics include the roles and operation of web browsers and servers, including interacting with web applications through forms; and the separation of formatting and logical structure in HTML documents, stylesheets, and the basic principles of effective interface design for the web.

Pre-requisite: MIS 101

CIT 271: Interactive Media

The user interface development process, including user and task analysis, design, prototyping and evaluation. Human memory, perception, and motor abilities as they relate to user interface design. Students design a low-tech prototype of a user interface. Students prepare written documents describing their activities and present the final results to the class.

Pre-requisite: MIS 101

CIT 283: Critical Thinking

The course begins with an introduction to problem solving via simple logical puzzles. This is followed by an elementary study of arguments, including general rules for arguments and types of arguments. Critical thinking and reasoning are approached through a more advanced study of arguments dealing with values and ethics, reality, causality, induction, and deduction. The course concludes with discussions of faulty reasoning and fallacy. The teaching methodology for the course provides student-centered learning through collaborative enquiry.

Pre-requisite: QUAN 202

CIT 323 Operating Systems

A course on computer systems topics, focusing on operating systems components and their relevance for application programming. Linking, processes, virtual memory, dynamic memory allocation, system level I/O, networking and network programming, concurrent servers and web services.

Pre-requisite: CIT 201

CIT 381: Project Management

An introduction to the concept and techniques of project management for a broad range of systems, including Web-based application development. Topics include resource management, organizational factors, project manager responsibilities, team building, and risk management. Tools and techniques for project estimating and scheduling will be presented. Case study and group projects.

Pre-requisite: MIS 201

CIT 385: Information Assurance

This course is a survey of the fundamental elements of computer security and information assurance. Topics may include confidentiality, integrity, and availability; security policies; authentication; access control; risk management; threat and vulnerability assessment; common attack/defense methods; ethical issues.

Pre-requisite: MIS 101

CIT 389: Cooperative Assignment

This course provides the opportunity for the students to understand local Businesses within the Kingdom of Saudi Arabia and how they operate. General assignments do not focus on a specific concentration. This course requires the collaboration of employers, faculty, and co-op staff to ensure the success of the program.

Pre-requisite: Official Declaration of Concentration and 60 academic-level credit hours

CIT 481: Senior Capstone Project I

Application of Information Technology (IT) concepts, principles, and practices in the development of computer-base IT systems. The course leads to the development of the system requirements and design phases.

Pre-requisite: Senior standing

CIT 482: Senior Capstone Project II

In completion of the first part, the course will emphasize the application of technical, managerial, communications, and interpersonal skills to the development of a realistic IT-based project in a team environment.

Pre-requisite: CIT 481

COMP 001: Computer Skills I

This course introduces students to the use of computers and the basic constructs of word processing, spreadsheets, and presentations for business processes. Students are provided with hands-on tutorial experience with Microsoft Office- with initial emphasis on the various features of MS WORD, MS EXCEL and MS POWERPOINT. These software tools are also presented and used to improve personal productivity and work effectiveness.

Pre-requisite: NONE

COMP 002: Computer Skills II

This course is an introduction to computer-based information systems and their applications in business-especially the use of Management Information Systems by management. It continues with the hands-on teaching of more powerful features of EXCEL and introduces students to MS ACCESS and MS OUTLOOK so they may learn the fundamentals of data management and the design and utilization of web pages for E-Commerce.

Pre-requisite: COMP 001

ENG 101: English Writing I, ENG: 102 English Writing II and ENG: 201 Technical English Writing

These classes are designed to provide practice in composing business and technology related documents. Students refine their English writing skills while engaged in creating memos, abstracts, resumes, and a variety of business and technology letters. Proficiency in creating well-formatted and well-designed documents using a word processor is developed through the practical exercises prescribed for these classes.

Pre-requisites: Orientation year for ENG 101, ENG 101 for ENG 102 and ENG 102 for ENG 201

ISLM 101: Foundations of Islamic Culture

Students are novices, and this course introduces the student to the foundations of Islamic principles and culture and helps the student appreciate the way Islam views the human being, life, and the universe.

Pre-requisite: ENG 04R

ISLM 202: Foundations of Islamic Economy

This course provides students with economic principles from an Islamic perspective. It addresses Islamic economic concepts, such as protection of property, ownership, inheritance, consumption, Islamic finance, and economic welfare. The course also provides an introduction to Islamic Banking Systems.

Pre-requisite: ISLM 101

ISLM 303: Work Ethics in Islam

Work ethics is one of the most important aspects that students need to understand and implement when they graduate and become employees. The rich content of work ethics in Islam helps students develop personal skills and motivates them to excel in their future employment.

Pre-requisite: ISLM 202

ISLM 404: Selected Topics in Islamic Thought

This course explores current thoughts in Islamic literature related to contemporary social, political, and economical issues.

Pre-requisite: ISLM 303

KDTH 102: Introduction to Physical Sciences

This course provides at least three perspectives on how we understand the properties of the physical world that surrounds us. The primary disciplines used to accomplish this are biology, chemistry, and physics. This course focuses on one of these perspectives or uses all three.

Pre-requisite: Orientation year

KDTH 202: Introduction to Social Sciences

This course provides several ways of introducing students to conceptualize the nature of the human experience. Three potential lenses are suggested: psychology, sociology, and anthropology. This course focuses on one of these perspectives or uses all three.

Pre-requisite: Orientation year

MGT 101: Introduction to Management

This course introduces students to the practice of management. It presents numerous illustrations of business environments and open systems in which managers solve problems, transform scarce inputs such as capital, skilled people, and materials through the use of limited information and available technology into product and service outputs demanded by customers. Students examine in detail the primary management functions of planning, organizing, leading and controlling the activities of the firm.

Pre-requisite: NONE

MIS 101: IS in Organizations and Society

Understanding of various perspectives of Information Systems, various perspectives, role of technology and associated areas including e-commerce, e-business and managerial decision making in business processes along with knowledge work systems.

Pre-requisite: MGT 101

MIS 201: Information Systems Analysis and Design

This course reflects the information explosion of recent years, the new technological advances in information systems, and the exponential growth in electronic business processes. Information systems analysis and design is the process of determining information technology needs for a particular application or set of applications and defining appropriate solutions for these needs. The course provides extensive and comprehensive coverage of systems development techniques for the redesign of core business processes. The course aims to prepare future analysts, programmers, managers, and consultants for delivery and evaluation of IT-enabled process redesign projects.

Pre-requisite: MIS 101

MIS 303: Data Management

This course reflects the information explosion of recent years, the new technological advances in information systems, and the exponential growth in electronic business processes. Information systems analysis and design is the process of determining information technology needs for a particular application or set of applications and defining appropriate solutions for these needs. The course provides extensive and comprehensive coverage of systems development techniques for the redesign of core business processes. The course aims to prepare future analysts, programmers, managers, and consultants for delivery and evaluation of IT-enabled process redesign projects.

Pre-requisite: MIS 201

MIS 404 Management of Information Systems

This course provides a broad based introduction to the management of information systems focusing on three interrelated themes: technology, organization and strategy. The goal of this course is to equip students with the knowledge and tools they need to analyze, design, build and implement information systems taking into account both technological and business factors.

Pre-requisite: MIS 303

MKGT 201: Introduction to Marketing

The course presents a thorough and systematic coverage of marketing theory and practice. It is designed to provide you with an overview of the marketing field. The concept and the importance of marketing, the environmental influences that impact marketing managers, strategic marketing fundamentals, consumer behavior, market segmentation, and managerial issues related to the marketing mix (4Ps) decisions (product, price, promotion and place) will be explored comprehensively throughout the course. The marketing research process will be also examined.

Pre-requisite: ORG 101

NITE 301: Organizational Leadership and Supervision

Organizational Leadership and Supervision is a highly individualized, practical, people-oriented approach to the practice of supervision. In addition to management skills, students gain a technical background in a specialty area of their choice such as operations or quality control.

Pre-requisite: ORG 101

NITE 303: Research Methods and Techniques

This course is a general introduction to social research methods and will cover four broad topics: the foundations of social science, research design, data collection, and data analysis. In discussing each topic, we will also consider the ethical implications of social research. Social research is a craft, and like any other craft, it takes practice to do it well. Therefore, our approach will be hands-on right from the start. Student will have opportunities to learn by doing in all aspects of the course, in class meetings, the computer lab, and out-of-class assignments.

Pre-requisite: CIT 293

NITE 305: Introduction to Ecology

This is an introduction to life-environmental relationships and dynamics: ecological concepts, population dynamics, variation, adaptation and evolution.

Pre-requisite: KDTH 101

NITE 403: Fundamentals of Human Structure and Function

This course provides students with basic anatomy and physiology nervous system, the muscles, endocrine system, cardio-respiratory skeletal system, and gastrointestinal functions.

Pre-requisite: KDTH 101

ORG 101: Organizational Behavior

Core topics in this course include examination of individual behavior and team processes. Specific theories include employee motivation and performance, organizational communication, work perceptions and attitudes, individual and group decision-making, team dynamics, and conflict management. Applications of these ideas to contemporary practices in human resource management are investigated.

Pre-requisite: Orientation year

QUAL 201: Quality Management

The purpose of this course is to provide the student with the fundamental knowledge of current quality applications in use today for competitive manufacturing environments. Topics for discussion follow the Certified Quality Engineer's body of knowledge, which includes quality functions, organizational structure, and management. Computer applications in statistical methods and cost of quality concepts will be addressed.

Pre-requisite: ORG 101

QUAN 001: Mathematics

This course deals with essential mathematical topics in management, such as: linear and quadratic functions, sequences and sums, compound interest, exponential and logarithmic functions, counting techniques and probability

Pre-requisite: NONE

QUAN 201: Discrete Mathematics

This course covers the logic of compound statements. applications to digital logic circuits and computer arithmetic, the logic of quantified statements, programming logic, elementary number theory and methods of proof, sequences and mathematical induction, combinatorial reasoning, and discrete data structures.

Pre-requisite: Orientation year

QUAN 202: Calculus for the Social Sciences

This course is designed for students specializing in business or the social sciences. It provides an introduction to differential and integral calculus and shows how these mathematical techniques are used to derive an understanding of the quantitative' models that underlie many business practices.

Pre-requisite: Orientation year

QUAN 203: Statistical Reasoning

This course introduces students to: descriptive statistics of different distributions of populations; testing hypotheses about differences in means in parametric and nonparametric distributions; and to analysis of variance, linear correlation and multiple regression techniques.

Pre-requisite: QUAN 201