

WBIT - INFORMATION TECHNOLOGY

WBIT 1100 Introduction to Information Technology (3-0-3)

This course is an introductory course in information technology. Topics include foundations in hardware, software, data and an overview of the use of information technology in organizations. Additional topics include structured programming techniques, systems development, database design and networking, with an emphasis on appropriate business ethics, interpersonal skills and team building.

WBIT 1310 Programming and Problem Solving I (3-0-3)

Prerequisite: C or better in Area A mathematics course and in WBIT 1100.

This course helps students to develop basic problem-solving skills using the Java programming language. Students are introduced to fundamentals of Java programming language with emphasis on primitive data types, control structures, methods, arrays, classes, objects, abstraction, inheritance and polymorphism. Students learn basic techniques of good programming style, design, coding, debugging, and documentation. Students are able to create programs to solve basic practical problems.

Prerequisite(s): (WBIT 1100 with a minimum grade of C and MATH 1001 with a minimum grade of C) or (WBIT 1100 with a minimum grade of C and MATH 1101 with a minimum grade of C) or (WBIT 1100 with a minimum grade of C and MATH 1111 with a minimum grade of C) or (WBIT 1100 with a minimum grade of C and MATH 1113 with a minimum grade of C) or (WBIT 1100 with a minimum grade of C and MATH 1125 with a minimum grade of C) or (WBIT 1100 with a minimum grade of C and MATH 1131 with a minimum grade of C)

WBIT 2000 The Enterprise and IT (3-0-3)

Prerequisite or Corequisite: WBIT 1100 with a grade of C or better. This course will look at the structure and management of an information technology infrastructure. From the management aspect the course will touch on principles and practices of managing both people and technology to support an organization. The course will emphasize how to make an information technology infrastructure effective, efficient, and productive. The management of hardware, software, data, networks and other supporting IT functions will be studied.

Prerequisite(s): WBIT 1100 (may be taken concurrently) with a minimum grade of C

WBIT 2300 Discrete Math for IT (3-0-3)

Prerequisites: MATH 1113 or MATH 1125 with a grade of C or better. Discrete (as opposed to continuous) mathematics is of direct importance to the fields of Computer Science and Information Technology. This branch of mathematics includes studying areas such as set theory, logic, relations, graph theory, and analysis of algorithms. This course is intended to provide students with an understanding of these areas and their use in the fields of Computer Science and Information Technology.

Prerequisite(s): (MATH 1113 with a minimum grade of C and MATH 1125 with a minimum grade of C)

WBIT 2311 Programming and Problem Solving II (3-0-3)

Prerequisites: WBIT 1310 and WBIT 2300 with a min. grade of C. The emphasis of this course is on advanced programming techniques in Java including GUI's, software reuse through component libraries, recursion, event-driven programming, database processing, file processing, and exception handling. Students are able to create event-driven, graphical programs or text-based programs solving practical problems incorporating databases and external files.

Prerequisite(s): (WBIT 1310 with a minimum grade of C and WBIT 2300 with a minimum grade of C)

WBIT 3010 Technical Communication (3-0-3)

Prerequisite: ENGL 1102 with a min. grade of C. This course covers workplace communication at the intermediate level. Topics include audience analysis, research proposal and report writing, document and visual design, editing and presentation design.

Prerequisite(s): ENGL 1102 with a minimum grade of C

WBIT 3110 Systems Analysis and Design (3-0-3)

Prerequisites: WBIT 1310 and WBIT 2000 with a grade of C or better. This course introduces the fundamental principles of the design and analysis of IT applications. In this course, students will learn to apply the tools and techniques commonly used by systems analysts to build and document IT applications. Classical and structured tools for describing data flow, data structure, process flow, file design, input and output design, and program specification will be studied, as will object-oriented techniques.

Prerequisite(s): (WBIT 1310 with a minimum grade of C and WBIT 2000 with a minimum grade of C)

WBIT 3111 Information Technology Project Management (3-0-3)

Prerequisites: WBIT 3010, WBIT 3110, and STAT 1401 with a grade of C or better. Project management techniques and tools as applied to information systems projects including resource and personnel management and allocation, product testing, scheduling, and project management software. Students will study examples of both successful and unsuccessful projects and apply lessons learned to a class project.

Prerequisite(s): (WBIT 3010 with a minimum grade of C and WBIT 3110 with a minimum grade of C and STAT 1401 with a minimum grade of C) or (WBIT 3010 with a minimum grade of C and WBIT 3110 with a minimum grade of C and STAT 1127 with a minimum grade of C) or (WBIT 3010 with a minimum grade of C and WBIT 3110 with a minimum grade of C and STAT 1127H with a minimum grade of C)

WBIT 3200 Database Design, Development and Deployment (3-0-3)

Prerequisite or Corequisite: WBIT 2311 with a grade of C or better. This is an advanced course in database design, development and deployment. Course emphasizes database design drawing distinctions between data modeling and process modeling using various modeling techniques including Entity-Relationship Modeling, Object Modeling and Data Flow Diagramming; database development using the relational model, normalization, and SQL; database deployment including control mechanisms, forms, reports, menus and web interfaces. Additional topics include procedures, functions, packages and triggers. Students will design, create and process a database to demonstrate competency in the course content.

Prerequisite(s): WBIT 2311 (may be taken concurrently) with a minimum grade of C

WBIT 3400 Introduction to Digital Media (3-0-3)

Prerequisite: WBIT 1100 with a grade of C or better. This course covers the basic design principles and tools for creating and editing digital media elements. Examples of these elements include graphics, animation, audio, video, virtual space and simulation.

Prerequisite(s): WBIT 1100 with a minimum grade of C

WBIT 3410 Web Applications Development (3-0-3)

Prerequisite: WBIT 1310 with a min. grade of C. This course provides a survey of techniques and tools for developing basic web pages for delivery of text and graphic information; focus on page markup languages, client-side scripting, page design principles, page layout techniques, markup language syntax, and page styling methods.

Prerequisite(s): WBIT 1310

WBIT 3500 Architecture and Operating Systems (3-0-3)

Prerequisite: WBIT 1310 with a grade of C or better. This course introduces students to the architectures of computer systems and the operating systems that run on them. It explores and gives experience with some common computer designs and operating systems. Topics include basic computer architecture, instruction set architecture, memory, memory management, processes, and file systems.

Prerequisite(s): WBIT 1310 with a minimum grade of C

WBIT 3510 Data Communications and Networking (3-0-3)

Prerequisite: WBIT 3500 with a min. grade of C. This course covers computer network and communications concepts, principles, components, and practices; coverage of common networking standards, topologies, architectures, and protocols; design and operational issues surrounding network planning, configuration, monitoring, troubleshooting, and management.

Prerequisite(s): WBIT 3500 with a minimum grade of C

WBIT 3600 Introduction to E-Commerce (3-0-3)

Prerequisite: WBIT 3110 and WBIT 3410 with a grade of C or better. The emphasis of this course is on basic principles and practices of E-business and E-commerce. Topics include infrastructures and applications of Ecommerce, E-Tailing, E-Marketing, advertisement, B2B, B2C, C2C, E-Government, M-Commerce, E-Learning, electronic payment systems, security, and legal issues. Students also learn to build simple dynamic E-commerce sites using server-side scripting.

Prerequisite(s): (WBIT 3110 with a minimum grade of C and WBIT 3410 with a minimum grade of C)

WBIT 4020 Professional Practices and Ethics (3-0-3)

This course covers historical, social, economic and legal considerations of information technology. It includes studies of professional codes of ethical conduct, philosophy of ethics, risk analysis, liability, responsibility, security, privacy, intellectual property, the internet and various laws that affect an information technology infrastructure. This course is only offered to students with senior standing.

Restriction(s):

Enrollment limited to Senior students.

Enrollment is limited to Undergraduate Level level students.

WBIT 4030 Senior Project (3-0-3)

A capstone course for WebBSIT majors, students will be expected to complete a final team or individual project. The project may be an approved industry, internship or a project developed and designed by faculty of the WebBSIT. Students will apply skills and knowledge from previous WebBSIT courses in project management, system design and development, digital media development, eCommerce, database design, and system integration.

Restriction(s):

Enrollment limited to Senior students.

WBIT 4112 Systems Acquisition, Integration and Implementation (3-0-3)

Prerequisites: WBIT 3110, WBIT 3200, and WBIT 4520 with a grade of C or better. Most IT applications used by organizations are configured from components that have been purchased from third-party vendors. This includes both hardware components and, increasingly, software components. In this course, students will study the component acquisition process, and methods and techniques for integrating these components into an existing IT infrastructure.

Prerequisite(s): (WBIT 3110 with a minimum grade of C and WBIT 3200 with a minimum grade of C and WBIT 4520 with a minimum grade of C)

WBIT 4120 Human-Computer Interaction (3-0-3)

Prerequisite: WBIT 2311 and WBIT 3400 with a grade of C or better.

The emphasis of this course is on fundamentals of human-machine interfaces, both cognitive and physical. Learning styles and effects of short-term memory on cognition and reaction will affect hardware and software development. Students will design a prototype interface.

Prerequisite(s): (WBIT 2311 with a minimum grade of C and WBIT 3400 with a minimum grade of C)

WBIT 4520 Information Assurance and Security (3-0-3)

Prerequisite or Corequisite: WBIT 3510 with a grade of C or better.

This course is an introduction to information assurance and security in computing. Topics include computer, network (distributed) system and cyber security, digital assets protection, data backup and disaster recovery, encryption, cryptography, computer virus, firewalls, terrorism and cyber crimes, legal, ethical and professional issues, risk management, information security design, implementation and maintenance.

Prerequisite(s): WBIT 3510 with a minimum grade of C

WBIT 4601 Customer Relationship Management (3-0-3)

Prerequisites: WBIT 3200 and WBIT 3600 with a grade of C or better. The use of IT applications has allowed many organizations to collect large amounts of data on their clients and to use such data to improve the relationships with their customers. In this course, students will study customer relationship management systems, including the reasons for their emergence, the functionalities that they provide and the issues one would have to face to successfully introduce a Customer Relationship Management System into an organization.

Prerequisite(s): (WBIT 3200 with a minimum grade of C and WBIT 3600 with a minimum grade of C)

WBIT 4602 IT Seminar (3-0-3)

Prerequisites: WBIT 3111, WBIT 3200, WBIT 3600, and WBIT 4120 with a grade of C or better. Students will participate in research and discussion on a topic of current interest. A term paper on the topic (or related subtopic) is required. A designated faculty member will select the topic in advance based on his/her expertise and lead the seminar.

Prerequisite(s): (WBIT 3111 with a minimum grade of C and WBIT 3200 with a minimum grade of C and WBIT 3600 with a minimum grade of C and WBIT 4120 with a minimum grade of C)

WBIT 4610 IT Policy and Law (3-0-3)

Prerequisite: WBIT 3600 with a grade of C or better. This course will focus on the legal implications of conducting business in the information technology age. Topics will include current understanding of Internet contracts, copyright, trademark and patent law. Further, this course will examine cutting-edge cases relating to security, e-commerce, and emerging ethical issues and trends.

Prerequisite(s): WBIT 3600 with a minimum grade of C