Information Systems and Business Communication (ISBC)

Courses

ISBC 117. Personal Productivity with Information Technology. 1 Credit.
Introductory lab-based course covering basic computer hardware, operating systems, software, and Microsoft Office tools. F, S, SS.

ISBC 217. Fundamentals of Computer Information Systems. 3 Credits.
This course exposes students to the role information systems play in the business world with an introduction to information technology topics and data analytics. This experiential and application-oriented course develops spreadsheet, visualization, and database competencies relevant to business professionals. F, S, SS.

ISBC 240. Operating Systems Principles. 3 Credits.
An introduction to a variety of computer operating systems. Emphasis placed on terminology, concepts, system commands, architecture, maintenance, and troubleshooting. Hands-on experience with operating systems and operating environments such as Windows and UNIX at the workstation and server level. Prerequisite: ISBC 117. On demand.

ISBC 300. Programming for Data Analytics. 3 Credits.
This course introduces one powerful and widely used programming language for data analytics. Course content may vary based on the current programming trend. The programming language chosen has easily understood syntax and library or open source modules for everything from web development to data analysis. This course covers the syntax and semantic of the programming language and its uses as a data analytics tool. The material will emphasize the core concepts in the programming language, specifically data types, data structures, functions, and text and image processing and how they can be implemented and used to address data analytics problems. Popular modules used in data analysis such as data mining and data visualization will also be covered. F.

ISBC 305. End-User Applications. 3 Credits.
Development of proficiency in the use of end-user software applications with emphasis on spreadsheet and database. Spreadsheet applications include solutions for typical business situations using functions, macros and linking. Database applications include development of and querying of databases, linking, generating forms and reports, and developing menus. Prerequisite: ISBC 117 or ISBC 217. S.

ISBC 330. Database Management. 3 Credits.
This course covers the fundamentals of database design and management. Topics include, but not limited to, database models, database normalization, entity-relationship diagramming, SQL and database implementation and management. The course will provide a balance of theory and practical applications and will culminate in database implementation exercises conducted by students. F, S.

ISBC 340. Fundamentals of Networking. 3 Credits.
Explores principles of networking computer systems; telecommunications hardware, software, and media components; and approaches to efficient business data communications. The student will be exposed to telecommunications terminology, concepts, protocols, and logical and physical design of local area networks. S.

ISBC 350. Networking II. 3 Credits.
An in-depth study of networking protocols, planning, design, security, VLANs, switch and router configuration, workstation and server management, troubleshooting, and when possible, enterprise level network topics. Prerequisite: ISBC 340. On demand.

ISBC 370. Web Development. 3 Credits.
An introduction to web application development in a business environment. Students learn programming theory, fundamentals and practices in writing programs to meets business requirements, solve business problems, and address business opportunities in the desktop, mobile and/or Internet/intranet environments. S.

ISBC 378. Cooperative Education. 1-2 Credits.
Enrollment in 1 credit grants half-time student status, 2 credits grants full-time status (See Academic Catalog description of Cooperative Education.). Prerequisites: ISBC 217 and approval of the Information Systems Cooperative Education/Internship Coordinator. Repeatable to 6 credits. S/U grading. F, S, SS.

ISBC 410. Information Security. 3 Credits.
An introduction to information security and information assurance. The students will achieve a firm intuition about what information security means; be able to recognize potential threats to information confidentiality, integrity and availability; be aware of some of the underlying technologies that address these challenges; and be conversant with current security-related issues in the field. This course addresses both the technical and behavioral aspects of information security. F.

ISBC 430. Database Analytics. 3 Credits.
This course equips students with an understanding of techniques in data analytics with particular emphasis on unstructured data. Coverage includes, but not limited to, database analytics, PL/SQL, advanced SQL, business intelligence, unstructured big data analytics, Hadoop framework in business, data visualization, data warehousing, NoSQL, and in-memory database system. Prerequisite or Corequisite: ISBC 330. F, S.

ISBC 431. Database Administration and Optimization. 3 Credits.
Focuses on the administration of business databases and the optimization of database performance at the server level. Topics may include but are not limited to user and security administration, physical organization and optimization, performance maintenance and monitoring, fault tolerance, database distribution and replication. Prerequisite: ISBC 430. On demand.

ISBC 444. Philosophy of Vocational Education. 3 Credits.

ISBC 451. Networking III. 3 Credits.
Focuses on exploring a variety of advanced networking topics. Students will develop knowledge and practical skills including, but not limited to, advanced configuration, implementation, security, and troubleshooting of network servers, services, devices, resources, and infrastructure. Prerequisite: ISBC 350. On demand.

ISBC 471. Advanced Information Systems Programming. 3 Credits.
Advanced-level programming in a business environment. Students apply programming and database theory, fundamentals and practices learned in ISBC 370 and ISBC 430 to address complex business problems and opportunities in the desktop, mobile and/or Internet/intranet environments. Prerequisite: ISBC 430. On demand.

ISBC 490. Information Systems Analysis and Design Seminar. 3 Credits.
The capstone course for the Information Systems major. System analysis and design is taught and applied through team development of an information system. Prerequisites: ISBC 340, ISBC 370, and ISBC 410. S.

ISBC 497. Information System Internship. 1-6 Credits.
Compensated work experience in areas related to information systems. Repeatable to 6 credits cumulative from ISBC 397, ISBC 497. Prerequisites: ISBC 217 and approval of the Information Systems Cooperative/Internship Coordinator. Repeatable to 6 credits. S/U grading. F, S, SS.

ISBC 499. Special Topics. 1-3 Credits.
Topics will be selected on the basis of currency and relevancy to student needs. Repeatable to 12 credits. Repeatable to 12 credits. On demand.

ISBC 510. Business Intelligence. 3 Credits.
A business intelligence (BI) system is an information system that supports decision making process. BI is also about creating strategic value for organizations based on data. This course provides critical thinking and self-learning abilities by discovering the business intelligence and data analytic challenges. The expected outcome of the course will allow each student to have a solid understanding of current and emerging issues and best practices of data visualization and data analytics. Students will also gain a strong business process analysis experience. The course will challenge each student in her/his ability to use big data, predictive data analysis, data gathering techniques, data warehouse, knowledge management, data mart, and data mining systems. These challenges are becoming a prevalent factor in the present turbulent business environment. Prerequisite: Admission to the MBA program or department consent required. F, S.
ISBC 517. Advanced Accounting Systems. 3 Credits.
An advanced study of integrated information systems and how these affect business decisions. Prerequisite: ACCT 309 or permission of instructor.

ISBC 520. Communication for the Professional. 3 Credits.
Examines theory and research relevant to understanding the communication process. Topics include strategies of organizing, globalization, technology, power, and diversity.

ISBC 590. Special Topics. 3 Credits.
Specific topic will vary from offering to offering at the discretion of the department. Departmental permission will be required for enrollment. Prerequisites and/or corequisites may be required depending upon the special topic selected. Course may be repeated up to a total of 6 credits with permission of department. Prerequisite: Department permission. Repeatable to 6 credits.