TECHNOLOGY, INFORMATION SYSTEMS AND ANALYTICS

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- Technology, Information Systems and Analytics (B.A.) (https://bulletins.wayne.edu/undergraduate/school-business/technology-information-systems-analytics/technology-information-systems-analytics-ba/)
- Technology, Information Systems and Analytics (B.S.) (https://bulletins.wayne.edu/undergraduate/school-business/technology-information-systems-analytics/technology-information-systems-analytics-bs/)

TIS 1500 Business Tools and Applications Cr. 3
Integrated business computer concepts and business applications and tools to solve business problems. No credit after former BA 1500. Offered Every Term.
Corequisite: TIS 2300
Restriction(s): Enrollment limited to students in the School of Business.

TIS 2300 Quantitative Methods I: Probability and Statistical Inference Cr. 3
Satisfies General Education Requirement: Quantitative Experience Comp Measures of central tendency and dispersion. Introduction to probability; normal, binomial, uniform, and Poisson distributions. Statistical inference and sampling methods. Computer techniques. No credit after former BA 2300. Offered Every Term.
Corequisite: TIS 1500
Restriction(s): Enrollment limited to students in the School of Business.

TIS 3400 Quantitative Methods II: Statistical Methods Cr. 3
Uses of statistical techniques in business. Topics include: sampling, hypothesis testing, confidence interval estimation, regression, analysis of variance and chi-square tests. Application to accounting, market research, finance, production and forecasting. Computer techniques. No credit after former BA 3400. Offered Every Term.
Prerequisites: TIS 2300 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.

TIS 3630 Business Information Systems Cr. 3
Introductory Technology, Information Systems and Analytics course, which establishes a foundation for understanding the value of information systems in organizations. Provides a management-oriented study of computer-based information systems in organizations and an overview of the manner in which information systems and technology supports business processes, managerial decision-making, and organizational strategy. No credit after former ISM 3630. Offered Every Term.
Restriction(s): Enrollment limited to students in the School of Business.

TIS 4500 Business Co-op Assignment Cr. 0
Provides students with practical application of theory to on-the-job experience. Students must be admitted to the University's Cooperative Education Program during the work semester that the course is to be taken. Students will normally be assigned to a cooperating business organization for internship periods of one semester. No credit after former ISM 4500. Offered Yearly.
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.

TIS 4550 Advanced Excel with VBA: Beyond the Basics Cr. 3
This course is designed assuming students have basic familiarity with Excel but may not have programming experience. Its aim is to provide a comprehensive understanding of VBA programming in Excel, covering both foundational and advanced topics. The course is designed to equip students with advanced skills in Microsoft Excel, focusing on complex data analysis, automation, and customization using Visual Basic for Applications (VBA). Students will learn advanced Excel functions, pivot tables, data visualization techniques, and programming fundamentals in VBA to automate repetitive tasks and enhance productivity in business and analytical contexts. Offered Every Term.
Prerequisites: TIS 1500 with a minimum grade of C-

TIS 4575 IT Security Cr. 3
Provides an investigation of contemporary issues in computer security. Students are exposed to the spectrum of security activities, procedures, and methodologies. Topics include: inspection and protection of information assets; detection of and reaction to threats to information assets; examination of pre- and post-incident procedures, and technical and managerial responses; and an overview of information security planning and staffing functions. No credit after former ISM 4575. Offered Yearly.
Prerequisites: ISM 3630 with a minimum grade of C or TIS 3630 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.

TIS 4990 Directed Study in Information Systems Management Cr. 1-3
Provides the student with the opportunity to focus on advanced readings, projects (e.g., tutorials, certifications), and research in a particular area of information systems management that is of interest to the student and faculty member. Offered Every Term.
Prerequisites: ISM 3630 with a minimum grade of C or TIS 3630 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.

TIS 5200 ERP Systems: Concepts and Practice Cr. 3
Discusses the role and function of ERP systems within organizations; analyzes the major business processes in their organization and their implementation using ERP software; provides hands-on use of ERP tools for transaction processing and decision support; and describes the use of ERP systems for customer relationship management (CRM), supply chain management (SCM), and electronic commerce. Offered for undergraduate credit only. No credit after former ISM 5200. Offered Winter.
Prerequisites: ACC 3010 with a minimum grade of C, ACC 3020 with a minimum grade of C, and (ISM 3630 with a minimum grade of C or TIS 3630 with a minimum grade of C)
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.
Fees: $117
Equivalent: ACC 5200

TIS 5210 Blockchain Fundamentals for Accounting and Business Cr. 3
Introduces blockchain, which is a public, transparent, secure, immutable and distributed ledger. Blockchains can be used to record and transfer any digital asset, not just currency. Progressing from a detailed study of how blockchain works in Bitcoin; this course also discusses alternative blockchain platforms; potential uses of blockchain in accounting, other areas of business, and society; and this technology's potential impact on accounting systems, business transactions, financial services, government, and banking management. This course is taught completely online. No credit after former ISM 5210. Offered Spring/Summer.
Prerequisite: ACC 3010 with a minimum grade of C and ACC 3020 with a minimum grade of C
Equivalent: ACC 5210

TIS 5530 Ethics in Information Technology Cr. 3
An awareness of the wider social, legal and ethical issues of information technology. Relationship between technological change, society and the law. Student is introduced to legal issues such as intellectual property and liability for defective software. Offered for undergraduate credit only. No credit after former ISM 5530. Offered Yearly.
Prerequisites: ISM 3630 with a minimum grade of C (may be taken concurrently) or TIS 3630 with a minimum grade of C (may be taken concurrently)
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.

TIS 5560 Survey of e-Commerce Cr. 3
Provides an introduction to electronic commerce. Topics include: e-commerce scope, business-to-business (B2B) and business-to-consumer (B2C) activities; supporting software, hardware, networking, security technologies; readings and online discussions. Offered for undergraduate credit only. No credit after former ISM 5560. Offered Yearly.
Prerequisites: ISM 3630 with a minimum grade of C or TIS 3630 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.

TIS 5570 Introduction to Business Analytics Cr. 3
Focuses on developing techniques to analyze large datasets and using techniques, algorithms, and software to automate the analysis and exploration of those datasets. Covers the methodology, major software tools, and applications in the data mining and analytics field. Offered for undergraduate credit only. No credit after form ISM 5570. Offered Yearly.
Prerequisites: ISM 3630 with a minimum grade of C or TIS 3630 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.

TIS 5580 Introduction to Data Visualization for Business Cr. 3
The purpose of this course is to teach students how to convert raw data into insightful visualizations that aid business decision making. Students will learn how to work with large complex data sets using the R environment and its various graphics packages. Basic programming experience is recommended but not required. No credit after former ISM 5580. Offered Intermittently.
Prerequisites: ISM 3630 with a minimum grade of C or TIS 3630 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.

TIS 5670 Special Topics in Information Systems Cr. 3
Topics range from JAVA to digital video creation and analytics. Offered for undergraduate credit only. No credit after former ISM 5670. Offered Intermittently.
Prerequisites: ISM 3630 with a minimum grade of C or TIS 3630 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.
Repeatable for 6 Credits

TIS 5705 Inbound Information Technology Cr. 3
Provides insights and practical guidelines to help students learn how to create an appealing and engaging digital presence for businesses. The discussion focuses on topics relevant to planning, managing, and implementing on-line and social media interactivity such as: search engine organization (SEO), inbound links, page ranking, tagging content, pillaring content, publishing content, analytic reports, blogging, tweeting and other social media. Offered for undergraduate credit only. No credit after former ISM 5705. Offered Yearly.
Prerequisites: ISM 3630 with a minimum grade of C or TIS 3630 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.
Fees: $50

TIS 5820 Systems Analysis and Design Cr. 3
Presents a structured and formal approach to information systems development. Analysis, logical requirements specification, general and detailed design, control, and implementation of information systems are discussed. Offered for undergraduate credit only. No credit after former ISM 5820. Offered Every Term.
Prerequisites: ISM 3630 with a minimum grade of C or TIS 3630 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.

TIS 5860 Data Communications and Networks Cr. 3
Data communication concepts and terminology, communication system design approaches, data communications standards, data communications software and hardware, network architecture, distributed management information systems. Offered for undergraduate credit only. No credit after former ISM 5860. Offered Yearly.
Prerequisites: ISM 3630 with a minimum grade of C or TIS 3630 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.
Fees: $13

TIS 5890 Internship in Information Systems Cr. 3
Student performs assigned tasks and responsibilities in a professional manner under supervision of host-employer for a minimum of 160 hours during the semester, abiding by the rules and regulations established by the employer and expected by all employees; student must satisfactorily complete all course requirements outlined in the internship program for the Mike Ilitch School of Business. Offered for undergraduate credit only. No credit after former ISM 5890. Offered Every Term.
Prerequisites: ISM 3630 with a minimum grade of C or TIS 3630 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.

TIS 5900 Project Management Cr. 3
Understanding and appreciation of the different knowledge areas of project management. Insight into developing the inputs, tools, techniques, and outputs to successfully manage products. Offered for undergraduate credit only. No credit after former ISM 5900. Offered Yearly.
Prerequisites: ISM 3630 with a minimum grade of C or TIS 3630 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.
Equivalent: MGT 5900

TIS 5992 Database Systems Cr. 3
Details the importance of data in today's enterprise and describes the theories, models, and techniques for designing, developing, creating, and manipulating a database. Students will practice data modeling, physical database design, database implementation, and complete introductory SQL exercises. Offered for undergraduate credit only. No credit after former ISM 5992. Offered Yearly.
Prerequisites: ISM 3630 with a minimum grade of C or TIS 3630 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.

TIS 5994 Software Tools for Business Applications Cr. 3
Introduces the student to the use of the Internet to create a digital presence. Students design and develop websites, create responsive web pages to provide an optimal viewing experience, and integrate database functionality allowing all web pages to "know" who is looking at the information using HTML, Javascript, Hubl, HubDB, Wistia, and cascading style sheets (CSS). Smart design includes content complete with video, progressive forms, and focused calls-to-action. Offered for undergraduate credit only. No credit after former ISM 5994. Offered Yearly.
Prerequisites: ISM 3630 with a minimum grade of C or TIS 3630 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.
Fees: $13

TIS 6997 Information Systems Policy and Management Cr. 3
Within the overall structure of the systems approach, this capstone course integrates the managerial, technical, and strategic planning and control concepts developed throughout the undergraduate courses. It also focuses on the concepts and methodologies necessary for management of information systems projects. Offered for undergraduate credit only. No credit after former ISM 6997. Offered Yearly.
Prerequisites: ISM 3630 with a minimum grade of C or TIS 3630 with a minimum grade of C
Restriction(s): Enrollment is limited to Undergraduate level students; enrollment limited to students in the School of Business.