Information Systems (ISYS)

Courses

ISYS 11203. Business Application Knowledge - Computer Competency. 3 Hours.
An introduction to computer literacy using information business application software; email/Internet; word processing; spreadsheets; presentation; database; collaborative/groupware; and integration of computer applications. Introduces the student to computer Concepts and Microsoft Office (Word, Excel, Windows, and PowerPoint) to manage finances, work with formulas, charts and graphics, and the development of professional worksheets and presentations. Students learn business computing through appropriate self-paced, computer-based instruction. (Typically offered: Fall, Spring and Summer)

ISYS 20001. Principles of Business Application Development. 1 Hour.
An introduction to the principles of business application development and the development process for business applications using a current high level languages such as Python, Swift, etc. Discussions include topics such as development teams, project management, design thinking, coding, and entrepreneurship; essential skill sets for future leaders. Students learn about coding using languages such as Python and Swift while developing their own applications. (Typically offered: Fall and Spring)

ISYS 20303. Foundations of Business Analytics. 3 Hours.
Foundations of Business Analytics (ISYS 20303) introduces students to the process of transforming data into actionable insights to guide business decision-making. Students will learn the full analytics lifecycle, starting with data collection and preparation, through analysis and interpretation, to communicating insights and driving strategic actions. Emphasis is placed on critical thinking to explore business problems. By the end of the course, students will have a solid foundation for using data to make informed, data-driven decisions. Prerequisite: BUSI 10303 with a C or better. (Typically offered: Fall, Spring and Summer)

ISYS 21003. Business Information Systems. 3 Hours.
This course presents the fundamentals of business information systems (IS) topics essential to today's business graduate. Applied areas of business will be used to provide the context for the IS topics, business applications, and management challenges. The broad objective of this course is to present students with a business and information systems framework that will allow them to envision how business decisions are enabled and empowered by information systems and technology. Prerequisite: BUSI 10303, ACCT 20103 and (ECON 21003 or ECON 22003), all with a grade of C or better. (Typically offered: Fall, Spring and Summer)

ISYS 210H3. Honors Business Information Systems. 3 Hours.
This course presents the fundamentals of business information systems (IS) topics essential to today's business graduate. Applied areas of business will be used to provide the context for the IS topics, business applications, and management challenges. The broad objective of this course is to present students with a business and information systems framework that will allow them to envision how business decisions are enabled and empowered by information systems and technology. Prerequisite: BUSI 10303, ACCT 20103 and (ECON 21003 or ECON 22003), all with a grade of C or better and honors standing. (Typically offered: Fall, Spring and Summer)
This course is equivalent to ISYS 21003.

ISYS 22603. Principles of Information Systems. 3 Hours.
This course presents the fundamental concepts used in developing information systems. It provides a framework for students to use throughout their software development coursework. Also includes management of information systems concepts. This course requires extensive use of computer systems. Prerequisite: ACCT 20103, MATH 20503 and ISYS 21003, each with a grade of C or better. (Typically offered: Fall and Spring)

ISYS 32703. Cryptocurrency. 3 Hours.
This course will focus on topics such as a brief history of money, Bitcoin and the origin of cryptocurrency, blockchain system fundamentals (cryptography and consensus algorithms), real-world application with software clients and wallets, as well as assessing the current regulatory environment, financial applications and exchanges. Upon completion, students will understand what constitutes as digital money and how this phenomenon is currently transpiring within an economic, legal, and financial context; will be prepared to learn more about specific financial industry applications; make judgements on viability of certain crypto projects; and speak to challenges facing the future of cryptocurrency. Prerequisite: ISYS 21003 and ACCT 20103, each with a grade of C or better. (Typically offered: Fall and Spring)

ISYS 32803. Opportunities, Risks and Ethics in the Metaverse. 3 Hours.
Exploration of different metaverse platforms as well as develop and deliver a team experience in a metaverse and make recommendations pertaining to the opportunities, risks, and ethical guard rails. Prerequisite: Business Majors and Junior standing. (Typically offered: Fall and Spring)

ISYS 32903. Systems Analysis and Design. 3 Hours.
Practice and application of one structured analysis methodology; development of structured analysis specification; exposure to other methodologies; quality assurance and walkthroughs; survey of real systems and their components. Prerequisite: ISYS 22603 or CSCE 20104 with a grade of C or better. (Typically offered: Fall and Spring)

ISYS 33903. Business Application Development Fundamentals. 3 Hours.
Principles of design and development of windows and web applications using cutting edge visual development tools. The programming language will be a modern language used widely in industry, and the focus will be on its use in client-server, web, and/or mobile applications. Pre- or Corequisite: ISYS 32903. Prerequisite: ISYS 22603 or CSCE 20104 with a grade of "C" or better. (Typically offered: Fall and Spring)

ISYS 400H3. Honors Information Systems Colloquium. 3 Hours.
Explores events, concepts and/or new developments in the field of Computer Information Systems and Quantitative Analysis. Prerequisite: Senior standing and honors standing. (Typically offered: Fall)

ISYS 40103. Principles of Data and Cybersecurity. 3 Hours.
This course provides students with insight into the cybersecurity and data issues surrounding businesses; fundamental concepts of the study of law - enabling students to understand the basics of reading and briefing a case as well as the process of legal analysis and case procedure and discovery; securing organizational data; detecting and responding to cyber-based security breaches; emerging technologies, and ensuring a secured computing environment for safeguarding company information will be explored. Prerequisite: ACCT 20103. (Typically offered: Fall and Spring)

ISYS 40203. Network and Data Security in a Changing World. 3 Hours.
This course explores network and data security in the context of today's digital enterprise. In addition to traditional network protocol and security issues, this course will explore security issues unique to cloud environments, data protection, IoT ecosystems, ERP systems, and Blockchain deployments. Prerequisite: ISYS 40103 with a grade of C or better. (Typically offered: Fall and Spring)

ISYS 40303. Advanced Information Security Management. 3 Hours.
This course provides students with an in-depth, advanced understanding of cybersecurity and data management. Topics include risk assessment, continuity planning, data protection, threat detection, threat/risk mitigation, and recovery issues and techniques. Current topics in data and cybersecurity will also be included. Prerequisite: ISYS 40203 with a grade of C or better. (Typically offered: Fall and Spring)

ISYS 40403. Cybersecurity, Crime and Data Privacy Law Fundamentals. 3 Hours.
This course examines the law governing computer crime, data privacy, and cybersecurity. Substantive crimes such as hacking, identity theft, economic espionage, and online threats are discussed. The Fourth Amendment, Privacy, the Wiretap Act, and other limits on law enforcement that might affect private industry developing surveillance tools used by governments are examined. Prerequisite: ISYS 40103. (Typically offered: Fall and Spring)

ISYS 40503. Advanced Cybersecurity, Crime and Privacy Law. 3 Hours.
The course will explore best practices for data privacy and security protection measures, mitigation techniques for privacy and security threats, and privacy and security law. The importance of informational privacy will be highlight and a high-level overview of U.S. laws and regulations including FTC roles, and government surveillance will be provided. Prerequisite: ISYS 40203 and ISYS 40403. (Typically offered: Fall and Spring)

ISYS 41703. Blockchain Fundamentals. 3 Hours.
This course provides the fundamental concepts underpinning blockchain technologies. This course focuses on blockchain applications for business. Students will learn about the overall blockchain landscape, including the investments, the size of markets, major players and the global reach, as well as the potential business value of blockchain applications and the challenges that must be overcome to achieve that value. Students will learn enough about the underlying technologies to be well-prepared to develop blockchain applications in future courses. Prerequisite: Walton College Majors: ISYS 21003 and ACCT 20103 each with a grade of C or better; Non-Business Majors: ACCT 20103 and (CSCE 20004 or DASC 12004) each with a grade of C or better. (Typically offered: Fall and Spring)

ISYS 41903. Business Analytics and Visualization. 3 Hours.
Introductory study of business analytics, visualization, and systems to provide analytics-based information derived from data within and/or external to the organization. Business analytics used to support management in the decision making. Application of tools in business analytics, problem solving, visualization, and decision making. Prerequisite: Walton College Majors: BUSI 10303 with a grade of C or better; Non-Business Majors: INEG 23104 or STAT 30133 or MATH 21003 each with a grade of C or better. (Typically offered: Fall)

ISYS 42103. ERP Fundamentals. 3 Hours.
An introduction to enterprise resource planning systems. Students should gain an understanding of the scope of these integrated systems that reach across organizational boundaries and can change how a company does business. Implementation issues are covered, including the importance of change management. Prerequisite: Walton College Majors: ISYS 21003 and ACCT 20103 each with a grade of C or better; Non-Business Majors: ACCT 20103 and (CSCE 20004 or DASC 12004) each with a grade of C or better. (Typically offered: Fall and Spring)

ISYS 42203. ERP Configuration and Implementation. 3 Hours.
The process of configuring and implementing an enterprise resource planning system. Business process analysis and integration. Students will develop and set up several modules in an ERP system for use in an organization. Develop understanding of how the business processes work and integrate. Prerequisite: ISYS 42103 with a grade of "C" or better. (Typically offered: Fall)

ISYS 42303. Seminar in ERP Development. 3 Hours.
ERP administration and system development practices. Advanced system support issues related to Enterprise Resource Planning systems that are used in global organizations. Basic ABAP programming. In addition, students will learn how to provide basic systems administration support of the operating system, database, and application systems software levels or ERP systems. Pre- or Corequisite: ISYS 42203 with a grade of "C" or better. (Typically offered: Spring)

ISYS 42403. Current Topics in Computer Information. 3 Hours.
Intensive investigation of selected developments in computer information systems hardware, software, and organization having current impact on computer information systems design and application. Offering an extension of lower-level CIS courses through individual student research and faculty team-teaching of advanced topics. Topical selection made with each course offering. Prerequisite: Junior standing. (Typically offered: Irregular) May be repeated for up to 6 hours of degree credit.

ISYS 42803. Business Database Systems. 3 Hours.
Introduces student to centralized information system design and implementation for business applications. In-depth study of logical systems modeling; physical file management; and software requirements. Pre- or Corequisite: ISYS 33903. Prerequisite: ISYS 32903 with a grade of C or better. (Typically offered: Fall)

ISYS 42903. Business Intelligence. 3 Hours.
Business intelligence focuses on creating, developing and storing information and knowledge from internal and external sources to better support business decisions. We will consider techniques from machine learning, data mining, and information retrieval to extract useful knowledge from data, which could be used for business intelligence, personalization or user profiling. Prerequisite: ISYS 41903 with a grade of "C" or better. (Typically offered: Spring)

ISYS 43103. Artificial Intelligence and Tech Ethics. 3 Hours.
Exploration and understanding of artificial intelligence and its use in business with hands-on activities using AI tools. Students will develop an understanding of technology ethics and ethical frameworks to be able to audit and assess the performance of technologies and algorithms, and knowledge of the range of AI technologies and their use cases. Prerequisite: Business Majors and Junior standing. (Typically offered: Fall and Spring)

ISYS 43203. Infrastructure and Digital Innovation. 3 Hours.
The aim of this course is to expose business students with the ever evolving environment of modern software development, infrastructure, and digital innovations. Using a hands-on approach to exploring modern software development tools and techniques students will learn how to conceptualize, design, and implement software product prototypes using a variety of emerging technologies. Students will gain understanding of how to evaluate digital innovations for inclusion into an ever-evolving software development environment to help accelerate development. Skills will focus on providing students the ability to quickly design and implement functional prototypes for business use-cases while exploring the introduction of innovations in the market. Prerequisite: ISYS 43103. (Typically offered: Fall and Spring)

ISYS 43603. Business Project Development. 3 Hours.
Review of fundamentals of application processing systems design and development; implementation of such a system by class. Prerequisite: ISYS 33903 and ISYS 42803 each with a grade of C or better. (Typically offered: Spring)

ISYS 43903. Seminar in Applied Business Analytics. 3 Hours.
Application of business analytics, business intelligence, data mining, and data visualization to business problem solving. Business Analytics techniques using current and relevant software are applied to current business problems for presentation to management. Prerequisite: ISYS 42903. (Typically offered: Fall and Spring)

ISYS 44503. Introduction to Blockchain Applications. 3 Hours.
The focus of this course is to expose students to working with mainframe computer systems, large-scale data, and blockchain software & technologies. This course provides the opportunity for students to gain valuable insight into mainframe coding concepts, SQL, and data in a mainframe operating environment. Prerequisite: ISYS 41703. (Typically offered: Fall)

ISYS 44603. Blockchain Enterprise Systems Development. 3 Hours.
Accurately capturing and storing business transactions is an important processing function in many businesses. This course provides students with the necessary understanding and skills to develop blockchain and other large-scale data applications in a mainframe environment with high volume. Prerequisite: ISYS 44503 with a grade of "C" or better. (Typically offered: Spring)

ISYS 4500V. Independent Study. 1-3 Hour.
Permits students on individual basis to explore selected topics in data processing and/or Quantitative Analysis. (Typically offered: Fall and Spring)

ISYS 50103. Data and Cybersecurity. 3 Hours.
This course provides current business cybersecurity and data issues for graduate students to include securing data, detecting and responding to cyber security breaches, cyber-technologies, current security and cryptographic techniques, and ensuring a secured computing environment to safeguard company information. In addition, students will explore cybersecurity strategies and compliance with security standards, as well as data confidentiality, integrity, ethical use, and availability. Prerequisite: Graduate standing and departmental consent. (Typically offered: Fall and Spring)

ISYS 50203. Data and System Security. 3 Hours.
This course involves a comprehensive study of data security and network security in today's digital enterprise. Traditional network protocol and security issues are explored as well as security issues such as cloud environments, data protection, IoT ecosystems, ERP systems, and Blockchain deployments. Prerequisite: ISYS 50103. (Typically offered: Fall and Spring)

ISYS 50303. Advanced Data and Cybersecurity Management. 3 Hours.
This course provides graduate students with an in-depth, advanced understanding of information security and data management. Topics include risk assessment, information systems security, continuity planning, data protection, threat detection, threat/risk mitigation, recovery issues/techniques, and current topics. Prerequisite: ISYS 50203. (Typically offered: Fall and Spring)

ISYS 50403. Cybersecurity, Crime, and Data Privacy Law I. 3 Hours.
This graduate level course in examines applicable cybersecurity, crime, and data privacy law to include the Fourth Amendment, Privacy, the Wiretap Act, and other. Limits on law enforcement that might affect private industry developing surveillance tools used by governments are reviewed. Crimes such as hacking, identity theft, economic espionage, online threats, are also discussed. Prerequisite: ISYS 50103. (Typically offered: Fall and Spring)

ISYS 50503. Cybersecurity, Crime and Privacy Law II. 3 Hours.
The course explores best practices for data, privacy, and security protection measures with respect to privacy and security law, as well as mitigation techniques for privacy and security threats. The importance of informational privacy will be highlighted along with a high-level overview of U.S. laws and regulations including FTC roles and government surveillance. Prerequisite: ISYS 50203 and ISYS 50403. (Typically offered: Fall and Spring)

ISYS 51003. Data Analytics Fundamentals. 3 Hours.
Fundamental knowledge and skills in several major areas of business data analytics. Emphasis on the management and use of data in modern organizations, intermediate & advanced spreadsheet topics; relational databases & SQL; and programming (such as Python). Prerequisite: MIS Director approval. (Typically offered: Fall)

ISYS 5110V. IT Toolkit & Skills Seminar. 1-3 Hour.
Seminar in Information Systems solutions and concepts (such as applications development, VB.NET, analysis of problems and design of solutions via application systems, etc.) designed for students entering the MIS program--may not be used for MIS degree credit. Prerequisite: MIS Director approval. (Typically offered: Irregular) May be repeated for up to 3 hours of degree credit.

ISYS 51303. Blockchain and E Business Development. 3 Hours.
This course explores various blockchain and e-business development technologies and then utilizes these technologies for developing a realistic application. Students will also learn strategies and use a varied web stack to build web pages that interact with blockchain platforms. Prerequisite: ISYS 51703. (Typically offered: Fall)

ISYS 5160V. Independent Study. 1-3 Hour.
Permits students on individual basis to explore selected topics in data processing and/or Quantitative Analysis. Graduate degree credit will not be given for both ISYS 4500V and ISYS 5160V. (Typically offered: Fall and Spring)

ISYS 51703. Blockchain Fundamentals. 3 Hours.
This course provides the fundamental concepts underpinning blockchain technologies. The focus is on blockchain applications for business. Students will learn about the overall blockchain landscape, including investments, the size of markets, major players and the global reach, as well as the potential business value of blockchain applications and the challenges that must be overcome to achieve that value. Students will learn enough about the underlying technologies to speak intelligently to technology experts and will be well-prepared to develop blockchain applications in future courses. Prerequisite: Graduate standing and departmental consent. (Typically offered: Fall, Spring and Summer)

ISYS 52103. ERP Fundamentals. 3 Hours.
An introduction to enterprise resource planning systems. Students should gain an understanding of the scope of these integrated systems that reach across organizational boundaries and can change how a company does business. Implementation issues are covered, including the importance of change management. Prerequisite: Graduate standing. (Typically offered: Fall and Summer)

ISYS 52203. ERP Configuration and Implementation. 3 Hours.
The process of configuring and implementing an enterprise resource planning system. Business process analysis and integration. Students will develop a company and set up several modules in SAP for use. Develop understanding of how the business processes work and integrate. Prerequisite: ISYS 52103 or equivalent. (Typically offered: Fall and Spring)

ISYS 52303. Seminar in ERP Development. 3 Hours.
ERP administration and system development practices. Advanced system support issues related to Enterprise Resource Planning systems that are used in global organizations. Basic ABAP programming. In addition, students will learn how to provide basic systems administration support of the operating system, database, and application systems software levels of ERP systems. Pre- or Corequisite: ISYS 52203. Prerequisite: ISYS 52103. (Typically offered: Spring) May be repeated for up to 6 hours of degree credit.

ISYS 52403. Current Topics in Computer Information. 3 Hours.
Intensive investigation of selected developments in computer information systems hardware, software, and organization having current impact on computer information systems design and application. Offering an extension of lower-level CIS courses through individual student research and faculty team-teaching of advanced topics. Topical selection made with each course offering. Graduate degree credit will not be given for both ISYS 42403 and ISYS 52403. (Typically offered: Irregular) May be repeated for up to 6 hours of degree credit.

ISYS 53103. Foundations of Digital Innovation. 3 Hours.
The aim of the course is to provide business students with ethical frameworks, innovation theories, and management practices to assess the potential business and social value of emerging digital innovations for organizations. Students will learn about the technology hype cycle and management practices to move digital innovations from proof-of-concepts to live production implementations that consider stakeholder consequences. Students will learn about digital innovations from innovators, thought leaders, and each other. Prerequisite: Walton Graduate standing and Graduate Director consent. (Typically offered: Fall and Summer)

ISYS 53203. Development with Digital Innovations. 3 Hours.
This course exposes graduate business students with the ever evolving environment of modern software development. Using a hands-on approach to exploring modern software development tools and techniques students will learn how to conceptualize, design, and implement software product prototypes using a variety of emerging technologies. Students will gain understanding of how to evaluate digital innovations for inclusion into an ever-evolving software development environment to help accelerate development. Skills will focus on providing students the ability to quickly design and implement functional prototypes for business use-cases while exploring the introduction of innovations in the market. Prerequisite: Walton Graduate Standing and Graduate Director Consent. (Typically offered: Fall and Summer)

ISYS 53403. Adaptive Cloud Infrastructure and Services. 3 Hours.
In this dynamic and hands-on course, graduate students will delve into the cutting-edge world of modern infrastructure technologies. Emphasizing real-world applications, this course provides an in-depth exploration of advanced topics such as cloud computing and platform services, equipping students with the skills to design, implement, and manage robust and scalable IT infrastructure solutions. Prerequisite: ISYS 51003, Graduate Director consent, and beginner python programming experience and database querying. (Typically offered: Fall and Spring)

ISYS 5350V. Internship Experience. 1-6 Hour.
This course allows a student to experience an internship within a business and benefit from the work experience. The internship focuses on applications and business problems and is supervised by a faculty member as well as a member of the company/firm. Prerequisite: MIS Director approval is required. (Typically offered: Fall, Spring and Summer) May be repeated for up to 6 hours of degree credit.

ISYS 53603. Business Analytics. 3 Hours.
This course in managerial business analytics provides future managers with the key concepts of decision modeling and information technology management concepts. Students will learn to utilize real time operational business data, as well as quickly process and effectively leverage information. In addition, students will exercise strategic IT deployment skills for supply chain and marketing processes as well as develop strong decision modeling abilities. (Typically offered: Spring)

ISYS 54203. Seminar in Systems Development. 3 Hours.
Advanced study of structured systems development. Emphasis on strategies and techniques of structured analysis and structured design for producing logical systems specifications and for deriving physical systems designs. Coverage of methodologies for dealing with complexity in the development of information systems. Prerequisite: ISYS 5110V. (Typically offered: Fall)

ISYS 54303. Enterprise Systems. 3 Hours.
Enterprise Systems comprises the entire class of information technology and systems that support the mission of the company including decision support and business processes. This managerial enterprise systems course focuses on strategic issues of information technology. Students study the various elements and integration of an organization's business processes; as a result, students gain an understanding and working knowledge of systems used to support these business processes and their use in decision making. In addition, students will study concepts and develop skills needed to utilize decision-centric business intelligence and knowledge management applications. (Typically offered: Spring)

ISYS 54503. Blockchain and Enterprise Data. 3 Hours.
The focus of this course is to expose students to working with distributed and service oriented architectures for different applications as well as the IT infrastructure needed. The course provides the opportunity for students to gain valuable insight into blockchain as a distributed system and cloud architecture platforms with the goal of developing enterprise applications. Prerequisite: ISYS 51303. (Typically offered: Spring)

ISYS 55003. Decision Support and Analytics. 3 Hours.
Analysis of the highest level of information support for the manager-user. A study of systems providing analytics-based information derived from databases within and/or external to the organization and used to support management in the decision making. Application of tools in business analytics, problem solving, and decision making. Prerequisite: MIS Director approval. (Typically offered: Fall)

ISYS 56003. Analytics and Visualization. 3 Hours.
This course focuses on how to discern and tell your story visually using data based on traditional graphical data representation as well as the latest data and information technologies. Coverage includes both visualization theory and hands-on exercises using appropriate computing tools. The course will also include visualization of predictive, clustering, and association models. The opportunities and challenges of Big Data visualization will be explored. Corequisite: Lab component. Prerequisite: (ISYS 55003) or (ISYS 51303 and departmental consent). (Typically offered: Fall)

ISYS 57103. Seminar in IS Topics. 3 Hours.
Intensive seminar in selected information systems topics. Topical selection made with each course offering. Prerequisite: ISYS 5110V or MIS Director approval. (Typically offered: Irregular) May be repeated for up to 9 hours of degree credit.

ISYS 57203. Advanced Multivariate Analysis. 3 Hours.
Factor analysis and other advanced techniques. (Typically offered: Irregular)

ISYS 58303. Data Management Systems. 3 Hours.
Investigation and application of advanced database concepts include database administration, database technology, and selection and acquisition of database management systems. Data modeling and system development in a database environment. Prerequisite: ISYS 51003. (Typically offered: Spring)

ISYS 58403. Seminar in Business Intelligence and Knowledge Management. 3 Hours.
Business intelligence focuses on assessing and creating information and knowledge from internal and external sources to support business decision making process. In this seminar, data mining and information retrieval techniques will be used to extract useful knowledge from data, which could be used for business intelligence, and knowledge management. Pre- or Corequisite: ISYS 58303 or equivalent. Prerequisite: ISYS 55003 or equivalent. (Typically offered: Spring)

ISYS 58603. Advanced Data Management. 3 Hours.
Advanced Data Management offers an in-depth exploration of modern data management practices. This course equips students with practical skills in programming to acquire, analyze, and host data solutions. Topics include data collection, preparation, analysis, their practical applications in data-driven environments, among others. Pre- or Corequisite: ISYS 58303. Prerequisite: ISYS 51003. (Typically offered: Fall and Summer)

ISYS 5930V. Global Technology and Analytics Seminar. 1-3 Hour.
This course is designed to provide an updated, comprehensive, and rigorous treatment of emerging global topics. Includes, but is not limited to, global study experiences, business insights, and foundational perspectives; examines significant issues from global perspectives. Prerequisite: Department Consent, Graduate standing, and MIS Director approval. (Typically offered: Summer) May be repeated for up to 3 hours of degree credit.

ISYS 59403. Management of Information Technology Seminar. 3 Hours.
Presented in a way that allows you to play an active role in the design, use, and management of information technology. Using IT to transform the organization, as competitive strategy, and creating new relationship with other firms is included. Pre- or Corequisite: ISYS 58303. Prerequisite: ISYS 54203. (Typically offered: Spring)

ISYS 5990V. Practicum Seminar. 1-6 Hour.
This course is designed to introduce and engage the student in the practice, application, and problem solving in the business environment. Hands-on application of a business problem. Students will gain experience working on, making decisions about, and developing solutions for business applications. Topics include but not limited to analytics, data, and information technology. Prerequisite: Graduate standing and MIS Director approval. (Typically offered: Fall, Spring and Summer) May be repeated for up to 6 hours of degree credit.

ISYS 6010V. Graduate Colloquium. 1-6 Hour.
Presentation and critique of research papers and proposals. (Typically offered: Fall and Spring) May be repeated for up to 12 hours of degree credit.

ISYS 61303. Survey of IS Research. 3 Hours.
This is an introductory seminar in information systems research for doctoral students. Its objective is to introduce participants to major streams of IS research and discuss many of the important roles and responsibilities of an IS researcher. Also, this course will play the important role of introducing participants to the research of the current IS faculty. (Typically offered: Fall)

ISYS 6360V. Special Problems. 1-6 Hour.
Independent reading and research under supervision of senior staff member. (Typically offered: Irregular) May be repeated for up to 6 hours of degree credit.

ISYS 63703. Social Networks in Information Systems Research. 3 Hours.
This is an introductory course in social networks for doctoral students. The course will be structured to be suitable to participants from a broad array of social and behavioral sciences. The study of social networks has emerged as an important stream with many fields, ranging from mathematics to organizational behavior to information systems to sociology. Although much of the early development took place in the analysis and methods to study social networks, more recently, a great deal of theory has been developed related to help better understand nomological networks related to social networks (and associated constructs). Prerequisite: Graduate standing and permission of the ISYS PhD Coordinator. (Typically offered: Irregular)

ISYS 63803. Critical Thinking on the Conduct of IS Research. 3 Hours.
This course is designed to enhance the critical thinking skills of Information Systems PhD students as they advance the development of their research agenda. The course will require deep thinking about critical issues in the field and, specifically, how they influence the development of research projects in a rapidly changing technological environment. Students will need to navigate the abstraction scale as they engage in broad debates regarding the field, information technology, and how it specifically impacts the conduct of research. This requires the course to have a pragmatic slant with an emphasis on how such critical thinking can be applied in the development of research projects. Prerequisite: Walton doctoral standing. (Typically offered: Fall Even Years)

ISYS 65303. Information Systems for Managing Organizations and Platforms. 3 Hours.
The goal of this seminar is to provide an understanding of the issues related to the organizational impacts of information technologies, the processes to create value by using information technologies, and the strategic and competitive dynamics related to information technologies in organizations. Students will read and discuss various theories, conceptual issues, and empirical papers pertaining to research on these topics of inquiry. Prerequisite: Graduate standing and permission of the ISYS PhD Coordinator. (Typically offered: Irregular)

ISYS 67303. Emerging Topics. 3 Hours.
Various emerging topics, such as RFID applications and RFID supply chain, ethical decision models, behavioral modeling, piracy and privacy issues, and virtual worlds. (Typically offered: Irregular) May be repeated for up to 15 hours of degree credit.

ISYS 67403. Qualitative and Quantitative Methods in Research. 3 Hours.
This seminar focuses on the study of processes, such as those associated with adoption and diffusion of technologies, the organizational impacts of technologies, and decision-making and planning by individuals and groups. Prerequisite: Graduate standing and permission of the ISYS PhD Coordinator. (Typically offered: Irregular)

ISYS 67503. Management of Knowledge and Information Systems. 3 Hours.
This seminar focuses on research related to the management of two key resources: (a) information systems (IS); and (b) knowledge. The course aims to help prepare students to become good researchers on management of IS and knowledge. Prerequisite: Graduate standing and permission of the ISYS PhD Coordinator. (Typically offered: Irregular)

ISYS 68303. Theory Development. 3 Hours.
To acquire theory development and writing skills, to understand challenges in developing and writing theory sections of papers, and to discuss approaches to writing good empirical journal articles. This course is suited for all social sciences students and is particularly appropriate for students conducting behavioral research in the business disciplines. (Typically offered: Irregular)

ISYS 7000V. Doctoral Dissertation. 1-18 Hour.
Doctoral Dissertation. Prerequisite: Candidacy. (Typically offered: Fall, Spring and Summer) May be repeated for degree credit.