The International Certificate Program offers a variety of classes for International students to choose from every semester. Students take at least two classes in their major (Business or Information Technology), two English courses and one elective course. The elective course can be selected from any offered course to allow students exposure in a new field. If preferred, students can take a third major course rather than an elective. The following courses are offered in the Fall 2016 semester. All majors have entry level courses that do not require previous experience in the field; however, some courses require previous experience or coursework in that area. International Certificate Program advisers will work with students individually to establish a suitable course schedule. \*Please note that the class list may change at any time due to management discretion.

**BUSINESS COURSES**

Students who major in Business must take a minimum of two of the following courses in the Fall 2016 semester:

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| **PL 810 Operations Management** |
| The world's best run companies have operations that closely support business strategy. This class presents the practices, procedures and thinking that have enabled these companies to become world leaders. Quite often, becoming world class requires developing a new way of thinking, an innovative way of doing things that is a significant departure from traditional approaches of the 1990s and recent years. Specific topics include linking marketing and sales to operations achieving flexibility and responsiveness while maintaining cost and quality control. A major focus of the class describes how the application of lean principles has increased the level of value contribution from every function and person in the company. |

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| **PL 811 Introduction to Marketing** |
| This course provides an introduction to the activities and decisions faced by marketing managers in modern organizations. Topics include: current marketing issues, including customer relationship management (CRM), global marketing, marketing research, supply-chain management and integrated marketing communications (IMC). Special text and classroom focus is placed on Product, Price, Place and Promotion strategies, as they relate to an overall Marketing Plan. |

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| **PL 813 Essentials of Economics** |
| The course looks at national and international statistics--real output, inflation, unemployment, and interest rates. It examines fiscal and monetary policy and how they influence the important measures of an economy's performance. Then the analysis is extended to the interaction between national economies and how this influences trade and capital flows between countries and determines exchange rates. |

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| **PL 819 Essentials of Exporting and Importing** |
| This course provides a comprehensive overview for conducting export and import business in the global arena. Content focuses on U.S. government trade policies and export-import controls, industry practices and international procedures that are essential for business or entrepreneurial success. Instruction ranges from the basics to more advanced marketing strategies for both export and import. The instructor's newly- published textbook, Essentials of Exporting and Importing, will be the textbook for this course. |

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| **PL 820 Theory & Organization of Management** |
| Theory of Organization and Management Introduction to the theory and practice of management; includes basic managerial functions: planning, organizing, leading and controlling. Communication, motivation and decision-making techniques are stressed. Also covered are organization structure and design, the dynamics of individual and group interaction, organization climate, managerial styles, the implication of increasing work force diversity, coping with conflict, and methods for achieving organizational improvement. Issues in international business are dealt with at relevant points. |

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| **PL 831 Financial Markets** |
| Theory and applications associated with the functioning of financial markets to include the conceptual foundations of portfolio theory, risk management, and asset valuation. The stock, money, bond, mortgage, and futures and options markets are examined. |

**BUSINESS COURSES (CONTINUED)**

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| **PL 864 Digital Marketing** |
| Digital media has revolutionized the way corporations, agencies and nonprofits reach consumers, forcing them to adapt their outreach strategies to this fast-moving medium. Marketing practitioners need to stay abreast of current digital trends, and create strategies that will help them stay ahead of the competition. This course will provide students with strategic knowledge they need to navigate the ever-changing digital marketing landscape. |

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| **IT-M 470 Fundamentals of Management for Technical Professionals** |
| This course explores fundamentals of management for professionals in high-technology fields. It addresses the challenges of the following: managing technical professionals and technology assets; human resource management; budgeting and managerial accounting; management of services, infrastructure, outsourcing, and vendor relationships; technology governance and strategy; and resource planning. |

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| **IT-M 471 Project Management for IT Professionals** |
| Basic principles of project management are taught. This course includes software development concepts of requirements analysis, object modeling and design, and software testing. Management of application development and major Web development projects will also be addressed. |

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| **IT-M 481 Entrepreneurship for IT Professionals** |
| This course prepares participants to become leaders in information technology and to build ITM companies. Participants design and develop a prototype ITM product and prepare a business plan and venture proposal presentation. |

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| **IT-M 482 Business Innovation** |
| This course is designed to teach innovative thinking through theory, methods, and practice of innovation. The course incorporates Einstein's thinking, and Edison's method to establish the innovation process that can be applied in current business environment. Current economic conditions and global sourcing requires that innovation becomes a leading tool for developing a competitive edge. Innovation has been considered a competency of educated, design engineering, and a selected few employees that has become insufficient today. Corporations and organizations need innovation to develop customer-specific solutions in almost real time. |

**INFORMATION TECHNOLOGY COURSES**

Students who major in information Technology must take a minimum of two of the following in the Fall 2016 semester:

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| **IT 301 A+ Certification Training** |
| Participants study the basics of computer architecture and learn to use a contemporary operating system. Hardware requirements, hardware components, software compatibility, and system installation topics are covered along with post-installation, storage, security and system diagnosis, and repair. Topics also include discussion of current and future technology industry trends. |

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| **IT 311 Introduction to Programming with Java** |
| A broad introduction to object-oriented programming and the related knowledge necessary to program in a contemporary programming language. This would include coverage of an Application Development Kit, a standard integrated Development environment, and the use of GUI components. |

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| **IT 312 C++ Programming** |
| Introduces basic concepts of systems programming. Participants learn to apply basic programming concepts toward solving problems, create source files and implement header files, work with and effectively use basic data types, abstract data types, control structures, code modularization and arrays. Participants will be introduced to object paradigm including, classes, inheritance, and polymorphism applications. |

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| **IT-D 361 Fundamentals of Web Development** |
| This course will cover the creation of Web pages and sites using HTML, CSS, Javascript, jQuery, and graphical applications as well as the client and server architecture of the Internet and related web technologies. The creation and deployment of modern, standards-compliant web pages are addressed. Students create and deploy a Web site with multiple pages and cross-linked structures. |

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| **IT-D 411 Java Programming** |
| This course covers a broad spectrum of object-oriented programming concepts and application programming interfaces. The participant considers the details of object-orientated development in topics of multi-threading, data structure collections, stream I/O and client interfaces. Software engineering topics of packaging and deployment are covered as well. Hands-on exercises reinforce concepts taught throughout the course.  *Prerequisite: IT 311 or equivalent* |

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| **IT-D 415 Intermediate Java Programming** |
| This course considers Web container application development for enterprise systems. The primary focus is on database connectivity (JDBC) integration with Web application programming using an enterprise-level application framework. A Web application term project considers the design and implementation of a database instance that serves as the information tier in a contemporary 3-tier enterprise solution.  *Prerequisite: IT-D 411 or equivalent* |

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| **IT-O 417 Shell Scripting for System Administration** |
| Focuses on preparation of shell scripts to enhance and streamline system administration tasks in all contemporary server operating systems. Scripting will be taught in both native and portable environments. The course will address shell programming, regular expressions, common and system-specific shell utilities and built-in commands, user defined and shell variables, flow control structures, shell functions, and the creation and execution of shell scripts. Homework and hands-on exercises will provide practical experience in contemporary server environments. |

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| **IT-D 421 Database Concepts with Oracle** |
| Basic data modeling concepts are introduced. Hands-on database design, implementation, and administration of single-user and shared multi-user database applications using a contemporary relational database management system. |

**INFORMATION TECHNOLOGY COURSES (CONTINUED)**

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| **IT-S 428 Database Security** |
| Participants will engage in an in-depth examination of topics in data security including security considerations in applications and systems development, encryption methods, cryptography law and security architecture and models.  *Prerequisite: IT-D 421 or equivalent* |

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| **IT-O 440 Network+ Certification Training** |
| This course covers current and evolving data network technologies, protocols, network components, and the networks that use them, focusing on the Internet and related LANs. The state of worldwide networking and its evolution will be discussed. This course covers the Internet architecture, organization, and protocols including Ethernet, 802.11, routing, the TCP/UDP/IP suite, DNS, Bluetooth, SNMP, DHCP, and more. Participants will be presented with Internet-specific networking tools for searching, testing, debugging, and configuring networks and network-connected host computers. There will be opportunities for network configuration and hands-on use of tools. |

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| **IT-S 443 Vulnerability Analysis and Control** |
| This course addresses hands-on ethical hacking, penetration testing, and detection of malicious probes and their prevention. It provides students with in-depth theoretical and practical knowledge of the vulnerabilities of networks of computers including the networks themselves, operating systems, and important applications. Integrated with the lectures are laboratories focusing on the use of open source and freeware tools; students will learn in a closed environment to probe, penetrate, and hack other networks. |

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| **IT-O 444 Cloud Computing Technologies** |
| Computing applications hosted on dynamically-scaled virtual resources available as services are considered. Collaborative and non-collaborative "cloud-resident" applications are analyzed with respect to cost, device/location independence, scalability, reliability, security, and sustainability. Commercial and local cloud architectures are examined. A group-based integration of course topics will result in a project employing various cloud computing technologies.  *Prerequisites: IT-D 411 AND IT-O 456 or equivalent* |

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| **IT-S 448 Cyber Security Technologies** |
| Prepares participants for a role as a network security analyst and administrator. Topics include viruses, worms, and other attack mechanisms, vulnerabilities, and countermeasures; network security protocols, encryption, identity and authentication, scanning, firewalls, security tools, and organizations addressing security. A component of this course is a self-contained team project that, if the participant wishes, can be extended into a fully operational security system in a follow-on course.  *Prerequisite: IT-O 440 or equivalent* |

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| **IT-D 453 Enterprise Intelligent Device Applications** |
| Intelligent device application development is covered with proprietary enterprise and open-source technologies on media device, mobile and robotic platforms. Utilizing contemporary toolkits, the student considers design and development on simulated and real “smart” devices including smart phones, tablets, sensors, drones and robots. |

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| **IT-O 453 Linux Server Administration** |
| Students learn to set up, configure, and administer an industry-standard open source server operating system including integration with client systems using a variety of operating systems in a mixed environment. Topics include hardware requirements; software compatibility; administrative and technical practices required for system security; process management; performance monitoring and tuning; storage management; back-up and restoration of data; and disaster recovery and prevention. Also addressed are configuration and administration of common network and server services such as DNS, DHCP, firewall, proxy, remote access, file and printer sharing, email, web, and web services as well as support issues for open source software. |

**INFORMATION TECHNOLOGY COURSES (CONTINUED)**

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| **IT-D 455 Intelligent Device Applications** |
| Intelligent device application development is covered with various technologies on mobile and robotic platforms. Utilizing contemporary toolkits, the participant considers design and development on emulated and real "smart" devices including smart phones, personal digital assistants, sensors, actuators, and robots. Numerous exercises reinforce concepts gained throughout the course. A term project will integrate course topics into a comprehensive intelligent device application.  *Prerequisite: IT 311 or equivalent* |

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| **IT-O 456 Linux + Certification Training** |
| Participants learn to set up and configure an industry-standard, open-source operating system including system installation and basic system administration. Also addressed are applications and graphical user interfaces as well as support issues for open-source software. |

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| **IT-D 460 Fundamentals of Multimedia** |
| Participants are introduced to computer-based multimedia theory, concepts, and applications. Topics include desktop publishing, hypermedia, presentation graphics, graphic images, animation, sound, video, multimedia on the World Wide Web and integrated multimedia authoring techniques. |

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| **IT-D 462 Web Site Application Development** |
| Programming the Common Gateway Interface (CGI) for Web pages is introduced with emphasis on creation of interfaces to handle HTML form data. CGI programming is taught in multiple languages. Security of Web sites is covered with an emphasis on controlled access sites. Setup, administration and customization of content management systems including blog and portal sites is introduced. Students design and create a Web site including basic CGI programs with Web interfaces and process data flows from online forms with basic database structures.  *Prerequisite: IT-D 361 or equivalent* |

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| **IT-D 463 ASP.Net with C#** |
| In-depth examination of the concepts involved in the development of Internet applications. Participants will learn the differences and similarities between Internet applications and traditional client/server applications. A discussion of the technologies involved in creating these Internet applications is included, and participants will learn to use these technologies to create robust server-side applications.  *Prerequisites: IT-D 411 AND IT-D 361 or equivalent* |

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| **IT-M 470 Fundamentals of Management for Technical Professionals** |
| This course explores fundamentals of management for professionals in high-technology fields. It addresses the challenges of the following: managing technical professionals and technology assets; human resource management; budgeting and managerial accounting; management of services, infrastructure, outsourcing, and vendor relationships; technology governance and strategy; and resource planning. |

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| **IT-M 471 Project Management for IT Professionals** |
| Basic principles of project management are taught with a particular focus on project planning for information technology hardware, software and networking project implementation. Management of application development and major Web development projects will also be addressed. |

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| **IT-S 478 Cyber Security Management** |
| In-depth examination of topics in the management of information technology security including access control systems and methodology, business continuity and disaster recovery planning, legal issues in information system security, ethics, computer operations security, physical security and security architecture and models using current standards and models. |

**INFORMATION TECHNOLOGY COURSES (CONTINUED)**

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| **IT-M 481 Entrepreneurship for IT Professionals** |
| This course prepares participants to become leaders in information technology and to build ITM companies. Participants design and develop a prototype ITM product and prepare a business plan and venture proposal presentation. |

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| **IT-M 482 Business Innovation** |
| This course is designed to teach innovative thinking through theory, methods, and practice of innovation. The course incorporates Einstein's thinking, and Edison's method to establish the innovation process that can be applied in current business environment. Current economic conditions and global sourcing requires that innovation becomes a leading tool for developing a competitive edge. Innovation has been considered a competency of educated, design engineering, and a selected few employees that has become insufficient today. Corporations and organizations need innovation to develop customer-specific solutions in almost real time. |

**FOOD SAFETY AND HEALTH COURSES**

The following courses are considered Information Technology courses. They can be used to fulfill the required major courses for students who major in Information Technology.

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| **IT-F 201 Nutrition and Wellness** |
| Introduction to the basic principles of nutrition and the relationship of the human diet to health. Overview of the nutrition profession, the biological uses of nutrients and tools for dietary planning and assessment in various settings. Examination of specific issues such as weight management, sports nutrition, food safety, the diet-disease relationship and global nutrition. Analysis of special nutritional requirements and needs during the life cycle. |

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| **IT-F 301 Exploring Food Science and Technology** |
| In this course students will explore the wide array of disciplines in which engineering, biological, and physical sciences are used to study and produce food products. An overview of the relationship between food nutrition, chemistry, microbiology, safety, processing, engineering, sensory, and product development will be discussed. The food science and technology industry will be studied to understand food processing, food safety, quality and packaging of specific categories of foods. The course also provides a brief introduction to different career opportunities within the food and technology industry. |

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| **IT-F 401 Nutrition, Metabolism and Health** |
| Study of the structures, types, properties, and metabolism of carbohydrates, lipids and proteins. Discussion of the biological roles of vitamins and minerals. Application and integration of metabolic knowledge with health promotion and chronic disease.  *Prerequisites: Basic science/chemistry/biology concepts and writing proficiency* |

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| **IT-F 405 Food and Behavior** |
| The course aims to develop an understanding of food and food intake behavior by examining the intersection of nutritional science with other disciplines and expertise. The course will be an analysis of the factors that impact food choice/intake. Examination of physiological regulation, physiological and psychological moderators, food marketing, technology, economics, food policy and regulations, media, food safety, agricultural practices, as well as how food intake behavior feeds back and influences these factors. Influence of sex, BMI, age will also be considered.  *Prerequisites: Basic knowledge in psychology, nutrition, wellness, metabolism and health.* |

**ENGLISH COURSES**

Students will take two English courses in the Fall 2016 semester. Students will be given an English assessment upon arrival to determine their English level in listening, reading, speaking and writing and will register for two of the following courses:

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| **PL 421 Listening Enhancement Level 1** |
| Listening Enhancement I is designed to help international students improve academic and social listening. Students will complete a variety of listening-based tasks to increase comprehension and develop strategies for effective listening and note-taking. Frequently used vocabulary terms will also be presented. |

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| **PL 422 Listening Enhancement Level 2** |
| Listening Enhancement II is an advanced level Listening course for international students. The course will aid students in comprehending academic lectures and strengthening social listening as well as note-taking skills. Students will complete activities using web-based videos to refine their listening skills. Each unit of study is centered on an academic lecture and the student work that is necessary before, during, and after a university course lecture. |

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| **PL 431 Reading/Vocabulary Development Level 1** |
| Reading and Vocabulary Development I is designed for international students to develop academic reading skills and increase overall vocabulary. Students will be exposed to a variety of readings in order to build effective strategies for analysis of and interaction with academic texts. |

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| **PL 432 Reading/Vocabulary Development Level 2** |
| Reading and Vocabulary Development II is designed to help international students analyze instructor-selected readings for lexical, syntactic, rhetorical, and discursive features. The course will also focus on increasing academic vocabulary and building skills and strategies to improve reading speed and overall comprehension. |

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| **PL 440 Fundamentals of Academic Writing** |
| Fundamentals of Academic Writing is designed to introduce international students to the conventions of academic writing and to develop a voice in writing for American audiences. By composing academic paragraphs in a variety of genres, students will gain knowledge of deductive organizational structure, academic formatting, and strategies for avoiding plagiarism. |

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| **PL 441 Academic Writing Level 1** |
| Academic Writing I is designed for international students to improve the fluency and accuracy of their writing. Students will reinforce their understanding of argumentation and organization for American academic audiences through the composition and revision of a variety of paragraphs and essays that demonstrate increasing complexity. |

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| **PL 442 Academic Writing Level 2** |
| Academic Writing II will prepare international students for research and research writing. Students will learn advanced research skills and apply them through the composition of several academic papers. |

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| **PL 461 Effective Communication 1** |
| Effective Communication I is designed to help international students improve speaking fluency and pronunciation. This course will focus on skills and strategies to increase confidence in spoken interactions, both in the classroom, and in daily life. |

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| **PL 462 Effective Communication 2** |
| Effective Communication II is an advanced course in speaking and pronunciation for international students. Topics include developing informational skills, interactional skills, and skills to manage interactions in both academic and social life. Accent reduction and the International Phonetic Alphabet (IPA) will also be addressed. |