CIT - COMPUTER INFORMATION TECHNOLOGY

CIT 1041 Intermediate Excel (1 Unit)
This course is an independent study, self-paced, competency based course designed for students who wish to develop a deeper knowledge of MS Excel functionality. The course will expand upon basic spreadsheet functions and introduce topics such as cell validation, advanced cell formatting, conditional functions, goal seek, pivot tables, multi-sheet functions, and other advanced topics. Students will complete knowledge assessment through hands-on simulation labs and online exams. A faculty advisor provides support and accountability in completing the requirements of the course. Although the course is self-paced, a minimum amount of progress must be made each week and all course requirements must be completed within assigned course time.
Prerequisite(s): A working knowledge of MS Excel that includes the use of cell entry, formatting, and use of common functions.

CIT 1053 IT Fundamentals (3 Units)
This course is an independent study, self-paced, competency based course designed for students who have little to no technical understanding of information technology, yet wish to begin the CIT program. The course will introduce basic technology topics, such as computer hardware, storage devices, computer peripherals, basic networking, setting up and maintaining a computer, installing and configuring software and basic troubleshooting techniques. Students will gain practical knowledge of computer concepts through simulation lab activities. A faculty advisor provides support and accountability in completing the requirements of the course. Although the course is self-paced, a minimum amount of progress must be made each week and all course requirements must be completed within assigned course time. The course aligns with topics covered in CompTIA's IT Fundamentals certification exam.
Online. Letter grade.

CIT 2034 Fundamentals of Computer Hardware and Operating Systems (4 Units)
This course is designed to introduce the fundamentals of hardware, networking, operating systems, and security of personal computers, peripherals, and mobile devices. Students will acquire hands-on experience by working with hardware, networking and operating system equipment and simulators. This course aligns with the topics covered in CompTIA's A+ certification examinations.
Letter grade.
Prerequisite(s): CIT 1053 or equivalent academic or work experience.

CIT 2061 IT Fundamentals Exam Prep (1 Unit)
This course is an independent study, self-paced, competency based course designed for students who wish to prepare for the CompTIA's IT Fundamentals certification exam. The course is intended for students who have already completed the CIT 1053 course or have equivalent academic or work experience. Students will be required to complete a predetermined number of practice certification exams, assess knowledge domain deficiencies, and focus on acquiring the requisite knowledge to pass the certification exam. A faculty advisor provides support and accountability in completing the requirements of the course. Although the course is self-paced, a minimum amount of progress must be made each week and all course requirements must be completed within the assigned course time. Attempting the certification exam within the assigned course time is also required. Although passing the certification exam is not required to pass this course, the results of the certification exam will be used to determine the final grade in the course. Students already holding a current certification for this course are not eligible to take this course.
Letter grade.
Prerequisite(s): CIT 1053 or equivalent academic or work experience.

CIT 2071 A+ Core 1 Exam Prep (1 Unit)
This course is an independent study, self-paced, competency-based course designed for students who wish to prepare for the CompTIA's A + Core 1 certification exams. The course is intended for students who have already completed the CIT 2034 course. Students will be required to complete a predetermined number of practice certification exams, assess knowledge domain deficiencies, and focus on acquiring the requisite knowledge domains to pass the certification exams. A faculty advisor provides support and accountability in completing the requirements of the course. Although the course is self-paced, a minimum amount of progress must be made each week and all course requirements must be completed within the assigned course time. Attempting the certification exams within the assigned course time is also required. Although passing the certification exam is not required to pass this course, the results of the certification exam will be used to determine the final grade in the course. Students already holding a current certification for this course are not eligible to take this course. This is a quad course.
Letter grade.
Prerequisite(s): CIT 2034
Requirement(s): Must earn a C or better, provide proof of A+ certification, or obtain authorization of the program director in order to continue in any further upper-division CIT courses beginning the following semester.

CIT 2081 A+ Core 2 Exam Prep (1 Unit)
This course is an independent study, self-paced, competency-based course designed for students who wish to prepare for the CompTIA's A + Core 2 certification exams. The course is intended for students who have already completed the CIT 2034 course. Students will be required to complete a predetermined number of practice certification exams, assess knowledge domain deficiencies, and focus on acquiring the requisite knowledge domains to pass the certification exams. A faculty advisor provides support and accountability in completing the requirements of the course. Although the course is self-paced, a minimum amount of progress must be made each week and all course requirements must be completed within the assigned course time. Attempting the certification exams within the assigned course time is also required. Although passing the certification exam is not required to pass this course, the results of the certification exam will be used to determine the final grade in the course. Students already holding a current certification for this course are not eligible to take this course. This is a quad course.
Letter grade.
Prerequisite(s): CIT 2034
Requirement(s): Must earn a C or better, provide proof of A+ certification, or obtain authorization of the program director in order to continue in any further upper-division CIT courses beginning the following semester.

CIT 3014 Networking (4 Units)
This course is designed to provide an in-depth understanding to a wide range of network architectures and configuration options. The course explores the concepts of physical and virtual network design options and network administration requirements. The course will cover the topics of wired and wireless networking, network optimization and management, virtual local area networks, network types, network hardware and software and networking standards. In addition, students will acquire hands-on experience by working with networking and security simulators. This course aligns with topics covered in the CompTIA's Network+ certification exam.
Letter grade.
Prerequisite(s): CIT 2034

CIT 3021 Network+ Exam Prep (1 Unit)
This course is an independent study, self-paced, competency based course designed for students who wish to prepare for the CompTIA's Network+ certification exam. The course is intended for students who have already completed the CIT 3014 course. Students will be required to complete a predetermined number of practice certification exams, assess knowledge domain deficiencies, and focus on acquiring the requisite knowledge domains to pass the certification exams. A faculty advisor provides support and accountability in completing the requirements of the course. Although the course is self-paced, a minimum amount of progress must be made each week and all course requirements must be completed within the assigned course time. Attempting the certification exam within the assigned course time is also required. Although passing the certification exam is not required to pass this course, the results of the certification exams will be used to determine the final grade in the course. Students already holding a current certification for this course are not eligible to take this course.
Letter grade.
Prerequisite(s): CIT 3014

CIT 3024 Security and Information Assurance (4 Units)
This course is designed to provide an in-depth understanding to the concepts of data and network security. Other topics include access control, authentication, authorization, data security and integrity, encryption, recovery, and business continuity. Students will gain hands-on experience with firewalls, network security, application security, email security, and tools for securing, monitoring and auditing the IT network and systems environments through system security simulators. This course aligns with topics covered in the CompTIA's Security+ certification exam.
Letter grade.
Prerequisite(s): CIT 2034

CIT 3031 Security+ Exam Prep (1 Unit)
This course is an independent study, self-paced, competency based course designed for students who wish to prepare for the CompTIA's Security+ certification exam. The course is intended for students who have already completed the CIT 3024 course. Students will be required to complete a predetermined number of practice certification exams, assess knowledge domain deficiencies, and focus on acquiring the requisite knowledge domains to pass the certification exams. A faculty advisor provides support and accountability in completing the requirements of the course. Although the course is self-paced, a minimum amount of progress must be made each week and all course requirements must be completed within the assigned course time. Attempting the certification exam within the assigned course time is also required. Although passing the certification exam is not required to pass this course, the results of the certification exams will be used to determine the final grade in the course. Students already holding a current certification for this course are not eligible to take this course.
Letter grade.
Prerequisite(s): CIT 3024 or equivalent academic or work experience.

CIT 3034 Project Management (4 Units)
This course is designed to provide the fundamentals of project management with an emphasis on managing unique challenges of information technology (IT) projects. Students will be introduced to the IT project management process using industry accepted methodologies. Extensive case related work will be used to help students understand the important aspects of time, performance, cost, and risk estimation in relation to the unique conditions often present in IT projects. Each of the critical phases of the IT project management process will be reviewed in detail using practical examples from the IT industry. Students are also introduced to computer-based project management software such as MS Project. This course aligns with topics covered in the CompTIA's Project+ certification exam and the PMI's CAPM certification exam.
Letter grade.
Prerequisite(s): CIT 2034

CIT 3041 Project+ Exam Prep (1 Unit)
This course is an independent study, self-paced, competency based course designed for students who wish to prepare for the CompTIA's Project+ certification exam. The course is intended for students who have already completed the CIT 3034 course. Students will be required to complete a predetermined number of practice certification exams, assess knowledge domain deficiencies, and focus on acquiring the requisite knowledge domains to pass the certification exams. A faculty advisor provides support and accountability in completing the requirements of the course. Although the course is self-paced, a minimum amount of progress must be made each week and all course requirements must be completed within the assigned course time. Attempting the certification exam within the assigned course time is also required. Although passing the certification exam is not required to pass this course, the results of the certification exams will be used to determine the final grade in the course. Students already holding a current certification for this course are not eligible to take this course.
Letter grade.
Prerequisite(s): CIT 3034 or equivalent academic or work experience.

CIT 3054 Database Design (4 Units)
This course is designed to provide an in-depth, hands-on introduction to designing and implementing databases that use relational technologies with a significant market presence. Hands-on assignments using an industry standard DBMS, such as MS SQL, MySQL, or Oracle Server will receive significant coverage in the course. SQL and various vendor extensions to the language will be covered. In addition, some advanced topics such as stored procedures and triggers will be covered.
Letter grade.
Prerequisite(s): CIT 2034

CIT 3064 Web Design and Scripting (4 Units)
This course is designed to provide in-depth, hands-on instruction in designing and scripting Web sites using HTML5 and CSS3 standards. Techniques in page layout and graphic design will be introduced. Assignments will focus on hands-on use of modern web development practices using integrated development environments. In addition, the course will introduce popular website development and content management tools such as WordPress to show alternative development approaches to HTML5 and CCS3.
Letter grade.
Prerequisite(s): CIT 1053 or equivalent academic or work experience.

CIT 3074 Cloud Computing (4 Units)
This course is designed to provide students an in-depth introduction to cloud computing. The course introduces the concepts of cloud configuration and deployment, security, maintenance, management, and troubleshooting. Hands-on labs with cloud technologies such as Microsoft Azure and AWS will give students practical experience working with cloud technologies. This course aligns with topics covered in the CompTIA's Cloud+ certification exam.
Prerequisite(s): CIT 3011 or equivalent academic or work experience.

CIT 3081 Cloud+ Exam Prep (1 Unit)
This course is an independent study, self-paced, competency based course designed for students who wish to prepare for the CompTIA's Cloud+ certification exam. The course is intended for students who have already completed the CIT 3074 course. Students will be required to complete a predetermined number of practice certification exams, assess knowledge domain deficiencies, and focus on acquiring the requisite knowledge domains to pass the certification exams. A faculty advisor provides support and accountability in completing the requirements of the course. Although the course is self-paced, a minimum amount of progress must be made each week and all course requirements must be completed within the assigned course time. Attempting the certification exam within the assigned course time is also required. Although passing the certification exam is not required to pass this course, the results of the certification exams will be used to determine the final grade in the course. Students already holding a current certification for this course are not eligible to take this course.
Prerequisite(s): CIT 3074 or equivalent academic or work experience.

CIT 4014 Web Programming (4 Units)
This course is designed to provide a practical approach to web development using either server side or client side scripting languages, such as PHP, ASP or JavaScript. This course teaches the core language and implementation of webpage based scripting. Students will learn the web programming language and practices through many hands-on assignments in developing web based applications. The integration of databases, such as MySQL or MS SQL will provide additional depth of knowledge. In addition the course will introduce other forms of modern web based protocols, such as XML, JSON and SOAP.
Letter grade.
Prerequisite(s): CIT 3054

CIT 4024 Visual Programming (4 Units)
This course is designed to provide a practical approach to event based visual programming using modern-general purpose programming languages, such as C#, Java, Python or Visual Basic. This course teaches the core concepts of programming, such as proper variable usage, decision structures, iterative structures, common data structures, and proper programming logic. Students will learn the programming language through many hands-on assignments in developing event based and visual computer applications. The integration of databases, such as MySQL or MS SQL will provide additional depth of knowledge. In addition the course will introduce object oriented programming techniques and the use of complex data structures.
Letter grade.
Prerequisite(s): CIT 3054

CIT 4034 Management of Information Systems (4 Units)
This course is designed to provide in-depth review of modern information systems management strategies and approaches. Topics in the course include management of operational strategy, server and network management practices, data reporting systems, social media management, business and IT strategic alignment, and disaster recovery. A review of incident cases will provide students with an understanding of how the course concepts can be applied in real world situations.
Letter grade.
Prerequisite(s): CIT 2034

CIT 4062 Topics in Cyber Security (2 Units)
This course is designed to build on the previous computer science and cyber security classes. The course will focus on applications of cyber security programs and process via case studies and research projects. Letter grade.
Prerequisite(s): CIT 3014 or equivalent; CIT 3024 or equivalent; previous coursework validated by the PLNU Records Office in the following areas: Cyber Security Analyst or Cyber Forensics; Ethical Hacking or Penetration Testing; Linux/Unix; and Windows Server.

CIT 4071 Information Technology Practicum (1-4 Units)
This course is a supervised experience in which the student works with industry professionals to gain experience with managing information systems. The course may be taken for 1 to 4 units based on the number of engagement hours in the practicum.
May be repeated for up to four (4) units. Credit/No Credit.
Prerequisite(s): Student has completed at least 16 credit hours in CIT course or related academic field and permission from the faculty advisor.

CIT 4081 Information Technology Project (1 Unit)
This course is a study of a selected problem or topic in Information Technology under the direction of a faculty advisor. The faculty advisor and student propose the research topic and course deliverables.
May be repeated for up to two (2) units. Credit/No Credit.
Prerequisite(s): Approval by the program director or department chair is required. Student has completed at least 16 credit hours in CIT course or related academic field and permission from the faculty advisor.