COMPUTER AND INFORMATION TECHNLOGY

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CIT 110 A+ Hardware **3 Credits**
Techniques of personal computer hardware maintenance and installation. Course covers hardware and software diagnostics, system troubleshooting, and methods of achieving effective system upgrades to enhance capabilities or improve system performance. Prerequisite:

CIT 112 Network + **3 Credits**
Course covers computer network infrastructure, network uses, and basic network management issues. CIT 112 has no prerequisite but assumes that students are familiar with computer hardware, have a basic understanding of stand-alone operating systems, and can use applications software. Prerequisite:

CIT 129 Intro to Programming **3 Credits**
A first course in programming. Offers an introductory course on computer program design and development. Emphasizes identification and solution of business problems through the use of logic development tools and scripting languages. Prerequisite:

CIT 130 Beginning Java **3 Credits**
Java is a general-purpose, object-oriented programming language best known for, but not limited to, creating applets to run on the Internet. This course will include applet creation, but the primary emphasis will be on general purpose object-oriented programming. Prerequisite: Must have completed CIT 129.

CIT 151 Beginning Web Development **3 Credits**
Create and maintain web pages using HTML. Build interactive web pages using dynamic HTML. Topics include images, tables, frames, CSS styles, forms, FTP, and site maintenance. Prerequisite:

CIT 152 Web Script Language Prog **3 Credits**
A continuation of CIT 151, Beginning Web Development. This programming class creates interactive web pages using technologies such as Javascript, SQL, and server-side programming language. Prerequisite: Must have completed CIT 129 and CIT 151.

CIT 174 Linux System Admin **3 Credits**
Covers concepts required for Linux server system administration and common networking services configuration, operation, and management. There is no formal prerequisite, however, CIT 173 or a basic understanding of either the UNIX or Linux workstation environment is recommended. Prerequisite:

CIT 180 Database Concepts and SQL **3 Credits**
This class is targeted for people with little or no SQL knowledge. The objective of this class is to familiarize students with database concepts that will be needed by programmers as well as professionals maintaining data management systems in such as those used in GIS. The class is accented with hands-on learning in Structured Query Language (SQL) and SQL procedures. CIT 129 recommended but not required. Prerequisite:

CIT 201 Word Certification Prep **3 Credits**
A hands-on course building on the foundation laid in COT 151 and continuing on to sophisticated manipulation of word processing software. Topics include tables, graphic boxes, clip art, desktop publishing, fonts, macros, styles, and spreadsheets. Recommend: COT 151. Prerequisite:

CIT 202 Excel Certification Prep **3 Credits**
In-depth exploration of Excel spreadsheets. Topics include advanced functions, importing and exporting data, multiple tables and workbooks, pivot tables, macros, and VBA. Team and student projects are conducted. Prerequisite: Must have completed IS 201.

CIT 212 Microsoft Networking II **3-5 Credits**
Introduces students to computer network server administration and management using MSMCSE II. CIT 211 or an advanced understanding of a Windows desktop environment is recommended. Prerequisite:

CIT 217 Security + **3 Credits**
Prepares professionals with some networking experience and who possess a thorough knowledge of TCP/IP to take and pass the CompTIA Security + certification exam. Topics will include general security basics of cryptography and operational/ organizational security. Working knowledge and network servers or associated certifications would be considered essential. Prerequisite:

CIT 240 Python for Data Analysis **3 Credits**
This course is designed to equip students with the essential skills for effective data handling using Python. It covers data analysis fundamentals, including collection, cleaning, transformation, statistical methods, and data visualization, leveraging Python libraries like pandas, numpy, matplotlib, seaborn, and scikit-learn. Practical case studies in business and sports analytics provide real-world applications, guiding students through data lifecycles and predictive modeling. Additionally, the course incorporates ChatGPT Prompt Engineering, allowing students to master the art of formulating prompts for AI language models, enhancing their data analysis capabilities. Prerequisite: Must have completed CIT 129 or Instructor Approval.

CIT 242 R for Data Analysis **3 Credits**
This course serves as an introduction to data analysis using the R programming language, a powerful open-source tool for statistical computing. It provides a solid foundation in R programming, covering key aspects such as data manipulation, data visualization, and statistical analysis. Practical, real-world data analysis projects will offer hands-on experience, and by the course's end, students will be proficient in conducting data analysis and visualization with R. Prerequisite: Must have completed CIT 129 or Instructor Approval.

CIT 263 Project Management **3 Credits**
The purpose of this course is to help students gain the knowledge required to effectively plan, implement, and complete IT projects across the organization. Topics will include business practices, interpersonal skills, and management process. Prerequisite:

CIT 280 Intro to Blockchain Concepts 3 Credits
Introduction to Blockchain is a course building the foundations to blockchain technology, which is a type of distributed ledger technology: what blockchain is, how blockchain was developed, how blockchain works, and the primary issues, challenges, and opportunities blockchain faces. Students will engage in hands-on work, such as contextualized coding exercises, to lay a strong foundation for post-secondary education in blockchain development. Prerequisite:

CIT 303 Intermediate Survey Computing 3 Credits
This course surveys essential concepts in a wide range of computing fields including database management, GIS, graphic communications, networking, and programming required by managers of computing systems and departments. This class assumes students understand at least one area of computing well then builds on that understanding to provide them with a survey of additional computing technologies that IT managers could reasonably be expected to facilitate and supervise. Prerequisite: Must have completed an AAS degree and COT 204.

CIT 361 TCP/IP: Manage Netwk Resources 3 Credits
Course provides in-depth coverage of TCP/IP concepts, protocols, and programming including IPv6. Prerequisite: Must have completed (CIT 112 or CIT 303) and MATH 116 or higher.

CIT 480 SQL Database Design/Implmnt 3 Credits
This course covers concepts required to design, implement, and administer a database management system for use in a modern organization. The emphasis will be on database structures, logical and physical data organization, the relational database model, development of stored programs, and database administration. Prerequisite: Must have completed CIT 180.