2018 Fall - Course Descriptions and Prerequisites

Course	Course Title	Course Description	Prerequisites	Semesters
		CPT Core Courses		
CPT 113	Information Systems	This course is an introduction of the principles and technologies used in modern management information systems.	Placement into MAT 032 and placement into RDG 100	FA SP SU
CPT 170	Microcomputer Applications	This course introduces microcomputer applications software, including word processing, databases, spreadsheets, graphs, and their integration.	(CPT placement score) or (successful completion of COL 107) or (placement into MAT 101 or higher and placement into ENG 101)	FA SP SU
CPT 209	Computer Systems Management	This course examines the methods and procedures used in maintaining microcomputer systems. Topics include hardware and software installation, configuration, operations and troubleshooting.	Placement into MAT 101 or higher and ENG 101	FA SP SU
CPT 230	C# Programming I	This course introduces designing, coding, testing and debugging C# programs. Topics include procedural, functional and object oriented techniques; programming; IDEs; .NET; processing data; data types; I/O; decision processing; control structures; modularized coding with methods; and arrays.	CPT 113 and MAT 102 or higher and CPT 257	FA SP SU
CPT 257	Operating Systems	This course examines the theory of operating systems and how the operating system theory is implemented in current operating systems.	Placement into MAT 101 and ENG 101	FA SP SU
CPT 264	Systems and Procedures	This course covers the techniques of system analysis, design, development, and implementation.	CPT 230 or IST 272	FA SP SU
CPT 267	Technical Support Concepts	This course is a study of technical support/help desk concepts and techniques for supporting computers and computer services.	CPT 209, CPT 257, IST 220	FA SP SU
CPT 275	Computer Technology Senior Project	This course includes the design, development, testing and implementation of an instructor-approved project.	CPT 264; IST 203 or IST 235 or IST 258 or IST 278; SPC 205 or SPC 209; and MAT 103 or MAT 109 or MAT 120 or higher math	FA SP
IST 220	Data Communications	This course is a study of the fundamentals of data communications. Basic signaling, networking and various transmission media are covered.	Placement into MAT 101 and ENG 101	FA SP SU
IST 226	Internet Programming	This course covers designing internet pages and applications for personal/business use, writing the required program code in languages such as HTML, Java, and VRML, testing and debugging programs, uploading and maintaining internet pages and applications.	Placement into MAT 032 and RDG 100	FA SP SU
IST 266	Internet and Firewall Security	This course is an introduction to firewalls and other network security components that can work together to create an in-depth defensive perimeter around a local area network (LAN).	IST 220 or IST 201 and CPT 257	FA SP SU
IST 272	Relational Database	This course provides a comprehensive foundation in both SQL and relational database design and implementation. Dynamic and embedded SQL programming techniques are emphasized. Note: SQL Server is used.	CPT 170 or CPT 113, MAT 102 or higher	FA SP SU

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CPT Concentration - Network Administration				
IST 201	Cisco Internetworking Concepts	This course is a study of current and emerging computer networking technology. Topics covered include safety, networking, network terminology and protocols, network standards, LANS, WANS, OSI models, cabling, cabling tools, Cisco routers, router programming, star topology, IP addressing, and network standards.	IST 220 and placement into MAT 102 or higher	SP SU
IST 202	Cisco Router Configuration	This course is a study of LANS, WANS, OSI models, ethernet, token ring, fiber distributed data interface TCP/IP addressing protocol, dynamic routing, routing, and the network administrator's role and function.	IST 201 and MAT 102 or higher	SU FA
IST 203	Advanced Cisco Router Configuration	This course is a study of configuring Cisco routers.	IST 202	Offered Based on Need
IST 204	Cisco Troubleshooting	This course is a study of troubleshooting network problems.	Co-requisite: IST 203 (required)	Offered Based on Need
IST 295	Fundamentals of Voice Over IP	This course is an introduction to features of Voice Over IP protocols, including VOIP hardware selection and network design considerations. Concepts include analog and digital voice encoding signaling and Quality of Service (QOS) and troubleshooting and configuration of VOIP networks.	IST 201, Co-requisite: IST 202 (required)	Offered Based on Need

Course	Course Title	Course Description	Prerequisites	Semesters
CPT Concentration - Programming				
CPT 231	C# Programming II	This course focuses on advanced programming concepts for C#. Topics include advanced string and character processing, user defined classes and advanced .NET, multiform projects, inheritance and polymorphism, database processing, exception handling, and GUIs with Windows Forms.	CPT 230; co-requisite IST 272 required	Offered Based on Need
CPT 236	Introduction to JAVA Programming	This course is an introduction to JAVA programming. Topics will cover JAVA syntax and classes for use in the development of JAVA applications and applets.	CPT 230	FA SP SU
CPT 237	Advanced JAVA Programming	This course is a study of advanced topics of the java programming language by building on a basic knowledge of the java language. Topics covered will include multi reading, swing classes, swing event models, advanced layout managers, the javabean component model, network programming and server-side programming.	CPT 236	Offered Based on Need
CPT 239	Active Server Pages	This course is a study of Active Server Pages (ASP) programming to build, implement, and execute ASP scripts and examines topics related to the syntax of server-side ASP scripting as well as the use of ASP with databases.	CPT 231 and IST 226 and IST 272	Offered Based on Need
CPT 283	PHP Programming I	This course is an introduction to the PHP programming language and will cover topics related to the syntax of PHP language and how PHP can be used to design and develop dynamic, database-driven web pages.	CPT 230 and IST 226 or IST 237 and IST 272	Offered Based on Need

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IST 239	DHTML and JavaScript	This course includes concepts and skills for developing dynamic functionality and interactivity for web sites using JavaScript. Variables, operators, conditionals, functions, objects (image and form), properties, methods, cookies, frames, and arrays. Note: Course taught via College Online only.	CPT 230 and IST 226 or IST 237	Offered Based on Need
IST 278	Database Programming	This course is a study of advanced database techniques. Topics will cover procedures, triggers, query optimization and user security.	IST 272 and MAT 102 or higher	Offered Based on Need

CPT Concentration - Systems Administration				
IST 190	Linux Essentials	This course will provide students with the fundamental knowledge and concepts of the LINUX operating system, including command line functions, file systems, user and group administration, process management, text editors, and network applications.	CPT 257	SP SU
IST 191	Linux Administration	This course will provide students with the skills necessary to administer a LINUX system, including hardware/software configuration, user and group administration, LINUX network configuration, and file system management.	IST 190	Offered Based on Need
IST 198	Cloud Essentials	This course is a study of cloud computing as a framework for providing network access to shared computing resources including storage, network, server and virtualization infrastructures.	CPT 257, IST 220, IST 190, IST 257 Co-requisite: IST 258 (required)	Offered Based on Need
IST 257	LAN Network Server Technologies	This course is a study of networking system technologies including network operating system architecture, the installation, configuration, monitoring and troubleshooting of network resources, and network administration functions such as user-group maintenance, network security print services, remote access, fault tolerance, backup and recovery. Correlates with Microsoft Windows 2003 Server.	CPT 257	SU, FA
IST 258	LAN Directory Services	This course is a study of LAN objects, object properties, and the organization of network objects into a structure that is extensible and scalable. The course includes a hierarchical view of network resources and allows administrators, developers and end-users to gain access to those resources.	IST 257 and IST 220	FA, SP