

Information Technology (ITEC) Courses

ITEC2081 Network Protocols I

This course develops students' knowledge of computer networks, network appliances and network protocols. They are introduced to methods of developing protocols, including interpretation of standards, finite state machines and state-full transition. Students gain a conceptual framework useful in the adaptation of network protocols to network appliances and internetworking design. Through the use of network protocol analyzers students conduct in-depth examinations of the 802.3, ARP, IP (versions 4 and 6), ICMP and RIP protocols. Comparison of protocols is made by type. Students develop a basic understanding of the software paradigms used to construct protocols. In homework and lab assignments, students develop skill competencies needed to troubleshoot protocol issues. Students connect, configure and program a range of network devices; work with network protocol analyzers; examine the software internals of protocol implementations; and map the path of a data packet on a network.

Prerequisite(s): CSIS1101 or CSIS1020. (OL)

Offered at North Miami, Online, Providence, Providence CE

4.5 Quarter Credit Hours

ITEC2085 Distributed Systems with TCP/IP

In this course, students learn how client/server systems evolved and how those systems continue to adapt to business needs. Students develop an understanding of distributed programming techniques and of how distributed applications (databases, transactions, processors, ERP systems, etc.) work within networks. The course also covers the three main types of systems (Two Tier, Three Tier and N Tier) and how they relate to one another. In homework and lab assignments, students develop skill competencies needed to solve day-to-day business problems in maintaining and customizing databases and other applications. Students configure and implement their own client/server network, which gives them an opportunity to develop a professionally focused understanding of how such a network is designed and built. This course focuses on the upper layers of the OSI model (especially the application layer).

Prerequisite(s): ITEC2081, MATH2001.

Offered at North Miami, Providence

4.5 Quarter Credit Hours

ITEC3010 Server Configuration and Implementation

This course allows students to apply skills learned in the network degree program and other information-technology-related courses to the construction and commission of a server on a network. Students are responsible for configuring a server to deliver applications and files necessary to support many types of user-bases.

Prerequisite(s): CSIS1020 or CSIS1101, CSIS2045, ITEC1020 or ITEC2081.

Offered at North Miami, Providence

4.5 Quarter Credit Hours

ITEC3040 Systems Analysis

This course presents a systematic approach to the development of business systems. By following this approach, students learn to design business systems that efficiently meet the goals and objectives of management. A major element of this course is a team project, where students utilize the systems approach in analyzing and designing a business system. This class is required for majors in this program and highly recommended for non-computer majors.

Prerequisite(s): CSIS1112 or FIT1014 or FIT1040.

Offered at North Miami, Providence, Providence CE

4.5 Quarter Credit Hours

ITEC3050 Information Security

This course presents all aspects of computer and information security including data encryption, zero-knowledge based proofs, public key coding and security procedures. This course makes students aware of the various threats to computers and data and identifies methods and techniques for providing counter-measures to those threats. (OL)

Offered at North Miami, Online, Providence, Providence CE

4.5 Quarter Credit Hours

ITEC3070 Systems Modeling and Simulation

This course addresses the process of modeling systems, including business systems, network systems, dynamic vehicle systems and client-server systems, to name a few. The modeling process is the prerequisite for the simulation and subsequent analysis, design and assessment of a system with respect to specific performance criteria. The roles of modeling in simulation are presented within the context of the systems engineering process. Modeling encompasses everything from functional through mathematical modeling; simulation includes the development and use of software for systems analysis and design. Team projects from students' areas of interest are an integral part of the course.

Prerequisite(s): MATH2001. (OL)

Offered at North Miami, Online, Providence, Providence CE

4.5 Quarter Credit Hours