

# NETWORKING TECHNOLOGIES (NET TEC)

## Networking Technologies (NET TEC) 101

### Client-Server Database I

This course introduces client-server Relational Database Management Systems (RDBMS) that are commonly used to design scalable databases. Topics include relational database terminology and concepts, database design using Normalization, Data Modeling and Entity-Relationship (ER) models, schemas, using Structured Query Language (SQL) for database construction and application processing, and additional data-base-related concepts. Writing assignments, as appropriate to the discipline, are part of the course.

2 Laboratory hours. 2 Lecture hours. 3 Credit Hours.

**Offered At:** DA, HW, KK, MX, OH, TR, WR

## Networking Technologies (NET TEC) 111

### Intro to Computer Electronics

Introduction to concepts and principles used in modern computers and computer circuits; basic computer numbers systems; computer architecture; exposure to computer languages; digital logic. Writing assignments, as appropriate to the discipline, are part of the course.

*Grade of C or better in CIS 116, or Consent of Department Chairperson.*

4 Laboratory hours. 2 Lecture hours. 4 Credit Hours.

**Offered At:** DA, TR

## Networking Technologies (NET TEC) 119

### Intro To Networking

Covers the basics of networking from the component hardware to the topology and theoretical foundation of networks. Emphasis will be placed on learning current networking theoretical models and on supporting and maintaining a network. Various types of networks and various topologies will be covered. This course is ideal for the individual that wants to obtain a solid foundation in the principles of Networking. Writing assignments, as appropriate to the discipline, are part of the course.

*Grade of C or better in CIS 116, or Consent of Department Chairperson.*

4 Laboratory hours. 2 Lecture hours. 4 Credit Hours.

**Offered At:** DA, TR

## Networking Technologies (NET TEC) 121

### Internetworking I

This course introduces the architecture, structure, functions, components, and models of the Internet and other computer networks. The principles and structure of IP addressing and the fundamentals of Ethernet concepts, media, and operations are introduced to provide a foundation in networking technologies. Writing assignments, as appropriate to the discipline, are part of the course. NOTE: CIS 101 or CIS 116 or COMPSFI 101 recommended prior to enrolling in this course.

*Eligibility for ENGLISH 101 based on prior coursework or CCCRTW, ACT, SAT, GED, or HiSET test scores, or Consent of Department Chairperson.*

2 Laboratory hours. 2 Lecture hours. 3 Credit Hours.

**Offered At:** DA, HW, KK, MX, OH, TR, WR

## Networking Technologies (NET TEC) 122

### Internetworking II

This course describes the architecture, components, and operations and routers and switches in a small network. Students learn how to configure a router and a switch for basic functionality, and the essential routing protocols and virtual LAN operation in both IPv4 and IPv6 networks.

Writing assignments, as appropriate to the discipline, are part of the course.

*Grade of C or better in NET TEC 121, or Consent of Department Chairperson.*

2 Laboratory hours. 2 Lecture hours. 3 Credit Hours.

**Offered At:** DA, KK, OH, TR, WR

## Networking Technologies (NET TEC) 201

### Client-Server Database II

In this course, the students shall learn of the how to manage a client-server database - serve as database management administrator (DBA), learn techniques to create initial database, configure storage space, add/delete/modify users, and security issues for a database. Network configuration and performance tuning will be covered in more advance courses. Writing assignments, as appropriate to the discipline, are part of the course.

2 Laboratory hours. 2 Lecture hours. 3 Credit Hours.

**Offered At:** DA

## Networking Technologies (NET TEC) 202

### Client-Server Database III

In this course, the students shall learn of the how to manage a client-server database - serve as database management administrator (DBA), learn procedures necessary to recover a database failure, and ensure network accessibility for a client-server database. Student will learn both command-line and GUI interfaces to perform these procedures. Writing assignments, as appropriate to the discipline, are part of the course.

2 Laboratory hours. 2 Lecture hours. 3 Credit Hours.

**Offered At:** DA

## Networking Technologies (NET TEC) 203

### Client-Server Database IV

In this course, the students will learn how to tune a client-server database and serve as database management administrator (DBA): learn tuning concepts, diagnose and prevent lock contention, discuss difference between dedicated and shared servers, prevent performance degradation as well as use tools to diagnose, troubleshoot and optimize database productivity. Writing assignments, as appropriate to the discipline, are part of the course.

4 Laboratory hours. 2 Lecture hours. 4 Credit Hours.

**Offered At:** DA

## Networking Technologies (NET TEC) 221

### Internetworking III

This course describes the architecture, components, and operations of routers and switches in larger and more complex networks. Students learn how to configure routers and switches for advanced functionality, resolve common issues in both IPv4 and IPv6 networks, and implement a WLAN in a small-to-medium network. Writing assignments, as appropriate to the discipline, are part of the course.

*Grade of C or better in NET TEC 122, or Consent of Department Chairperson.*

2 Laboratory hours. 2 Lecture hours. 3 Credit Hours.

**Offered At:** DA, MX, OH, TR, WR

### **Networking Technologies (NET TEC) 222**

#### **Internetworking IV**

This course discusses the WAN technologies and network services required by converged applications in a complex network. In a complex hierarchical networks, students will learn the selection criteria of network devices and WAN technologies to meet network requirements, configure and troubleshoot network devices, resolve common issues with data link protocols, and develop the knowledge and skills needed to implement virtual private network (VPN) operations. Writing assignments, as appropriate to the discipline, are part of the course.

*Grade of C or better in NET TEC 221, or Consent of Department Chairperson.*

2 Laboratory hours. 2 Lecture hours. 3 Credit Hours.

**Offered At:** DA, MX, OH, TR, WR

### **Networking Technologies (NET TEC) 240**

#### **Operating Systems/Server I**

This course introduces the concepts and components of a domain server to manage and serve the resources available in a network environment. The fundamentals of a domain controller including domain services, network name resolution, resource containers, directory management, and network accessibility are discussed with hands on learning experience. The processes of server installation, configuration, and maintenance will establish the necessary knowledge for planning and implementing advanced services. Writing assignment, as appropriate to the discipline are part of the course. Allowed repeatable course: course may be repeated up to three times and may count for a maximum of four variable credits. Consent of Department Chairperson required for repeatability.

*Grade of C or better in CIS 116 or Consent of Department Chairperson.*

2 Laboratory hours. 2 Lecture hours. 3 Credit Hours.

**Offered At:** DA, KK, MX, OH, TR, WR

**Repeatable:** Yes, up to 4 times

### **Networking Technologies (NET TEC) 245**

#### **Cloud Computing and Services**

Cloud services are commonly adopted in current business operational infrastructure that on-demand services as shared resources to be accessed by users through private or public network connections. This course presents the essential technologies for cloud deployments that include system requirements, service evaluations, secure network access, and automation and orchestration for cloud service management. Students will perform hands-on projects for cloud deployments using services appropriate to the profession. Writing assignments, as appropriate to the discipline, are part of the course.

*Grade of C or better in CIS 116, and NET TEC 121 -OR- COMPSFI 101, or Consent of Department Chairperson.*

2 Laboratory hours. 2 Lecture hours. 3 Credit Hours.

**Offered At:** DA, KK, OH, TR, WR

### **Networking Technologies (NET TEC) 260**

#### **Microcomputers**

Introduction to microcomputer architecture, peripheral and input/output devices. Testing, troubleshooting, upgrading and repair of microcomputer systems. Writing assignments, as appropriate to the discipline, are part of the course

4 Laboratory hours. 2 Lecture hours. 4 Credit Hours.

**Offered At:** DA, TR

### **Networking Technologies (NET TEC) 270**

#### **Local Area Networks**

Selection and installation of network hardware and software.

Management and maintenance of networks. Writing assignments, as appropriate to the discipline, are part of the course. Allowed Repeatable Course: Courses may be repeated up to three times and may count for a maximum of four variable credits. Consent of Department Chairperson required for repeatability.

*Grade of C or better in (CIS 116 or NET TEC 240), or Consent of Department Chairperson.*

4 Laboratory hours. 2 Lecture hours. 4 Credit Hours.

**Offered At:** DA, TR

**Repeatable:** Yes, up to 4 times

### **Networking Technologies (NET TEC) 299**

#### **Special Topics Networking Systems Technologies**

Special topics in networking systems and technology will be discussed along with appropriate lab and/or field trip activities. New developments will be emphasized, especially materials useful in K12 education and industry. Writing assignments, as appropriate to the discipline re part of the course.

*Consent of Department Chairperson.*

1-4 Lecture Hours. 2-4 Credit Hours.

**Offered At:** DA, OH, TR, WR

**Repeatable:** Yes, up to 4 times