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**CIS 302/312: Computer Networking**

**Curriculum Objectives:**

This course is for individuals seeking an understanding and knowledge of networking fundamentals including the Open Systems Interconnect (OSI) seven-layer model concepts; Ethernet and Cabling concepts; terminology and technologies. Students obtain the skills necessary for the configuration of Cisco routers connected in local-area networks (LANs) and wide-area networks (WANs) typically found at small to medium network sites. It is part of the recommended training for those seeking certification as a Cisco Certified Network Associate (CCNA). The second part of the course is designed for students with primary knowledge of the working of operating systems. The topics include: various generations of operating systems, process and its transitions, concurrent processes and multiprogramming, deadlock, real storage, virtual and auxiliary storage, processor scheduling and operating system security. The management of the above mentioned resources by operating system is covered in detail. Various popular state-of-the-art operating systems are also discussed

**Course Outline:**

|  |  |  |
| --- | --- | --- |
| Marking Period | Major Topics / Units | Student Learning Targets |
| 1 | * Intro to Computer Networking
* Copper Core
* Fiber Optic
* Wireless Technology
* Digital Encoding
 | Students will be able to have a better understanding of a Computer Network, difference between copper core and fiber optic cables, and establishing a wireless connection.  |
| 2 | * Networking Operating System
* Micro Network
* Unix
* Intro to Server
* TCP/IP
 | Students will begin to understand different size networks, server operating systems, different server connections and maintaining an active directory.  |
| 3 | * Subnetting
* Multimedia
* Webservers
* Remote Access
* Network Security
 | Students will learn how to establish a webserver, connect and operate remotely webservers, and maintaining a Network security with proper updates.  |
| 4 | * Maintaining a Network
* Trouble Shooting a Network
* New Networks
 | Students will be able to maintain a network connection while learning how to trouble shoot any issues/errors that may occur on a network.  |

**Grading:** Full year grade is a cumulative of all marking periods and exams:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Full Year Grade** | **1st Marking Period** | **2nd Marking Period** | **Mid-Term Exam** | **3rd Marking Period** | **4th Marking Period** | **Final Exam** |
| **100%** | **20%** | **20%** | **10%** | **20%** | **20%** | **10%** |

Each marking period grade is calculated as given below:

|  |  |
| --- | --- |
| **Percent Weightage** | **Category** |
| **[40%]** | Assignments  |
| **[25%]** | Test and Quizzes  |
| **[25%]** | Projects |
| **[10%]** | Class Participation  |

**Required Materials:**

1. **Composition Notebook for “Do Now’s”**
2. **One Folder**
3. **Blue or black ink pen & pencil**

**Expectations:**

**Assignments & Projects** is assigned almost every day if not completed in class, you can continue to complete at home using Schoology. It will either be checked for completion and you will be able to monitor your grade in Schoology. **Students must show all work to receive full credit. Majority of homework and projects assignments will be sent as an attachment using Schoology applications. We will fully go over everything in class.**

 **Attendance:**

As the student handbook states, regular class attendance is crucial to the learning process. If a student has an excused absence from class (illness, doctor’s appointment, etc.) it is his/her responsibility to get a legal note from your parent and take it to your guidance counselor.

**Extra Help Days:**

Wednesdays 2:30-3:15

Room 220

**Parent-Teacher Communication:**

Mr. Fanek

Room 220

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