

**SCHOOL OF COMPUTER TECHNOLOGIES**

**COURSE NAME:** WINDOWS SERVER ACTIVE DIRECTORY CONFIGURATION

**COURSE CODE:** COMP 2064

**CREDIT HOURS:** 4

**COURSE CONTACT HOURS:** 56

**PREREQUISITES:** COMP 1165

**COREQUISITES:** None

**EFFECTIVE DATE:** September, 2019

**PROFESSOR:** Ranjit Sohal **EMAIL:** rsohal@georgebrown.ca

**PHONE:** 416-415-5000 **ROOM:** C430

**PLAR ELIGIBLE: YES (X) NO ( )**

**NOTE TO STUDENTS: Academic Departments at George Brown College will NOT retain historical copies of Course Outlines. We urge you to retain this Course Outline for your future reference.**

FOR OFFICE USE ONLY

ORIGINATOR\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**SIGNATURE DATE**

**CHAIR:** **Albert Denison**   **SIGNATURE DATE**

**DATE OF REVISION:**  **-----------------------**\_

**EQUITY STATEMENT: George Brown College values the talents and contributions of its students, staff and community partners and seeks to create a welcoming environment where equity, diversity and safety of all groups are fundamental. Language or activities which are inconsistent with this philosophy violate the College policy on the Prevention of Discrimination and Harassment and will not be tolerated. The commitment and cooperation of all students and staff are required to maintain this environment. Information and assistance are available through your Chair, Student Affairs, the Student Association or the Human Rights Advisor.**

**George Brown College is dedicated to providing equal access to students with disabilities.  If you require academic accommodations visit the Disability Services Office or the Deaf and Hard of Hearing Services Office on your campus.**

STUDENT RESPONSIBILITIES: Students should obtain a copy of the *Student Handbook* and refer to it for additional information regarding the grading system, withdrawals, exemptions, class assignments, missed tests and exams, supplemental privileges, and academic dishonesty. Students are required to apply themselves diligently to the course of study, and to prepare class and homework assignments as given. Past student performance shows a strong relationship between regular attendance and success.

COURSE DESCRIPTION:

This course is designed to prepare individuals for the responsibilities of being a Windows server 2016 administrator. It provides the knowledge, concepts, and skills necessary to install, customize and troubleshoot Windows server 2016 in Microsoft Active Directory services. Course emphasis focuses on installation, user and group management, client/server management and monitoring; disk and file share management, print services and backup management.

**ESSENTIAL EMPLOYABILITY SKILLS:**

As mandated by the Ministry of Training, Colleges and Universities essential employability skills (EES) will be addressed throughout all programs of study. Students will have the opportunity to **learn (L)** specific skills, to **practice (P)** these skills, and/or **be evaluated (E)** on the EES outcomes in a variety of courses. The EES include communication, numeracy, critical thinking & problem solving, information management, interpersonal and personal skills. The faculty for this course has indicated which of the EES are either Learned (**L**), Practiced (**P**) or Evaluated (**E**) in this course:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Skill | **L** | **P** | **E** | Skill | **L** | **P** | **E** |
| 1. communicate clearly, concisely and correctly in the written, spoken and visual form that fulfills the purpose and meets the needs of the audience |  | X |  | 7. locate, select, organize and document information using appropriate technology and information sources |  | X | X |
| 2. respond to written, spoken or visual messages in a manner that ensures effective communication |  | X |  | 8. show respect for the diverse opinions, values, belief systems, and contributions of others | X | X |  |
| 3. execute mathematical operations accurately |  | X | X | 9. interact with others in groups or teams in ways that contribute to effective working relationships and the achievement of goals |  | X |  |
| 4. apply a systematic approach to solve problems |  | X | X | 10. manage the use of time and other resources to complete projects |  | X |  |
| 5. use a variety of thinking skills to anticipate and solve problems |  | X |  | 11. take responsibility for one’s own actions, decisions and consequences |  | X | X |
| 6. analyze, evaluate, and apply relevant information from a variety of sources |  | X | X |  |  | X |  |

**COURSE OUTCOMES:**

Upon successful completion of this course the students will have reliably demonstrated the ability to:

1. Explain the basics of computer networks. Peer-to-Peer networks and Client/Server networks.
2. Explain the Windows 2016 advance file and security system. Types of file system supported and the fault tolerance implemented.
3. Define Forest, Trees, Domain, workgroup, users, groups and how they are managed.
4. Explain Windows communication protocols, and how the registry can be viewed and managed.
5. Explain Windows Printer Services, network-attached print devices, dedicated print servers, and Window 2016 remote printing.
6. Explain how to install Windows 2016 server, networking hardware, and select a topology for implementation.
7. Explain user, group accounts and policies, how they are implemented and administered using Windows server administration tools.
8. Know why, where, and when to use system performance monitor, event viewer and Windows 2016 diagnostics.

**DELIVERY METHODS / LEARNING ACTIVITIES:**

The instructional methods of this course are comprised of a combination of lectures, demonstrations, hands-on exercises and labs.

**LIST OF TEXTBOOKS AND OTHER TEACHING AIDS:**

**Required:**

Hands-On Microsoft Windows Server 2016; Author: Michael Palmer; Publisher: Course Technology  ISBN-10: 1-305-07862-4      ISBN-13: 978-1-305-07862-8

**TESTING POLICY:**

A score of zero will be recorded for a missed assignment or examination unless the student presents the professor official substantiation of the absence the first day the student returns to class.

**ASSIGNMENT POLICY:**

Students are required to complete hands-on exercises and projects in labs, quizzes and exams.

**EVALUATION SYSTEM:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Assessment Tool:** | **Description:** | **Outcome(s) assessed:** | **EES**  **assessed:** | **Date / Week:** | **% of Final Grade:** |
| Quizzes | 2 at 5% each | 1-7 | 1, 2, 3, 10 | 3, 9 | 10% |
| Project | Hands on exercises | 1-5 | 4, 5, 6, 7, 8, 9, 10, 11 | 15 | 25% |
| Examination | Mid term | 7 | 1, 2, 3, 10 | 7 | 30% |
| Examination | Final comprehensive exam | 1-7 | 1, 2, 3, 10 | 15 | 35% |
|  |  |  |  | **TOTAL** | **100%** |

**GRADING SYSTEM**

**The passing grade for this course is: 50%**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **A+** | **90-100** | **4.0** | **B+** | **77-79** | **3.3** | **C+** | **67-69** | **2.3** | **D+** | **57-59** | **1.3** | **Below 50** | **F** | **0.0** |
| **A** | **86-89** | **4.0** | **B** | **73-76** | **3.0** | **C** | **63-66** | **2.0** | **D** | **50-56** | **1.0** |  |  |  |
| **A-** | **80-85** | **3.7** | **B-** | **70-72** | **2.7** | **C-** | **60-62** | **1.7** |  |  |  |  |  |  |

**Excerpt from the College Policy on Academic Dishonesty:**

**The *minimal* consequence for submitting a plagiarized, purchased, contracted, or in any manner inappropriately negotiated or falsified assignment, test, essay, project, or any evaluated material will be a grade of zero on that material.**

**To view George Brown College policies please go to** [**www.georgebrown.ca/policies**](http://www.georgebrown.ca/policies)

**TOPICAL OUTLINE:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Week** | **Topic / Task** | **Outcomes** | **Content / Activities** | **Resources** |
| 1 | Introduction to windows server 2016 | 1 | Windows 2016 server capabilities  Windows networking concepts overview Workgroups, Domains  Implementing TCP/IP in Windows Server 2016. | Ch.1 |
| 2 | Installing windows server 2016 | 1, 2 | Installing windows server 2016  Overview of windows server 2016 installation methods  Performing a DVD based installation  Using windows deployment service  Installing windows server core  Installing and managing service. .packs  Troubleshooting installation problems. | Ch2. |
| 3 | Configuring server 2016 environment | 1, 2, 5 | Configuring the windows server 2016 environment  Using server manager  Installing and removing server roles  Configuring server hardware devices  Configuring the operating system  Explain the window server 2016 registry.  **Quiz 1/1** | Ch3. |
| 4 | Active directory and account management | 3, 5 | Introduction to active directory and account management  Active directory basics  Containers in active directory  User account management  Security group management  Implementing user profiles | Ch4. |
| 5 | Configuring, managing and troubleshooting | 3, 5 | Managing and troubleshooting Configuring resource management  Managing folder and file security  Configuring shared folders and shared folder permissions  Implementing a distributed file system  Configuring disk quotas | Ch.5 |
| 6 | Server 2016 printing | 5, 6 | Configuring windows server 2016 printing  An overview of windows server 2016 printing  Installing the print service role  Installing local and shared printers  Configure printer properties  Troubleshooting common printing problems | Ch.6 |
| 7 |  | 7 | **Mid-Term Examination** |  |
| 8 | *I N T E R S E S S I O N          W E E K* | | | |
| 9 | Managing data storage | 6, 8 | Windows server 2016 storage options  Disk management  Introduction to fault tolerance  Windows server 2016 storage enhancements  Disk backup  **Quiz 2/2** | Ch.7 |
| 10 | Server 2016 network services | 4, 5, 8 | Implementation of Microsoft DNS  Implementation of Microsoft WINS  Implementation of Microsoft DHCP  Implementation of Microsoft Internet information services | Ch.8 |
| 11 | Remote access services | 6, 7, 8 | Introduction to remote access  Implementing a virtual private network  Configuring a VPN server  Configuring a dial-up remote access server  Troubleshooting VPN and dial-up RAS installation  Connecting through terminal services | Ch.9 |
| 12 | Securing server 2016 | 6, 7, 8 | Securing windows server 2016 using security policies  Introduction to group policies  Active directory rights management service  Using security templates and configuration analysis snap-ins  Configuring NAT | Ch.10 |
| 13 | Server and network monitoring | 6, 7, 8 | Server and network monitoring  Monitoring server services  Using task manager  Using performance monitor  Using reliability monitor | Ch.11 |
| 14 | System reliability and availability | 6, 7, 8 | Managing system reliability and availability  Resolving boot problems  Using and configuring event viewer  Troubleshooting connectivity | Ch.12 |
| 15 |  |  | **Final examination** |  |
| **Please note: this schedule may change as resources and circumstances require.**  For information on withdrawing from this course without academic penalty, please refer to the College Academic Calendar: [**http://www.georgebrown.ca/Admin/Registr/PSCal.aspx**](http://www.georgebrown.ca/Admin/Registr/PSCal.aspx) | | | | |