



COURSE OUTLINE: CYB102 - WINDOWS ADMINISTRATI

Prepared: IT Studies

Approved: David Oraziotti, Dean, Environment, Technology, and Business

Course Code: Title	CYB102: WINDOWS ADMINISTRATION & POWERSHELL SCRI
Program Number: Name	5911: CYBERSECURITY
Department:	PPP triOS
Academic Year:	2022-2023
Course Description:	This course covers the skills and knowledge necessary to install, configure, administer, and support Microsoft Windows. In addition, you will learn about the various tools for administering, configuring, and troubleshooting Windows, as well as how to deploy and upgrade to the latest version of Windows, configure disks, users, drivers, printers, network interfaces and security. This course also provides students with the knowledge and skills necessary to write and maintain PowerShell scripts for automating system administration tasks.
Total Credits:	4
Hours/Week:	4
Total Hours:	56
Prerequisites:	There are no pre-requisites for this course.
Corequisites:	There are no co-requisites for this course.
Vocational Learning Outcomes (VLO's) addressed in this course:	5911 - CYBERSECURITY VLO 1 Develop and implement cyber security solutions to protect network systems and data. VLO 2 Plan and implement security assessment methodologies, vulnerability management strategies and 2. incident response procedures to generate and communicate security analysis reports and recommendations to the proper level of the organization. VLO 3 Recommend processes and procedures for maintenance and deployment of cyber security solutions.
Essential Employability Skills (EES) addressed in this course:	EES 4 Apply a systematic approach to solve problems. EES 5 Use a variety of thinking skills to anticipate and solve problems. EES 6 Locate, select, organize, and document information using appropriate technology and information systems. EES 7 Analyze, evaluate, and apply relevant information from a variety of sources. EES 10 Manage the use of time and other resources to complete projects.
Course Evaluation:	Passing Grade: 50%, D A minimum program GPA of 2.0 or higher where program specific standards exist is required for graduation.
Other Course Evaluation &	OTHER EVALUATION CONSIDERATIONS



Assessment Requirements:

1. In order to pass this course, the student must obtain an overall test/quiz average of 50% or better, as well as an overall assignment average of 50% or better. A student who is not present to write a particular test/quiz and does not notify the professor beforehand of their intended absence, may be subject to a zero grade on that test/quiz.
2. There will be no supplemental or make-up quizzes/tests in this course unless there are extenuating circumstances.
3. Assignments must be submitted by the due date according to the specifications of the professor. Late assignments will normally be given a mark of zero. Late assignments will only be marked at the discretion of the professor in cases where there were extenuating circumstances.
4. Any assignment/projects submissions, deemed to be copied, will result in a zero grade being assigned to all students involved in that particular incident.
5. It is the responsibility of the student to ask the professor to clarify any assignment requirements.
6. The professor reserves the right to modify the assessment process to meet any changing needs of the class.

Attendance:

Sault College is committed to student success. There is a direct correlation between academic performance and class attendance, therefore, for the benefit of all its constituents, all students are encouraged to attend all of their scheduled learning and evaluation sessions. This implies arriving on time and remaining for the duration of the scheduled session. It is the departmental policy that once the classroom door has been closed, the learning process has begun. Late arrivers may not be granted admission to the room.

Books and Required Resources:

MCA Modern Desktop Administrator Complete Study Guide: Exam MD-100 and Exam MD-101
ISBN: 978-1-119-60310-8

Course Outcomes and Learning Objectives:

Course Outcome 1	Learning Objectives for Course Outcome 1
Navigate the features and structure of the Windows operating system for planning and maintenance purposes.	DEPLOY AND UPGRADE OPERATING SYSTEMS 1.1 Plan a Windows deployment. 1.2 Plan and implement Windows by using Windows Autopilot. 1.3 Plan and implement Windows by using MDT. 1.4 Manage Windows accounts, VPN connections and certificates on Windows.
Course Outcome 2	Learning Objectives for Course Outcome 2
Manage the methods and procedures used to deploy and maintain Windows in an enterprise environment	DEPLOY WINDOWS 2.1 Deploy Windows while selecting the appropriate Windows edition, perform a clean installation, perform an in-place upgrade, Migrate user data, configure Windows for additional regional and language support. 2.2 Perform post-installation configuration tasks like customize the Windows desktop, configure Windows browsers (Microsoft Edge and Internet Explorer) including the mobility settings, implement activation, configure printers and external devices, configure Windows by using provisioning packages, configure store settings, application settings 2.3 Configure and manage services. MAINTAIN WINDOWS



	<p>2.4 Configure system and data recovery by performing file recovery procedures, Windows recover procedures and troubleshooting the startup process.</p> <p>2.5 Manage updates by planning for Windows updates, selecting the appropriate servicing channel, configuring Windows update options, and troubleshooting updates.</p> <p>2.6 Monitor and manage Windows by configuring and analyzing event logs, managing performance, managing Windows 10 environment, configuring local registry and scheduling tasks.</p> <p>2.7 Configure remote connectivity by configuring remote assistance tools, remote desktop access and managing Windows remotely by using Windows Remote Management, PS remoting and Windows Admin Center.</p>
Course Outcome 3	Learning Objectives for Course Outcome 3
Configure and support disks, filesystems, users, groups, devices, and user interface options using the appropriate tools and procedures	<p>MANAGE DEVICES AND DATA</p> <p>3.1 Manage local users, local groups, and devices.</p> <p>3.2 Configure devices by using local policies</p> <p>3.3 Configure local registry, implement local policy, troubleshoot group policies on devices.</p> <p>3.4 Manage Windows security by configuring user account control (UAC), Windows Defender Firewall, encryption, BitLocker, Windows Defender Antivirus.</p>
Course Outcome 4	Learning Objectives for Course Outcome 4
Configure and support TCP/IP networking within the Windows operating system in a variety of different network environments	<p>CONFIGURE STORAGE AND CONNECTIVITY</p> <p>4.1 Configure Networking by configuring client IP settings, mobile networking, VPN client, Wi-Fi profiles and troubleshoot networking.</p> <p>4.2 Configure data access and protection by configuring file and folder permissions, shared permissions, local storage, OneDrive and OneDrive for Business.</p>
Course Outcome 5	Learning Objectives for Course Outcome 5
Configure and support security, access control, and group policy for Windows clients in a workgroup and domain environment	<p>MANAGE POLICIES AND PROFILES</p> <p>5.1 Implement compliance policies for devices</p> <p>5.2 Configure device profiles.</p> <p>5.3 Manage user profiles.</p> <p>MANAGE AND PROTECT DEVICES</p> <p>5.4 Implement and manage device, application and threat protection.</p> <p>5.5 Manage Microsoft Intune devices.</p> <p>5.6 Monitor devices in a Windows environment</p> <p>5.7 Manage updates by planning for Windows updates, deploying Windows updates using Intune, configuring Windows delivery optimization and monitoring windows updates.</p>
Course Outcome 6	Learning Objectives for Course Outcome 6
Optimize, update, and troubleshoot the Windows operating system, apps, and	<p>MANAGE APPS AND DATA</p> <p>6.1 Deploy, update, applications in Windows environment.</p> <p>6.2 Implement Mobile Application Management (MAM).</p>

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Evaluation Process and Grading System:	Evaluation Type	Evaluation Weight
	Final Exam	30%
	Professional Performance	10%
	Quizzes, Tests & Projects	60%
Date:	July 6, 2022	
Addendum:	Please refer to the course outline addendum on the Learning Management System for further information.	