Assessment Details and Submission Guidelines	
Trimester	T2 2024
Unit Code	MN621
Unit Title	Advanced Network Design
Assessment Type	Individual
Assessment Title	Assignment 1 - Network requirement analysis and plan
Purpose of the assessment (with ULO Mapping)	This assignment is designed to assess students' knowledge and skills related to the following learning outcomes: a. Analyse the need for advanced networks, standards and network solutions;
Weight	10%
Total Marks	20 Marks
Word limit	1500
Due Date	Week 3, 4 August 2024
Submission Guidelines	• **GENERATIVE AI TOOLS MAY BE USED WITH PRIOR PERMISSION** Students are permitted to use advanced automated tools for this formative assessment only for understanding, learning and research purposes. Using GenAI tools to write assignments for you, will be considered as Academic Misconduct, and it be penalised. If students are using any of the information from GenAI, then you **must cite or attribute** the use of the Gen AI in their assessment. • All work must be submitted on Moodle by the due date. • The assignment must be in MS Word format, 1.5 spacing, 11-pt Calibri (Body) font and 2.54 cm margins on all four sides of your page with appropriate section headings. • Reference sources must be cited in the text of the report, and listed appropriately at the end in a reference list using IEEE referencing style.
Extension	If an extension of time to submit work is required, a Special Consideration Application must be submitted directly in AMS. You must submit this application three working days prior to the due date of the assignment. Further information is available at: https://www.mit.edu.au/about-us/governance/institute-rules-policies-and-plans/policies-procedures-and-guidelines/assessment-policy
Academic Misconduct	Academic Misconduct is a serious offence. Depending on the seriousness of the case, penalties can vary from a written warning or zero marks to exclusion from the course or rescinding the degree. Students should make themselves familiar with the full policy and procedure available at: https://www.mit.edu.au/about-mit/institute-publications/policies-procedures-and-guidelines/AcademicIntegrityPolicyAndProcedure. For further information, please refer to the Academic Integrity Section in your Unit Description.
Use of Generative Artificial Intelligence (GenAI) in Assessments	More information about the use of Gen AI in student assessment can be found in the full policy and procedure available at: https://www.mit.edu.au/about-mit/institute-publications/policies-procedures-and-guidelines/GenAIinLearningTeachingAndResearch Further support can be found in the MIT LibGuide: Using Gen AI at MIT. Further details on the type of assessment tasks, and whether Gen AI is permitted to be used or not are provided in the assessment brief.

Assignment Description

Students are required to use an industry case study of your PBL exercise to complete the assignment. You have to discuss your chosen case study with tutor in week 1 and 2. Make sure to design your own case study to avoid Academic Misconduct.

Assignment 1

1. **Project Scope and report requirements**

   The project scope and requirement should have a detail explanation of the planning and designing of a network. It is recommended that bullet points are included whenever necessary. Use your Problem Based Learning (PBL) tutorial findings.

   The following is the scope for Assignment.

   - Write your own real world business case study.
   - Include points that you have gathered from case study.
   - Discuss in a tabular form how the information obtained will be useful in designing the network.
   - Identify the conflicting requirements that impact on the network design and document your assumptions or approach to resolve them.

2. **Network design and justification**

   - Identfy the most suitable network architecture and critically justify your choice.
   - Draw a network design. Network should include the following requirements:
     - Minimum 3 routers
     - Minimum 4 switches
     - Minimum 10 PCs
     - Minimum 4 VLANs.
   - Suitable IP addressing scheme in tabular form (assume as many hosts as necessary for each department). Come up with a proper IP addressing scheme, use your MIT ID as one of the references in IP addressing (to avoid Academic Misconduct), however, make sure that you do not disobey the fundamental principles of IP addressing i.e. IP Classes or CIDR priciples, IP Private and Public IP ranges, and other Industry guidelines. Justify the choice of IP address.

Marking Criteria

The following tentative marking criteria will be followed for the assignment.

Marks	Section to be included in the report	Description of the section
5+5 = 10	**A real world business case study and requirements**	Briefly outline the report and discuss the following requirements. • A real world case study. • Discuss in a tabular form how the information obtained will be useful in designing the network. • Discussion about the conflicting requirements and their resolution.
5+5 = 10	**Network design and justification** Use your MIT student ID to come up with your own IP addressing scheme (to avoid Academic Misconduct). Justify the choice of IP address.	• Well-designed network diagram and well justified network architecture. • Labelled with IP addresses. A clear description of the approach taken for the design (may use bullet points for this).

Marking Rubrics
The details about the rubric are as follows:

Grades	HD 80% & above	D 70 - 79%	CR 60 - 69%	P 50 - 59%	Fail <50%
Business case study and requirements (10)	Concise and specific to the project	Topics relevant and soundly analysed	Generally relevant and analysed	Some relevance and briefly presented	Not relevant to the assignment topic
Network design and justification (10)	All elements are present and very well integrated	Components present with good cohesion	Components presented and mostly well integrated	Most components present and an average integration	Lacks components and not integrated well