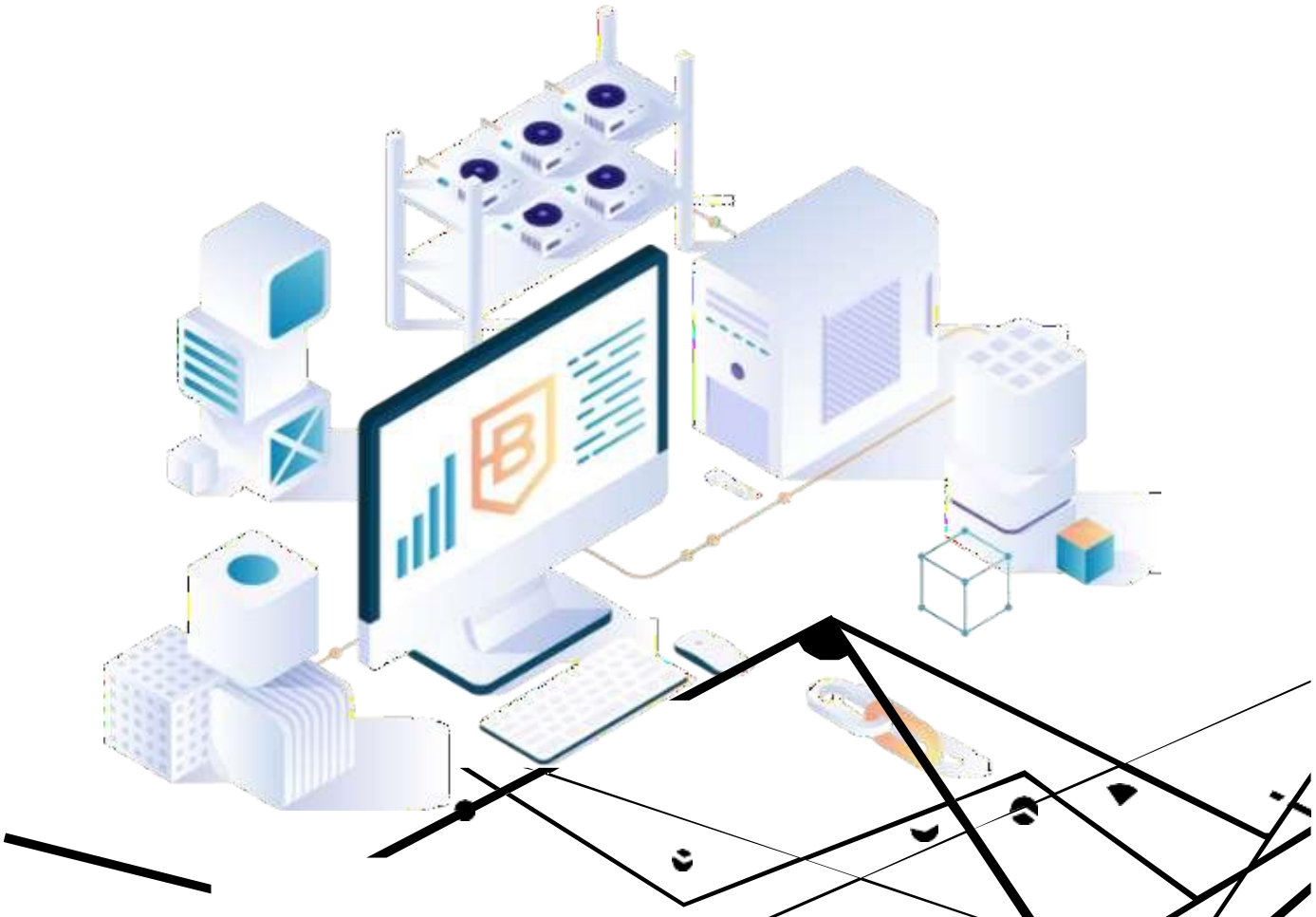
Phenomenal Based LMS

Maal Data Labs

Dual Award Diploma in Blockchain Technology

STUDENT HANDBOOK



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This student handbook is designed to provide guidance and support to students pursuing the Dual Award Diploma in Blockchain Technology offered by Maal Data Labs (MDL). It is intended for informational purposes only and does not replace or serve as a substitute for the official course materials of the Dual Award Diploma.

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Welcome Message

Dear Students,

On behalf of the entire team at Maal Data Labs, I extend a warm welcome to you as you begin your journey in the Dual Award Diploma in Blockchain Technology. We are thrilled to have you join this groundbreaking program and look forward to supporting you as you develop the skills and expertise that will shape the future of this transformative field.

This handbook has been carefully crafted to be your essential guide throughout the program. It offers valuable information to help you navigate your studies, access resources, and make the most of your time with us. Designed by our Academic Committee, this guide serves as a comprehensive tool for your academic and professional success. Whether you're from a local or international background, this handbook reflects our commitment to creating an inclusive and empowering environment, where diversity is celebrated, and every student is supported to achieve excellence.

At Maal Data Labs, we are dedicated to equipping you with the knowledge and practical experience necessary to excel in the dynamic world of blockchain technology. Our curriculum integrates both theoretical and hands-on approaches, ensuring you are prepared to tackle real-world challenges with innovative solutions.

We believe that blockchain technology holds incredible potential to revolutionize industries, and by pursuing this dual award diploma, you are stepping into an exciting opportunity to contribute to this global transformation. This program is not just about acquiring technical expertise; it's about cultivating a mindset that drives change and fosters progress.

As you embark on this journey, we encourage you to take full advantage of the resources available to you. Let this handbook inspire and guide you toward achieving your goals, while we at Maal Data Labs provide the support and encouragement you need to thrive.

Once again, welcome to the Blockchain Technology program. We look forward to celebrating your achievements and successes along the way.

Wishing you a fulfilling and successful academic journey ahead.

Warm regards,

Datin Syazana Parawadi Binti Abdullah

Chairman, Maal Data Labs

Who is Maal Data Labs?

Incorporated in Malaysia on November 8, 2023, as a wholly owned subsidiary of the renowned Islamic digital asset service provider Tijarah Holding Ltd., **MAAL DATA LAB SDN. BHD**. is here to empower you. As a certified Digital Status company under the Malaysia Digital Economy Corporation (MDEC) and an accredited training provider under the Human Resource Development Corporation (HRD Corp), we are committed to driving innovation in blockchain technology.

Through our Phenomena-Based Learner Management System (LMS) at www.maaledu.com, we offer a Dual Diploma Program in Blockchain Technology, designed for learners at all levels. Developed in partnership with Warnborough College, UK, this program combines Web3 technologies and innovative teaching to provide a fast-track pathway to success in the blockchain industry.

At MAAL DATA LAB, we're here to help you become the next leader and innovator in blockchain technology. Your future in this transformative industry starts here.

Our Partners

WARNBOROUGH™ COLLEGE UK

Warnborough College UK is designated as an "ASIC Premier College" by the Accreditation Service for International Colleges (ASIC).

Founded in Oxford in 1973, Warnborough College began as a destination for students to experience the Oxford Socratic method. It soon grew to attract international students, and in 1996, Warnborough revolutionised distance learning by embraced internet technology, allowing students to complete programs online. The college relocated to Canterbury in 2001, where it continues to operate in a historic educational hub.

Once again embracing technology, Warnborough College collaborates with Maal Data Labs to accredit its Dual Award Diploma in Blockchain Technology. This partnership ensures the program meets rigorous academic standards while equipping learners with industry-relevant skills for success in the blockchain ecosystem.

UMS
UNIVERSITI MALAYSIA SABAH

University Malaysia Sabah (UMS) is a prominent public university in Malaysia, established in 1994 with the mission of advancing education, research, and innovation. Offering a wide range of undergraduate and postgraduate programs across various disciplines, UMS emphasizes sustainability, global engagement, and industry-relevant education.

Dedicated to fostering innovation and academic excellence, University Malaysia Sabah (UMS) collaborates with Maal Data Labs to deliver professional programs in Blockchain Technology. This partnership ensures high-quality, industry-focused education designed to equip professionals with cutting-edge skills and knowledge in the evolving blockchain field.

Why Study Blockchain Technology?

Blockchain Technology is transforming industries worldwide, offering secure, transparent, and decentralized solutions that are reshaping the future. By studying Blockchain, you'll unlock opportunities to:

- **Master a High-Demand Skillset**
  Become an expert in one of today's most revolutionary technologies, highly sought after across industries.
- **Drive Innovation and Disruption**
  Learn how Blockchain is challenging and reinventing traditional business models, opening doors to new possibilities.
- **Build Versatile, In-Demand Skills**
  Acquire knowledge and expertise applicable to finance, supply chain, healthcare, real estate, and more.
- **Launch a Thriving Career**
  Prepare for dynamic roles as a Blockchain developer, consultant, strategist, or entrepreneur in a rapidly growing global ecosystem.

Step into the future with Blockchain technology and position yourself at the forefront of this groundbreaking revolution!

Program Learning Outcomes

Upon completing this program, students will be able to:

- Demonstrate a comprehensive understanding of the principles, architecture, and functionality of blockchain technology.
- Design, develop, and deploy smart contracts and decentralized applications (dApps) using industry-relevant tools.
- Evaluate the social, economic, and legal implications of blockchain technology in various contexts.
- Apply blockchain development tools, frameworks, and methodologies to create innovative solutions.
- Implement blockchain-based systems to address real-world challenges effectively and ethically.

Program Structure

The program consists of **six (6) theory-based modules** and **four (4) practical based modules guided by industry professionals**, and a **final assessment**, amounting to a total of 90 credit hours.

The standard program duration is 12 months. Extensions are only considered under exceptional circumstances and require formal approval from the Maal Data Labs Academic Committee. Approved extensions are capped at a maximum of 24 months, ensuring timely program completion.

Comprehensive details for each module are outlined in the respective module descriptors.

MODULES	CREDIT HOURS AWARDED
Introduction to Blockchain Technology (1 week)	2
Blockchain Architectures (1 week)	2
Consensus Mechanisms (1 week)	2
Cryptography and Security in Blockchain (3 weeks)	6
Blockchain Use Cases (1 week)	2
Social, Economic, and Legal Implications of Blockchain Technology (1 week)	2
Blockchain Development Tools and Programming Languages (6 weeks)	12
Smart Contracts – Practical (8 weeks)	16
Decentralized Applications – Front-End (6 weeks)	12
Decentralized Applications – Back-End (6 weeks)	12
Final Assessment (6 weeks)	22
Total	**90 Credits**

Module Descriptors

MODULE 1	INTRODUCTION TO BLOCKCHAIN TECHNOLOGY
Module Overview	This module aims to provide students with a comprehensive understanding of Blockchain Technology, covering its key concepts, evolution, and impact across industries. It explains how Web3 improves on Web2, addresses blockchain's advantages over traditional databases, and highlights its role in digital innovation. By the end of the course, learners will gain a solid foundation in blockchain and its core principles.
Module Credit Hours	2
Mode of Delivery	Phenomena-Based Learning Delivered through LMS
Module Assessment	Timely Module Completion – 60% | Quiz – 40%
Module Learning Outcomes	***1.What is blockchain*** -Understand the main ideas and concepts of Blockchain ***2.History and evolution of blockchain*** -Describe the origins of blockchain and evolution through key milestones like smart contracts and recognize its integration with emerging technologies and expanding applications. ***3.The need for Web3 and how it differs from Web2*** -Understand the need for Web3, identify how it addresses the limitations of Web2, and distinguish the key differences between the two. ***4. Key concepts: blocks, transactions, decentralized networks*** -Understand the key concepts of blockchain, including blocks, transactions, and decentralized networks, and explain their roles in enabling secure and transparent systems. ***5. Blockchain vs. traditional databases*** -Identify the comparison of blockchain with traditional databases, understand their fundamental differences, and the unique advantages of blockchain technology.

MODULE 2	BLOCKCHAIN ARCHITECTURES
Module Overview	To introduce students to Blockchain Technology and Traditional Databases, highlighting their fundamental differences in architecture, operation, and purpose. It covers public, private, and consortium blockchains, permissioned vs. permissionless networks, and Distributed Ledger Technology (DLT), while also comparing major blockchain platforms like Bitcoin and Ethereum.
Module Credit Hours	2
Mode of Delivery	Phenomena-Based Learning Delivered through LMS
Module Assessment	Timely Module Completion – 60% | Quiz – 40%
Module Learning Outcomes	***1.Public, private, and consortium blockchains*** -Distinguish between public, private, and consortium blockchains, and understand the use cases and benefits. ***2. Permissioned vs. permissionless networks*** -Differentiate between permissioned and permissionless networks, and understand their respective advantages and use cases in blockchain technology. ***3. Distributed ledger technology (DLT)*** -Understand the concept of Distributed Ledger Technology (DLT), its key features, and recognize its role in enabling secure and transparent data management across decentralized networks. ***4. Comparison of major blockchain platforms (Bitcoin, Ethereum, etc.)*** -Compare major blockchain platforms such as Bitcoin, Ethereum, and others, understanding their unique features, use cases, and differences in consensus mechanisms and scalability.

MODULE 3	CONSENSUS MECHANISM
Module Overview	This module aims for the students to understand the fundamental principles and functions of various consensus algorithms that enable decentralized decision-making and ensure the integrity of Blockchain networks. This includes learning about key mechanisms such as Proof of Work (PoW), Proof of Stake (PoS), and other emerging consensus protocols. Students will explore how these mechanisms facilitate agreement among distributed nodes, prevent double-spending, and maintain the security and reliability of the Blockchain. Additionally, they will analyze the strengths and limitations of different consensus methods and gain practical insights into their implementation and impact on Blockchain performance and scalability.
Module Credit Hours	2
Mode of Delivery	Phenomena-Based Learning Delivered through LMS
Module Assessment	Timely Module Completion – 60% | Quiz – 40%
Module Learning Outcomes	***1.Proof of Work (PoW)*** -Understand the concept of Proof of Work (PoW), understand how it functions in blockchain networks, and recognize its role in ensuring security and consensus. ***2.Proof of Stake (PoS)*** -Understand the concept of Proof of Stake (PoS) and recognize its benefits in terms of energy efficiency and security in blockchain networks. ***3.Delegated Proof of Stake (DPoS)*** -Understand the concept of Delegated Proof of Stake (DPoS), understand how it enhances scalability and governance. ***4.Practical Byzantine Fault Tolerance (PBFT)*** -Understand the concept of Practical Byzantine Fault Tolerance (PBFT), how it ensures consensus in distributed systems, and its advantages in terms of fault tolerance and scalability. ***5.Other consensus algorithms and their trade-offs*** -Identify various consensus algorithms and evaluate the trade-offs between them in terms of security, scalability, and energy efficiency.

MODULE 4	CRYPTOGRAPHY AND SECURITY BLOCKCHAIN
Module Overview	This module aims to give students a solid understanding of fundamental cryptographic concepts and their crucial role in securing Blockchain Technology. This includes learning about encryption, decryption, hash functions, public and private keys, and digital signatures. Students will explore how these elements ensure data integrity, authenticity, and security within a Blockchain system. Additionally, they will study common cryptographic algorithms and their applications in Blockchain and gain practical experience by applying these techniques in blockchain projects, preparing them to implement and analyze secure Blockchain solutions.
Module Credit Hours	6
Mode of Delivery	Phenomena-Based Learning Delivered through LMS
Module Assessment	Timely Module Completion – 60% | Quiz – 40%
Module Learning Outcomes	***1.Cryptography for Blockchain*** -Explain the role of cryptography in blockchain, understand key concepts. Understand the concept of cryptographic hash functions and role in ensuring data integrity and security. ***3.Public-key cryptography*** -Understand the concept of public-key cryptography, understand how it enables secure communication and transactions, and recognize its role in blockchain security. ***4.Digital signatures*** -Understand how they ensure integrity in blockchain transactions and recognize their role in securing digital identities. ***5.Merkle trees and their role in blockchain*** - Understand how they organize and verify data efficiently, and recognize their role in enhancing the security and scalability ***6.Security and Privacy in Blockchain*** -Explain the key principles of security and privacy in blockchain, understand the methods used to protect data ***7.Blockchain vulnerabilities and attacks*** - Identify common blockchain vulnerabilities and attacks, understand their potential impact on blockchain systems ***8. Privacy-enhancing techniques (e.g., zero-knowledge proof)*** -Understand how they protect user data, and recognize their role in ensuring privacy within blockchain systems. ***9.Identity management on the blockchain*** - Understand how decentralized identities work, and recognize the benefits of blockchain for secure and transparent identity verification. ***10.Auditing and compliance in blockchain systems*** - Explain the concepts of auditing and compliance in blockchain systems, understand how blockchain ensures transparency and traceability.

MODULE 5	BLOCKCHAIN USE CASES
Module Overview	This course explores Blockchain Technology's applications across industries, focusing on its role in enhancing transparency, security, and efficiency in sectors like finance, healthcare, supply chain, and government. Through case studies, students will analyze benefits, challenges, and best practices, while developing critical thinking to evaluate Blockchain's suitability and envision its impact on future technology and business.
Module Credit Hours	2
Mode of Delivery	Phenomena-Based Learning Delivered through LMS
Module Assessment	Timely Module Completion – 60% | Quiz – 40%
Module Learning Outcomes	***1.Blockchain in finance and banking (Tokenization)*** -Understand its applications in finance and banking, and recognize how it enhances liquidity, efficiency, and security in financial transactions. ***2.Supply chain management with blockchain (Case for Halal Certification)*** - Understand its application in ensuring transparency and traceability, and recognize the role of blockchain in Halal certification processes. ***3.Healthcare applications*** -Understand how it enhances data security, privacy, and interoperability, and recognize its potential in improving patient care and administrative efficiency. ***4.Intellectual property and digital rights management*** -Understand how it ensures ownership, transparency, and secure transactions, and recognize its role in protecting digital assets and copyrights. ***5.Voting systems and governance (DAOs)*** - Understand how decentralized autonomous organizations (DAOs) work, and recognize the benefits of blockchain in ensuring transparency, security, and trust in governance processes.

MODULE 6	SOCIAL, ECONOMIC, AND LEGAL IMPLICATIONS OF BLOCKCHAIN TECHNOLOGY
Module Overview	The objective of this module is for students to develop a comprehensive understanding of how Blockchain Technology impacts various aspects of society, economy, and regulatory frameworks. Students will explore how Blockchain can drive social change by promoting transparency and trust, analyze its economic effects including disruptions to traditional business models and financial systems, and examine the evolving legal landscape surrounding Blockchain adoption. By investigating case studies and current events, students will gain critical insights into the benefits, challenges, and ethical considerations of Blockchain implementation, preparing them to navigate and contribute to the development of Blockchain in a responsible and informed manner.
Module Credit Hours	2
Mode of Delivery	Phenomena-Based Learning Delivered through LMS
Module Assessment	Timely Module Completion – 60% | Quiz – 40%
Module Learning Outcomes	*1.**Decentralization and its impact on traditional systems*** *Recognize how it challenges centralized models in areas like finance, governance, and data management.* *2.**Economic models and token economics*** *Understand how tokens function within blockchain ecosystems and recognize their role in incentivizing behavior and driving value creation.* *3.**Regulatory and legal considerations for blockchain technology*** *Understand the challenges of compliance and recognize the role of legislation in shaping the future of blockchain adoption.* *4.**Social impact and challenges of blockchain adoption*** *Understand the challenges it presents and recognize its potential to transform industries and address issues like financial inclusion and transparency.*

MODULE 7	BLOCKCHAIN DEVELOPMENT TOOLS AND PROGRAMMING LANGUAGES
Module Overview	This module aims for students to equip them with the knowledge and practical skills necessary to effectively utilize the various tools and frameworks available for Blockchain development. This includes understanding the functionality and applications of popular development environments, libraries, and frameworks. Students will learn to set up and configure development environments, write and test smart contracts, and deploy decentralized applications. By mastering these tools, students will be prepared to streamline the development process, improve code quality, and create robust, scalable Blockchain solutions that meet industry standards and requirements.
Module Credit Hours	12
Mode of Delivery	Phenomena-Based Learning Delivered through LMS
Module Assessment	Attendance – 40% | Quiz – 20% |Assignment – 40%
Module Learning Outcomes	***1. Overview of project structure (smart contract, back end, front end)*** - Explain the structure of a blockchain project, understand the roles of smart contracts, back-end, and front-end components, and recognize how they interact to create a functional decentralized application (dApps) ***2. Introduction to Remix IDE (Tool)*** - Understand the features and functionality of Remix IDE, use it effectively for smart contract development, and recognize how it integrates with blockchain projects to enable testing, deployment, and debugging. ***3. Introduction to VS Code IDE (Tool)*** - Understand the uses for blockchain development, and recognize how it supports writing, testing, and debugging code for smart contracts and decentralized applications. ***4. Introduction to HTML & CSS*** - Understand the fundamentals of HTML and CSS, use them to structure and style web pages, and recognize how these technologies contribute to the front-end development of dApps. ***5. Introduction to JavaScript (Programming Language)*** - Understand the fundamentals of JavaScript, use it to develop dynamic web pages, and recognize its role in the front-end and back-end development of dApps. ***6. Frameworks and Security*** - Explore popular frameworks for building dApps, and recognize key security practices essential for ensuring the integrity and safety of blockchain systems.

MODULE 8	SMART CONTRACTS
Module Overview	This module aims for students to understand the creation, deployment, and execution of self-executing contracts with the terms of the agreement directly written into code. This involves learning the fundamental concepts of smart contracts, exploring their functionality and advantages over traditional contracts, and studying the programming languages and platforms used to develop them. Students will gain practical experience in writing and deploying smart contracts, examining real- world use cases, and understanding the legal and security implications. By the end of the course, students will be equipped to design, implement, and critically evaluate smart contracts within Blockchain ecosystems.
Module Credit Hours	16
Mode of Delivery	Phenomena-Based Learning Delivered through LMS
Module Assessment	Attendance – 40% | Quiz – 20% |Assignment – 40%
Module Learning Outcomes	***1.Introduction to smart contracts*** -Understand the concept of smart contracts, explain how they automate and execute agreements on the blockchain. ***2.Introduction to Solidity (Programming Language)*** -Understand the basics of Solidity, use it to write smart contracts for blockchain applications, and recognize its role in enabling secure and decentralized functionality. ***3.Ethereum Virtual Machine (EVM)*** -Understand how it executes smart contracts on the Ethereum blockchain, and recognize its importance in ensuring the security and decentralization of blockchain applications. ***4.Use cases and potential applications*** -Understand how they can automate processes across industries, and recognize their role in enabling secure, transparent, and decentralized systems. ***5.Trust Minimized Agreements (Unbreakable promises via smart contracts)*** -Understand how smart contracts create unbreakable agreement, and recognize their role in eliminating the need for intermediaries while ensuring security and transparency in transactions. ***6.Introduction to Hard Hat (Framework)*** - Know the features and functionality of Hard Hat, use it to develop, test, and deploy smart contracts, and recognize its role in simplifying the blockchain development process. ***7.Developing and deploying smart contracts using Solidity and development tools*** -Develop and deploy smart contracts ***8.ERC 20, ERC 721, ERC 1155*** -Explain their roles in creating tokens and NFTs, and implement these standards in smart contracts. ***9. Security best practices for blockchain development*** -Identify common vulnerabilities in smart contracts, and implement strategies to ensure the integrity, reliability, and safety.

MODULE 9	DECENTRALIZED APPLICATIONS – FRONT END
Module Overview	This module provides an in-depth exploration of front-end development for blockchain decentralized applications (dApps). Students will learn how to build intuitive user interfaces using modern front-end architectures, with a focus on enhancing user experience through effective use of HTML, CSS, and JavaScript. The module also addresses key challenges such as scalability and security in decentralized environments, teaching students' best practices for securing front-end applications and ensuring smooth interactions with blockchain networks. Additionally, students will gain hands-on experience in front-end development, deployment strategies, and maintaining dApps in live environments, equipping them with the skills to create professional and functional decentralized applications.
Module Credit Hours	12
Mode of Delivery	Phenomena-Based Learning Delivered through LMS
Module Assessment	Attendance – 40% | Quiz – 20% |Assignment – 40%
Module Learning Outcomes	***1.Front-End Architectures*** -Analyze front-end architectures, understand their structural design for decentralized applications (dApps), and implement robust user interfaces. ***2.React (.JS & .CSS)*** -Utilize React.js for building dynamic and responsive front-end applications, integrate React with CSS for styling, and implement seamless user interfaces. ***3.Addressing Scalability and Security in Front-End Development*** - Implement strategies for addressing scalability and security challenges in front-end development and ensure secure interactions with blockchain networks. ***4.Front-End Development and Deployment*** -Design, develop, and deploy front-end interfaces for decentralized applications (dApps), integrate them with blockchain systems, and ensure a seamless and secure user experience.

MODULE 10	DECENTRALIZED APPLICATIONS – BACK END
Module Overview	This module provides a comprehensive exploration of back-end development for blockchain decentralized applications (dApps). Students will learn about back-end architectures and how to build robust server-side applications that interact with blockchain networks using Node.js and the Express framework. The module emphasizes key considerations for scalability and security in back-end development, ensuring that applications can handle increasing loads and protect user data. Additionally, students will gain hands-on experience with databases like MongoDB and SQL for managing and storing decentralized data. The course culminates with deploying and maintaining the back-end infrastructure of dApps, preparing students to build secure, scalable, and efficient blockchain applications.
Module Credit Hours	12
Mode of Delivery	Phenomena-Based Learning Delivered through LMS
Module Assessment	Attendance – 40% | Quiz – 20% |Assignment – 40%
Module Learning Outcomes	***1. Back-End Architectures*** -Analyze back-end architectures, design scalable and efficient systems for decentralized applications (dApps). ***2. Node.js (Runtime)*** -Utilize Node.js as a runtime environment for back-end development, build scalable and efficient server-side applications, and integrate them seamlessly. ***3. Express (Framework)*** -Use Express.js as a web application framework, build robust and scalable back-end APIs for decentralized applications (dApps). ***4. Databases (MongoDB & SQL)*** -Integrate and manage databases like MongoDB and SQL, understand their role in storing and querying data ***5. Integration with existing systems and APIs*** -Integrate decentralized applications (dApps) with existing systems and APIs, ensure smooth data exchange between blockchain networks and legacy systems. ***6. Addressing Scalability and Security in Back-End Development*** -Implement strategies to address scalability and security challenges in back-end development, optimize server-side performance, and ensure secure interactions. ***7. Development and Deployment of Back-End*** -Develop, test, and deploy back-end systems for decentralized applications (dApps), integrate them with blockchain networks.

MODULE 11	FINAL ASSESSMENT
Module Overview	This module is designed to expose students to demonstrate their understanding of Blockchain Technology by analyzing its principles, evaluating its applications, and proposing a blockchain-based solution to a real-world problem.
Module Credit Hours	22
Mode of Delivery	Phenomena-Based Learning Delivered through LMS
Module Assessment	Technical Functionality – 60% |Conceptual Understanding – 40%
Final Assessment Outcomes	1. Comprehensive project or case study 2. Application of learned concepts to real-world problems 3. Presentation and evaluation of final project
Submission Requirements	1. All project submissions must be carefully prepared and uploaded to Maal's official GitHub accounts. Ensure that the files are properly named, organized, and meet the specified guidelines. 2. Projects should be hosted on the designated repositories within Maal GitHub, with appropriate documentation included for clarity and ease of review. This will ensure uniformity, accessibility, and efficient project management. 3. Project Assignment to be uploaded and hosted on: https://github.com/maaledu

Grading System and Graduating Overview

Our grading system is designed to provide a fair and transparent evaluation of academic performance. Both individual modules and the overall program are assessed using a numerical grading system, as illustrated in Figure 1.

To determine the final award, we calculate the **Grade Point Average (GPA)** for each term and the **Cumulative Grade Point Average (CGPA)** across the entire program. These metrics serve as benchmarks for academic achievement and outline the requirements for successfully completing the program.

Numeric Grade	Grade	GPA
80-100	A	4.00
75-79	A-	3.67
70-74	B+	3.33
65-69	B	3.00
60-64	B-	2.67
56-59	C+	2.33
50-55	C	2.00
45-49	C-	1.67
40-44	D	1.00
0-39	F	0.00

- Minimum to **Graduate** –75% or 3.67 CGPA*
- Minimum to **Pass** –70% or 3.33 GPA*

*GPA - Grade Point Average
*CPGA – Cumulative Grade Point Average

Figure 1: Assessment numerical system used in the program

To Pass A Module, A Learner Must Achieve 70% However, To Graduate the Program; A Learner Must Achieve
A MINIMUM OF 75% OR CGPA 3.67

Completion of the entire program consists of:

- 10 Learning Modules
- Fulfill the **90-credit hours** requirement.
- Timely quiz completions, and high-quality assignment submissions.
- Real Time Project* consist of coding & documentation (pertaining to the logic and solution of the coding and description of the solution and results). Students will be given a maximum duration of 45 days for the final project.
- Minimum of **75% or CGPA 3.67**

**Students must decide the solution they will work on and submit to the academic coordinator through email prior to beginning of the project.*