



INSTITUTE OF
BLOCKCHAIN™
— **SINGAPORE** —

区块链学院 (新加坡)

UEN: 201801117M

(Incorporated in the Republic of Singapore)

IBS-04 Blockchain & Cryptocurrency Security Syllabus

About Institute

Institute of Blockchain™ (Singapore), UEN: 201801117M) was founded on Jan 2018. We are a blockchain and EduTech private school with a primary focus on delivering blockchain education and certification. Secondary focus on blockchain research & development.

The Institute is a SkillsFuture Singapore's approved Non-WSQ Training Organisation, NTUC e2i's approved Training Provider and People's Association approved Private Operator, a registered Singapore government's Gebiz supplier and is a graduated start-up from the Alibaba Cloud-SUSS Entrepreneurship Programme.

As part of our CSR efforts, we joined the NVPC's Company of Good and adopted Singapore Children's Society as our official charity. Our strategic partners are DIFY, SUSS, Edufied, IBM Academic Initiative and Justicius Law Corporation and our past corporate clients include Deloitte, GCOX, ERA, Ninecoin (Hongkong), Tuandai (Guangzhou) and Singapore Customs.

About Lecturer

Mr. Alvin Chua is a former civil servant with MINDEF for 10 years. He is the current President of Institute of Blockchain Singapore, a blockchain & EduTech private school focusing on blockchain & cryptocurrency education as well as the current Founder & CEO of Resx Pte. Ltd, a corporate training firm.

He is also a Certified Blockchain Expert (CBE) and Certified Bitcoin Professional (CBP) with over eight years of investment experience and almost 2 years of experience with blockchain and cryptocurrency.

He is a committee member of ISO-TC307 Blockchain and Distributed Ledger Technology Standards Technical Committee, an ordinary member of ACCESS (Association of Cryptocurrency Enterprises and Startups), SIM, SIAS and SAFRA Entrepreneurship Club.

He attained the IBFQ standard level 1 through SGX's Certified Securities Professional Programme (CSPP) and is a holder of CFA Institute's Claritas Investment Foundations Programme.

Course Preface

Nil.

Course Content

1. What is Blockchain Security?

1.1 Types of Consensus

1.2 Proof of Work (POW)

1.3 Proof of Stake (POS)

1.4 Delegated Proof of Stake (DPOS)

1.5 Practical Byzantine Fault Tolerance (PBFT)

1.6 Delegated Byzantine Fault Tolerance (DBFT)

1.7 Proof of Importance (POI)

1.8 Proof of Elapsed Time (POET)

2. Introduction to Cryptocurrency Security

2.1 Crypto Security Concepts

2.2 What the Hack?

2.2 Cryptography of Systems

3. Wallet Security

3.1 Types of Wallets

3.2 Hardware Wallets In A Glance

3.3. PIN Bruteforce

4. Cryptocurrency Security

4.1 Safekeeping Your Cryptocurrency

4.2 Securing Your Cryptocurrency – Dos

4.3 Securing Your Cryptocurrency – Donts

4.4 Cryptojacking

5. Hands on Activity

5.1 Setting up Web Wallet

5.2 Setting up Software Wallet

5.3 Initializing Ledger Hardware Wallet

Course Administrative

Programme Mode: Full-Time & Part-Time

Full Time Duration: 1 weekend session - 8 hours (9 am to 6 pm) – With lunch break and short breaks after each main topic.

Part Time Duration: 3 weekday sessions (7pm to 10pm) – With 1 short break.

Class Size: 10 to 20 (minimum 10 to start)

Course Fees (per pax): \$278 (Local Rate) / \$360 (Overseas)

Language Medium: English or Chinese

Certification

An Electronic Certificate of Completion will be issued on NEM Blockchain to participants who achieved at least 75% attendance, pass the assessment with a score of 50% and above and completed the end of course survey,

Please indicate the correct name during registration for certificate issuing. The Institute is not responsible for any wrong name indicated and may refuse to issue a subsequent certificate.

Progression

This is a 2 Block Units module which leads to a full Certificate/Diploma in Blockchain Technology.

Assessment

Course participants are given **1 hour** to attempt an assessment comprising of 30 Multiple-Choice Questions. To pass the assessment, the participant needs to score **50%** and above. For scoring 49% and below, participants have up to **ONE** attempt to re-take the assessment at no additional fee. In the event, the participant fails again, he/she shall repeat the respective module

Course Enquiry / Support

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