

NUS School of Computing
Master of Computing (by coursework) – General Track
(Effective August 2021)

List of Modules

1. Essential Modules (24 MC) – Complete 6 Modules

Students can only read a maximum of 6 essential modules.

IT5001 Software Development Fundamentals
IT5002 Computer Systems and Applications
IT5003 Data Structures and Algorithms
IT5004 Enterprise Systems Architecture Fundamentals
IT5005 Artificial Intelligence
IT5006 Fundamentals of Data Analytics
IT5007 Software Engineering on Application Architecture *New*

2. Capstone Project (12 MC)

CP5105 Computing Capstone Project
CP5106 Computing Capstone Project (with Industry Internship) (8 MC) + Capstone Preparation Modules (4 MC)

3. Elective Modules (16 MC)

Students may select any four elective modules from the list below and also from other 4000/5000 level modules that are being offered in the School of Computing. To illustrate, below we provide sampler of modules organised by the different computing fields.

i. Computing Systems

CS5222 Advanced Computer Architecture
CS5223 Distributed Systems
CS5224 Cloud Computing
CS5229 Advanced Computing Networks
CS5239 Computer System Performance Analysis

ii. Cybersecurity

CS5231 Systems Security
CS5321 Network Security
CS5331 Web Security
CS5439 Software Security
IS5151 Information Security Policy and Management
IS4234 Compliance and Regulation Technology

iii. Data Analytics

BT4212 Search Engine Optimization and Analytics
CS5228 Knowledge Discovery and Data Mining
CS5425 Big Data Systems for Data Science
IS5126 Hands-on with Applied Analytics

IS5152 Data-Driven Decision Making

iv. Enterprise IT

IS5003 Platform Design and Economy

IS5004 Enterprise Architecture

IS5005 Digital Engagement

IS5128 Digital Innovation

IS4301 Agile IT with DevOps

v. Financial Technology (FinTech)

IS5002 Digital Transformation

IS5006 Intelligence Systems Deployment

IS5008 Technology Risk and Cyber Resilience

IS5009 Topics in Financial Technology Solutions

IS4302 Blockchain and Distributed Ledger Technologies

vi. Robotics

CS5340 Uncertainty Modelling in AI

CS5446 AI Planning and Decision Making

CS5477 3D Computer Vision

CS5478 Intelligent Robots: Algorithms and Systems

vii. Software Methodology

CS4218 Software Testing

CS5214 Design of Optimising Compilers

CS5218 Principles and Practice of Program Analysis

CS5219 Automated Software Validation

CS5232 Formal Specification & Design Techniques