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

2. Capstone Project (12 MC)

CP5105 Computing Capstone Project
CP5106 Computing Capstone Project (with 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

Last updated: June 2022
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