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

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 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

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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