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

List of Modules

1. **Essential Modules (24 MC)**
   - 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

2. **Capstone Project (12 MC)**
   - CP5105 Computing Capstone Project (new)

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