

## Core Modules (Required)

YSC1212 Introduction to Computer Science  
 YSC2239 Introduction to Data Science  
 YSC2209 Proof



## Focus Modules (Required)

Complete four modules in one of the three focus areas.

### Mathematics

#### Compulsory modules

YSC2232 Linear Algebra  
 YSC3240 Foundations of Applied Mathematics  
 YSC3206 Introduction to Real Analysis

#### Specialist modules, 1 required

YSC3237 Introduction to Modern Algebra  
 YSC4220 Ordinary and Partial Differential Equations

### Computer Science

#### Compulsory modules

YSC2229 Introductory Data Structures and Algorithms  
 YSC3208 Programming Language Design and Implementation  
 YSC3232 Software Engineering

#### Specialist modules, 1 required

YSC2244 Programming for Data Science  
 YSC3236 Functional Programming and Proving

### Data Science

#### Compulsory modules

YSC2243 Probability  
 YSC2232 Linear Algebra  
 YSC3249 Statistical Inference

#### Specialist modules, 1 required

YSC2244 Programming for Data Science  
 YSC4216 Machine Learning



## Elective Modules

Select from the list of MCS modules or approved NUS modules. At least 4MC must be taken at the 4000 level unless already taken as a focus module.



## Capstone Project (Required)

YSC4103 MCS Capstone Project  
 This includes required participation in a Capstone Seminar Series.

	Modular Credits
Core modules	15
Compulsory focus modules	15
Specialist focus modules	5
Elective modules	9 - 10
Capstone	10
<b>Total</b>	<b>54 - 55</b>