DDP in Bachelor of Computing (Artificial Intelligence) & Bachelor of Science in Mathematics
Cohorts AY2025/2026 Onwards

Requirements	Course	UNIT
CHS & SoC Common Curriculum [1] [2]	14 courses	56
Math Level 1000	MA1100 Basic Discrete Mathematics/ MA1100T Basic Discrete Mathematics (T) *(double count towards Mathematics Foundations in AI Requirements)* [3]	4
Math Level 2000	MA2001 Linear Algebra I *(double count towards Mathematics Foundations in AI Requirements)*	32-36
	MA2002 Calculus *(double count towards Mathematics Foundations in AI Requirements)*	
	MA2101/MA2101S Linear Algebra II	
	MA2104 Multivariable Calculus	
	MA2108/MA2108S Mathematical Analysis I	
	MA2116/ST2131 Probability or MA2116T Probability (T) *(double count towards Mathematics Foundations in AI Requirements)*	
	Pass any two additional courses coded MA22XX/MA32XX/MA42XX (except MAx288/MAx289/MA4288x)	
Math Level 3000	Pass five courses coded MA32xx/MA42xx/MA52xx/MA62xx (except MAx288/MAx289/ MAx288x/ MAx289x /MA4288x/MA5232/MA5266)* or ST3236 or ST4238 *At most three courses (12 Units) can be coded MA52xx/MA62xx	20-23
Math Level 4000	Pass MA4198 Mathematics Capstone Project	4
Computing Foundations	CS2030S Programming Methodology II	20
	CS2040S Data Structures and Algorithms	
	CS2100 Computer Organisation	
	CS2101 Effective Communication for Computing Professionals	
	CS3230 Design and Analysis of Algorithms	
AI Foundations	CS2109S Introduction to AI and Machine Learning *(double count towards CHS Artificial Intelligence Pillar)*	20
	CS3263 Foundations of Artificial Intelligence	
	CS3264 Foundations of Machine Learning	
	CS3268 Responsible AI: from Algorithms to Impact	
	Perception: one of the following two courses: • CS4243 Computer Vision and Pattern Recognition • CS4248 Natural Language Processing	

AI Breath and Depth	Complete 20 units and subject to the following constraints:
	• At least 12 units from the AI Technical Electives list.
	  Courses are:
	  − CS4220 Knowledge Discovery Methods in Bioinformatics
	  − CS4225 Big Data Systems for Data Science
	  − CS4240 Interaction Design for Virtual and Augmented Reality
	  − CS4244 Knowledge Representation and Reasoning
	  − CS4246 AI Planning and Decision Making
	  − CS4261 Algorithmic Mechanism Design
	  − CS4347 Sound and Music Computing
	  − CS4277 3D Computer Vision
	  − CS4278 Intelligent Robots: Algorithms and Systems
	• At least 12 units at level-4000 or above.
	• Industrial Experience Requirement: at least 6 units and at most 12 units of industrial experience courses. Students with a GPA of 4.00 or higher may opt to replace the Industry Experience Requirement with the programme's dissertation course (i.e., CP4101). [4]
		20

	• Students who aim for Honours (Highest Distinction) must pass the programme's dissertation course (i.e. CP4101). • All courses except Industry Experience must be CS/IFS/IS/CP-coded. • At most 12 units of CP-coded courses (aside from Industry Experience Requirement).	
Mathematics Foundations	MA1100 Basic Discrete Mathematics / MA1100T Basic Discrete Mathematics (T) *(double count towards Mathematics Level 1000)* **[3]**	20
	CS2251 Optimization and Regression	
	MA2002 Calculus (double count towards Mathematics Level 2000) **[5]**	
	MA2001 Linear Algebra I (double count towards Mathematics Level 2000) **[6]**	
	MA2116/ST2131 Probability or MA2116T Probability (T) (double count towards Mathematics Level 2000) **[7]**	
	ST2132 Mathematical Statistics **[7]**	4
	Total Units	**200 - 207**

Notes:

1. CHS-SoC DDP students are exempted from the 3 Cross-disciplinary/Interdisciplinary courses in the SoC Common Curriculum. AI-MA DDP students to read HSH1000 in place of ES2660.

2. CHS Artificial Intelligence pillar is fulfilled by Computing Foundation course CS2109S.

3. MA1100 / MA1100T replaces CS1231S Discrete Structures for AI-MA DDP.

4. Industry experience courses:
   a. A 6-month internship through one of the following: CP3880 Advanced Technology Attachment Programme (12 Units), IS4010 Industry Internship Programme (12 Units), or ETP3201L Innovation & Enterprise Internship (12 Units);
   b. A 3-month internship through one of the following: CP3200 Internship (6 Units), CP3202 Internship II (6 Units), CP3107 Computing for Social Service Agencies I (6 Units), CP3110 Computing for Social Service Agencies II (6 Units); ETP3205 Innovation & Enterprise Internship (6 Units);
   c. Other forms of industry experience approved by the Department of Computer Science. Certain NOC internships are not CP-coded but can also be used to satisfy Breadth-and-Depth requirements as if they were CP-coded.

5. MA2002 Calculus replaces MA1521 Calculus for Computing for AI-MA DDP.

6. MA2001 Linear Algebra I replaces MA1522 Linear Algebra for Computing for AI-MA DDP.

7. MA2116/MA2116T/ST2131 Probability/T and ST2132 Mathematical Statistics replace ST2334 Probability and Statistics for AI-MA DDP.

Updated 26 Feb 2026