CURRICULUM FOR BACHELOR OF ENGINEERING (ELECTRICAL & ELECTRONIC)
WITH CN YANG SCHOLARS PROGRAMME
SECOND MAJOR IN DATA ANALYTICS (EEDA)
(FIRST YEAR ADMISSION)
AY2026 Intake Onwards

SUMMARY OF ACADEMIC UNIT REQUIREMENT								
Year of Study	Major Requirements			Interdisciplinary Collaborative Core			BDE	Total AU
	School Core	CNYSP-Core	MPE	CC	Professional Series (PS)	Care, Serve, Learn		
1	9 [3]	23	0	5	0	0	3	**40 [3]**
2	18 [6]	6	0	5	3	3	4	**39 [6]**
3	14 [3]	0	9	0	6	0	12	**41 [3]**
4	8	0	12	0	0	0	3	**23**
Total	**49 [12]**	**29**	**21**	**10**	**9**	**3**	**22**	**143 [12]**

[ ] AU of courses that could be used to fulfil Core requirement and second major requirement concurrently.

YEAR 1 SEMESTER 1				
Course Code	**Course Title**	**Type**	**AU**	**Pre-Requisite/Remarks**
CY1001	The Systems Architecture of Life	CNY-Core	3	CNYSP Courses
CY1101	Molecule	CNY-Core	4	
CY1308	Physics	CNY-Core	3	
CY1601	Mathematics I	CNY-Core	4	
IE2104	Digital Electronics	C	3	
NH0007	Critical Perspectives on Technology and Society	CC	3	
			20	

YEAR 1 SEMESTER 2				
Course Code	**Course Title**	**Type**	**AU**	**Pre-Requisite/Remarks**
CY1007	Climate Change	CNY-Core	3	CNYSP Course
CY1500	Introduction to Research	CNY-Core	2	
EE1071	Introduction to EEE Laboratories	C	1	
EG1001	Engineers in Society	C	2	
IE2106^	Engineering Mathematics I	C	3	**CY1602**
CC0015	Health & Wellbeing	CC	2	
	Data Analytics Core	BDE	3	
			16	

YEAR 1 SPECIAL SEMESTER				
Course Code	**Course Title**	**Type**	**AU**	**Pre-Requisite/Remarks**
CY2003	Research Attachment 3	CNY-Core	4	CNYSP Course
	Overseas Learning Trip			
			4	

YEAR 2 SEMESTER 1				
Course Code	**Course Title**	**Type**	**AU**	**Pre-Requisite/Remarks**
CY0001	Language & Logic	CNY-Core	3	CNYSP Course
EE5915	Undergraduate Research	BDE	IP	Course will be registered in Semester 2. Grades will be recorded at the end of Semester 2
IE1005^	From Computational Thinking to Programming	C	3	
EE2101	Circuit Analysis	C	3	
CC0006	Sustainability: Society, Economy & Environment	CC	3	
ML0004	Career Design & Workplace Readiness in the V.U.C.A. World	CC	2	
NH0001	Tech-for-Good Service Learning	CSL	3	
			17	

YEAR 2 SEMESTER 2				
Course Code	**Course Title**	**Type**	**AU**	**Pre-Requisite/Remarks**
CY0002	Ethics	CNY-Core	3	CNYSP Course
EE5915	Undergraduate Research	BDE	4	2-semester long, course registered only in Sem 2
EE2005	Electrical Devices & Machines	C	3	**EE2101**
EE2102	Analog Electronics	C	3	**EE2101**

IE2107^	Engineering Mathematics II	C	3	
IE2110	Signals and Systems	C	3	**CY1601/CY1602**
IE0005	Introduction to Data Science and Artificial Intelligence	PS	3	**IE1005**
			22	

YEAR 3 SEMESTER 1				
Course Code	**Course Title**	**Type**	**AU**	**Pre-Requisite/Remarks**
EE2073	Intro to EEE Design & Project	C	2	
EE2103	Semiconductor Fundamentals	C	3	
IE2108^	Data Structures & Algorithms in Python	C	3	
	Third-Year Technical Elective 1	MPE	3	
	Profession Preparation	PS	1	
IE4483	Artificial Intelligence & Data Mining	BDE	3	**EE2107 & IE0005**
SC4024	Data Visualization	BDE	3	**IE1005 & IE2106/IE4491**
			18	

YEAR 3 SEMESTER 2				
Course Code	**Course Title**	**Type**	**AU**	**Pre-Requisite/Remarks**
EE3101	Engineering Electromagnetics	C	3	**IE2107 (co-req)**
EE3180	Design & Innovation Project	C	3	
	Third-Year Technical Elective 2	MPE	3	
	Final Year Technical Elective 1	MPE	3	
	Data Analytics Elective 1	BDE	3	
	Date Analytics Elective 2	BDE	3	
			18	

YEAR 3 SPECIAL SEMESTER				
Course Code	**Course Title**	**Type**	**AU**	**Pre-Requisite/Remarks**
EE3910	Professional Attachment	PS	5	Y3 standing, completed ≥4 semesters of study
			5	

YEAR 4 SEMESTER 1				
Course Code	**Course Title**	**Type**	**AU**	**Pre-Requisite/Remarks**
EE4081	CNYSP Overseas Final Year Project	C	8	CNYSP Course
			8	

YEAR 4 SEMESTER 2				
Course Code	**Course Title**	**Type**	**AU**	**Pre-Requisite/Remarks**
	Final Year Design Elective 1	MPE	3	
	Final Year Technical Elective 2	MPE	3	
	Final Year Design/Technical Elective 2/3	MPE	3	
	Final Year Design/Technical Elective 3/4	MPE	3	
	Date Analytics Elective 3	BDE	3	
			15	
		Total AU for Graduation:	**143**	

^ These courses are double-counted towards both EEE as well as the Second Major in Data Analytics.

Compulsory Courses for Second Major in Data Analytics					
Course Type	**Course Code**	**Course Title**	**AU**	**Offering Sem**	**Pre-req/Remarks**
Core	IE2106	Engineering Mathematics I	3	1	CY1602
Core	IE2107	Engineering Mathematics II	3	2	CY1602
Core	IE1005	From Computational Thinking to Programming	3	1	-
Core	IE2108	Data Structures & Algorithms	3	1	-
BDE	BC2402	Designing & Developing Databases	4	1	Suggested course for Knowledge Area 5
BDE	IE4483	Artificial Intelligence & Data Mining	3	1	EE2107 & IE0005
BDE	SC4024	Data Visualization	3	1	IE1005 & IE2106/IE4491

Suggested Electives for Second Major in Data Analytics
https://www.ntu.edu.sg/engineering/admissions/ug/allprogrammes/highlights/da