

**AY2024-25 CURRICULUM FOR BACHELOR OF ENGINEERING (AEROSPACE ENGINEERING)
SECOND MAJOR IN SUSTAINABILITY (ASSN)
(FIRST YEAR ADMISSION)**

Last Updated : 31-Jan-24

SUMMARY OF ACADEMIC UNIT REQUIREMENT							
Year of Study	School Core	CNYS Core	MPE	CC	FC	BDE	Total AU
1	12	27	0	5	0	0	44
2	17	10	0	8	0	3	38
3	30	0	0	0	8	9	47
4	17	0	0	0	0	13	30
Total	76	37	0	13	8	25	159

YEAR 1 SEMESTER 1				
Course Code	Course Title	Type	AU	Pre-Requisite/Remarks
CY1001	Cell	CNY-Core	3	CNYS Core Courses
CY1101	Molecule	CNY-Core	4	
CY1308	Physics	CNY-Core	3	
CY1500	Introduction to Research	CNY-Core	2	
CY1601	Mathematics I	CNY-Core	4	
EG1001^	Engineers in Society	C	2	Double-counted as Practice Core
CC0005	Healthy Living & Mental Wellbeing in an Aging Society	CC	3	
			21	

YEAR 1 SEMESTER 2				
Course Code	Course Title	Type	AU	Pre-Requisite/Remarks
CY1007^	Climate Change	CNY-Core	3	Double-counted as Planet Core
CY1602	Mathematics II	CNY-Core	4	CNYS Core Course
MA1001	Dynamics	C	3	CY1308 + CY1601
MA1008	Introduction to Computational Thinking	C	3	
MA1700	Aerospace Discovery Course	C	1	
MA2001	Mechanics of Materials	C	3	
CC0002	Navigating the Digital World	CC	2	
			19	

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

YEAR 2 SEMESTER 1				
Course Code	Course Title	Type	AU	Pre-Requisite/Remarks
CY0001	Writing Across the Disciplines	CNY-Core	3	CNYS Core Course
MA2003	Intro to Thermo-fluids	C	3	
MA2006	Engineering Mathematics	C	3	CY1602
MA2072	Laboratory Experiments (AE)	C	1	
MA2701	Flight Performance	C	2	MA1001 & MA1700
SP0061	Science & Technology for Humanity	CC	3	
	Second Major Compulsory Course 3	BDE	3	
			18	

YEAR 2 SEMESTER 2				
Course Code	Course Title	Type	AU	Pre-Requisite/Remarks
CY0002	Ethics	CNY-Core	3	CNYS Core Course
CY2001	Research Attachment 1	CNY-Core	4	CNYS Core Course 2-semester long, course registered only in Sem 2 (similar to URECA)
MA2007	Thermodynamics	C	3	MA2003
MA2079	Engineering Innovation and Design	C	2	Semester 2 with 1 week in Special Term
MA3705	Aerospace Control Theory	C	3	Having Read MA2006
CC0006	Sustainability: Society, Economy & Environment	CC	3	
ML0004	Career and Entrepreneurial Development for the Future World	CC	2	
			20	

YEAR 3 SEMESTER 1				
Course Code	Course Title	Type	AU	Pre-Requisite/Remarks
MA3072	Engineering Experiments (AE)	C	1	
MA3700	Aircraft Structures I	C	3	MA2001
MA3701	Aerodynamics	C	3	MA2003
MA3702	Aircraft Propulsion	C	3	MA2007
MA3703	Flight Dynamics	C	2	MA2701 & MA3705
MA3704	Aircraft Electrical Devices	C	3	
MA4705	Aircraft Navigation and Flight Computers	C	3	CY1602
	Second Major Compulsory Course 4	BDE	3	
			21	

YEAR 3 SEMESTER 2				
Course Code	Course Title	Type	AU	Pre-Requisite/Remarks
MA2005	Engineering Graphics	C	3	
MA2700	Aerospace Materials & Manufacturing Process	C	3	
MA3003	Heat Transfer	C	3	MA2007
MA3006	Fluid Mechanics	C	3	MA2003
MA0218	Introduction to Data Science and Artificial Intelligence	FC	3	MA1008
	SN Elective 1	BDE	3	Please see attached list of electives to choose from
	SN Elective 2	BDE	3	
			21	

YEAR 3 SPECIAL SEMESTER				
Course Code	Course Title	Type	AU	Pre-Requisite/Remarks
MA3910	Professional Attachment	FC	5	
			5	

YEAR 4 SEMESTER 1				
Course Code	Course Title	Type	AU	Pre-Requisite/Remarks
MA4701	Aircraft Design	C	3	MA3701, MA3702 & MA3703
MA4702	Aircraft Structures II	C	3	MA2001 & MA3700
MA4704	Aeroelasticity	C	3	MA3700 & MA3701
	Second Major Compulsory Course 5	BDE	3	
	SN Elective 3	BDE	3	Please see attached list of electives to choose from
	SN Elective 4	BDE	4	
	Second Major Interdisciplinary Project	BDE	3	
			22	

YEAR 4 SEMESTER 2				
Course Code	Course Title	Type	AU	Pre-Requisite/Remarks
MA4211	CNYSF Overseas Final Year Project	C	8	CNYSF Course
			8	

Total AU for Graduation: 159

^ These courses are double-counted towards both AERO as well as the Second Major in Sustainability.

Compulsory Courses and Electives for Second Major in Sustainability
https://www.ntu.edu.sg/ase/admissions/undergraduate-programmes/second-major-in-sustainability#Content_C002_Col00