



**Adhiyamaan College of Engineering
(Autonomous)**
Dr. M.G.R. Nagar, Hosur – 635130
(An Autonomous institute affiliated to Anna University, Chennai)
Department of Aeronautical Engineering



Adhiyamaan College of Engineering, Hosur - 635 130	
Curriculum for the programmes under Autonomous scheme	
Regulation	2022
Programme Name	B.E(Aeronautical Engineering)

SEMESTER-I

B.E. (COMMON FOR MECH, CIVIL & AERO) & B.TECH. (CHEM& BT)

S.No.	Course Code	Course Title	Category	L	T	P	C
-	122IP001	INDUCTION PROGRAMME	-	-	-	-	0
THEORY							
1	122ENI01	Professional English-I*	HS/EEC	2	0	2	3
2	122MAT02	Matrices and Calculus	BS	3	1	0	4
3	122PHT03	Engineering Physics	BS	2	0	0	2
4	122CYT04	Engineering Chemistry	BS	2	0	0	2
5	122EGT05	Engineering Graphics	ES	2	0	4	4
6	122EET06	Basic Electrical Electronics and Instrumentation Engineering	ES	3	0	0	3
7	112HST07	தமிழர்மரபு / Heritage of Tamils	HS	1	0	0	1
PRACTICALS							
7	122CYP07	Engineering Chemistry Laboratory	BS	0	0	2	1
8	122EPP08	Engineering Practice Laboratory	ES	0	0	2	1
TOTAL				15	1	10	20

SEMESTER II

COMMON TO B.E (ME, CE & AE)

S.No.	Course Code	Course Title	Category	L	T	P	C
THEORY							
1	222ENI01	Professional English-II*	HS/EEC	2	0	2	3
2	222MAT02	Probability and Statistics	BS	3	1	0	4
3	222EST03	Environmental Science and Engineering	BS	2	0	0	2
4	222PPT04	Python Programming	ES	3	0	0	3
5	222MST05	Material Science	BS	2	0	0	2
6	222EMT06	Engineering Mechanics	ES	3	0	0	3
7	222HST07	Tamils and Technology	HS	1	0	0	1
PRACTICALS0							
8	222PHP07	Engineering Physics Laboratory	BS	0	0	2	1
9	222PPP08	Python Programming Laboratory	ES	0	0	2	1
TOTAL				16	1	6	19

***(Theory + Lab – Embedded / Integrated)**



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Sl No.	III Semester		Hours/Week			
	Course Code	Course Title	L	T	P	C
1	322MAT01	Engineering Mathematics -III	3	1	0	4
2	322AET02	Fundamentals of AerospaceEngineering	3	0	0	3
3	322AET03	Mechanics of Machines	3	0	0	3
4	322AET04	Fluid Mechanics and Machinery	3	0	0	3
5	322AEI05	Solid Mechanics	3	0	2	4
6	322AET06	Aircraft Electrical and Electronics Systems	3	0	0	3
7	322GEV01	Professional Development Course	0	0	2	1
8	322AEP07	Fluid Mechanics Machinery Laboratory	0	0	2	1
9	322AEP08	UAV Laboratory	0	0	2	1

Sl No.	IV Semester		Hours/Week			
	Course Code	Course Title	L	T	P	C
1	422MAT01	Statistics and Numerical Methods	3	1	0	4
2	422AEI02	Aerodynamics – I	3	0	2	4
3	422AET03	Aircraft Structures-I	3	0	0	3
4	422AET04	Aero EngineeringThermodynamics	3	0	0	3
5	422AET05	Aircraft Materials andProcesses	3	0	0	3
6	422AET06	Aircraft Production Technology	3	0	0	3
7	422AEP07	Aircraft Component Drawing Laboratory	0	0	2	1
8	422AEP08	Aircraft Engineering Thermodynamics Laboratory	0	0	2	1
9	422GEV02	Math solver software	0	0	2	1

Sl No.	V Semester		Hours/Week			
	Course Code	Course Title	L	T	P	C
1	522AET01	Aerodynamics - II	3	0	0	3
2	522AET02	Propulsion - I	3	0	0	3
3	522AET03	Aircraft Structures-II	3	1	0	4
4	522AEI04	Aircraft Systems and Instrumentation	3	0	2	4
5	522AEEXX	Professional Elective I	3	0	0	3
6	522XXOXX	Open Elective I	3	0	0	3
7	522MCTXX	Mandatory Course I	1	0	0	1
8	522AEP07	Aircraft Structures Laboratory	0	0	2	1
9	522AEP08	Industrial Internship	0	0	4	2
10	522AEP09	Aircraft Repair Laboratory	0	0	2	1

Sl No.	VI Semester		Hours/Week			
	Course Code	Course Title	L	T	P	C
1	622AET01	Finite Element Method	3	0	0	3
2	622AEI02	Propulsion - II	3	0	2	4
3	622AET03	Aero Engine Maintenance and Repair	3	0	0	3
4	622AEEXX	Professional Elective II	3	0	0	3
5	622AEEXX	Professional Elective III	3	0	0	3
6	622XXOXX	Open Elective II	3	0	0	3
7	622MCTXX	Mandatory Course II	1	0	0	1
8	622AEP07	Aircraft Design Laboratory	0	0	2	1
9	622AEP08	Aero Engine Repair laboratory	0	0	2	1

Sl No.	VII Semester		Hours/Week			
	Course Code	Course Title	L	T	P	C
1	722AET01	Fracture Mechanics and Mechanism	3	0	0	3
2	722AEI02	Avionics	3	0	2	4
3	722AET03	Vibrations and Elements of Aero elasticity	3	1	0	4
4	722AEEXX	Professional Elective IV	3	0	0	3
5	722AEEXX	Professional Elective V	3	0	0	3
6	722AEEXX	Professional Elective VI	3	0	0	3
7	722AEP07	Industrial internship	0	0	4	2
8	722AEP08	Fabrication of UAV (Mini Project)	0	0	4	2

Sl No.	VIII Semester		Hours/Week			
	Course Code	Course Title	L	T	P	C
1	822AEEXX	Professional Elective VII	3	0	0	3
2	822AEEXX	Professional Elective VIII	3	0	0	3
3	822AEP03	Project work	0	0	18	9

PROFESSIONAL ELECTIVE COURSES: VERTICALS

VERTICAL 1: MECHANICS OF MATERIALS

Sl. No.	Course Code	Course Name	L	T	P	C
1	X22AEE01	Advanced Solid Mechanics	3	0	0	3
2	X22AEE02	Experimental Stress Analysis	3	0	0	3
3	X22AEE03	Theory of plates and shells	3	0	0	3
4	X22AEE04	Design and Analysis of Composite Structures	3	0	0	3
5	X22AEE05	Fatigue and Fracture	3	0	0	3
6	X22AEE06	Mechanical behavior of materials	3	0	0	3

VERTICAL 2: AERODYNAMICS

Sl. No.	Course Code	Course Name	L	T	P	C
1	X22AEE07	Experimental Aerodynamics	3	0	0	3
2	X22AEE08	Hypersonic Aerodynamics	3	0	0	3
3	X22AEE09	Advanced Computational Aerodynamics	3	0	0	3
4	X22AEE10	High Angle of Attack Aerodynamics	3	0	0	3
5	X22AEE11	Ground Vehicle Aerodynamics	3	0	0	3
6	X22AEE12	Helicopter Aerodynamics	3	0	0	3

VERTICAL 3: PRODUCT DESIGN AND MANUFACTURING

Sl. No.	Course Code	Course Name	L	T	P	C
1	X22AEE13	CAD / CAM Precision Engineering	3	0	0	3
2	X22AEE14	Mechanism and Machine Design	3	0	0	3
3	X22AEE15	Production Design and Development	3	0	0	3
4	X22AEE16	Precision Engineering	3	0	0	3
5	X22AEE17	Composites Fabrication and Machining	3	0	0	3
6	X22AEE18	Computer Integrated Manufacturing	3	0	0	3

VERTICAL 4: AVIATION AND AIRPORT OPERATIONS

Sl. No.	Course Code	Course Name	L	T	P	C
1	X22AEE19	Aircraft Electrical and Electronics	3	0	0	3
2	X22AEE20	Aircraft control systems	3	0	0	3
3	X22AEE21	Airport Planning and Operation Management	3	0	0	3
4	X22AEE22	Air Transportation System	3	0	0	3
5	X22AEE23	Airworthiness and Certifications	3	0	0	3
6	X22AEE24	Flight Scheduling and Operations	3	0	0	3

VERTICAL 5: SPACE SCIENCES

Sl. No.	Course Code	Course Name	L	T	P	C
1	X22AEE25	Orbital Mechanics	3	0	0	3
2	X22AEE26	Space Dynamics	3	0	0	3
3	X22AEE27	Spacecraft Attitude and Control	3	0	0	3
4	X22AEE28	Automatic Control of Aircraft	3	0	0	3
5	X22AEE29	Flight Simulation	3	0	0	3
6	X22AEE30	Atmospheric Re-entry Vehicle	3	0	0	3

VERTICAL 6: PROPULSION

Sl. No.	Course Code	Course Name	L	T	P	C
1	X22AEE31	Turbo Machinery	3	0	0	3
2	X22AEE32	Heat Transfer	3	0	0	3
3	X22AEE33	Theory of Combustion	3	0	0	3
4	X22AEE34	Cryogenics	3	0	0	3
5	X22AEE35	Aero Engine Design	3	0	0	3
6	X22AEE36	Non Air breathing Engines	3	0	0	3

**B.E. Aeronautical Engineering
Regulation 2022****Minimum number of Credits to be earned**

Semester	I	II	III	IV	V	VI	VII	VIII	TOTAL
Credits	20	19	22	22	24	21	22	15	165