



**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

2018

Programme Name

B.E(Aeronautical Engineering)

Sl No.	I Semester		Category	Hours/Week				Marks		
	Sub. Code	THEORY		L	T	P	C	IA	EA	Total
1	118ENT01	Technical English	HS	2	0	0	2	40	60	100
2	118MAT02	Engineering Mathematics-I	BS	3	0	0	3	40	60	100
3	118PHT03	Engineering Physics	BS	2	0	0	2	40	60	100
4	118CYT04	Engineering Chemistry	BS	3	0	0	3	40	60	100
5	118EGT05	Engineering Graphics	ES	2	0	4	4	40	60	100
6	118ESE02	Basic Civil Electrical and Electronics Engineering	ES	3	0	0	3	40	60	100
PRACTICAL										
7	118CYP07	Engineering Chemistry Laboratory	BS	0	0	2	1	60	40	100
8	118EPP07	Engineering Practice Laboratory	ES	0	0	3	1	60	40	100
Total Mandatory Credits							19			

Sl No.	II Semester		Category	Hours/Week				Marks		
	Sub. Code	THEORY		L	T	P	C	IA	EA	Total
1	218ENT01	Communicative English	HS	2	0	2	3	40	60	100
2	218MAT02	Engineering Mathematics-II	BS	3	1	0	4	40	60	100
3	218GET03	Environmental Science and Engineering	HS	2	0	0	2	40	60	100
4	218EMT04	Engineering Mechanics	ES	3	0	0	3	40	60	100
5	218PPT05	Problem Solving and Python Programming	ES	3	0	0	3	40	60	100
6	218BSE01	Material Science	BS	2	0	0	2	40	60	100
PRACTICAL										
7	218PHP07	Engineering Physics Laboratory	ES	0	0	2	1	60	40	100
8	218EPP08	Problem Solving and Python Programming Laboratory	ES	0	0	2	1	60	40	100
Total Mandatory Credits							19			



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SI No.	TABLE-I								
	III Semester			Hours/Week				Marks	
	Sub. Code	THEORY	L	T	P	C	IA	EA	Total
PC	318MAT01	Engineering Mathematics -III	3	0	0	3	50	50	100
PC	318AET02	Thermodynamics in Aeronautical Engineering	3	0	0	3	50	50	100
PC	318AET03	Fluid Mechanics and Machinery	3	0	0	3	50	50	100
PC	318AET04	Solid Mechanics	3	0	0	3	50	50	100
PC	318AET05	Production Technology	3	0	0	3	50	50	100
OE	318AEE--	Professional Elective-I	3	0	0	3	50	50	100
PRACTICAL									
PC	318AEP07	Strength of Materials Lab	0	0	3	1	50	50	100
PC	318AEP08	Fluid Mechanics and Machinery Lab	0	0	3	1	50	50	100
PE	318AEP09-	PE Lab-1 Thermodynamics Lab	0	0	3	1	50	50	100
Total Credits						21			

	SI No.	TABLE-II									
		Professional Elective-I			Hours/Week				Marks		
		Sub. Code	THEORY	L	T	P	C	IA	EA	Total	
OE-1	1	318AEE06	Elements of Aeronautics	3	0	0	3	50	50	100	
	2	318AEE07	Airline Operations and Management	3	0	0	3	50	50	100	
	3	318AEE08	Pollution Control in Aircraft Industries	3	0	0	3	50	50	100	
	4	318AEE09	Environmental Safety management	3	0	0	3	50	50	100	
	5	318AEE10	Renewable Energy Systems for Aircraft	3	0	0	3	50	50	100	
PE LAB -1	SI No.	Professional Elective			Hours/Week				Marks		
		Sub. Code	PRACTICAL	L	T	P	C	IA	EA	Total	
	1	318AEP09	Thermodynamics Lab	0	0	3	1	50	50	100	
	2	318AEP10	Aircraft Engine Repair and Maintenance Lab	0	0	3	1	50	50	100	
	3	318AEP11	Communication and Navigation Lab.	0	0	3	1	50	50	100	
	4	318AEP12	Aero Modeling Lab	0	0	3	1	50	50	100	
5	318AEP13	Solid Works For A/C Lab	0	0	3	1	50	50	100		



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Semester IV			Hours/Week				Marks		
Sl No	Sub code	Theory	L	T	P	C	IA	EA	Total
PC	418NMT01	Statistics and Numerical Methods	3	0	0	3	50	50	100
PC	418AET02	Aerodynamics - I	3	0	0	3	50	50	100
PC	418AET03	Aircraft Systems and Instruments	3	0	0	3	50	50	100
PC	418AET04	Aircraft Structures - I	3	0	0	3	50	50	100
PC	418AET05	Propulsion-I	3	0	0	3	50	50	100
PE	418AEE	P E Theory 2	3	0	0	3	50	50	100

PRACTICAL

PC	418AEP07	Aircraft Structures Laboratory I	0	0	0	1	50	50	100
PC	418AEP08	Aerodynamics Laboratory	0	0	0	1	50	50	100
PE	418AEP	PE Laboratory	0	0	0	1	50	50	100
Total Credits						21	450	450	900

Sl No.	TABLE-II									
	Professional Elective-2									
	Sub. Code		THEORY				Marks			
Sub. Code	Professional Elective Theory	L	T	P	C	IA	EA	Total		
PE1	418AEE06	Metal Joining Process and NDT	3	0	0	3	50	50	100	
PE2	418AEE07	Aerospace Materials	3	0	0	3	50	50	100	
PE3	418AEE08	Introduction to Space Technology	3	0	0	3	50	50	100	
PE4	418AEE09	Experimental Aerodynamics	3	0	0	3	50	50	100	
PE5	418AEE10	Mechanics of Machines	3	0	0	3	50	50	100	
Sl No.	Professional Elective		Hours/Week				Marks			
	Sub. Code	PRACTICAL	L	T	P	C	IA	EA	Total	
PE1	418AEP09	Aircraft Component Drawing Lab	0	0	3	1	50	50	100	
PE2	418AEP10	CATIA V5 R 21 Lab	0	0	3	1	50	50	100	
PE3	418AEP11	Production Technology Lab	0	0	3	1	50	50	100	
PE4	418AEP12	Modeling Lab I	0	0	3	1	50	50	100	
PE5	418AEP13	Aircraft Systems Lab	0	0	3	1	50	50	100	



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Sl No.	TABLE-I								
	V Semester		Hours/Week				Marks		
	Sub. Code	THEORY	L	T	P	C	IA	EA	Total
PC	518AET01	Aircraft structures II	3	0	0	3	50	50	100
PC	518AET02	Aircraft Performance	3	0	0	3	50	50	100
PC	518AET03	Aerodynamics II	3	0	0	3	50	50	100
PC	518AET04	Propulsion II	3	0	0	3	50	50	100
PE	518AEE	Professional Elective Theory 1	3	0	0	3	50	50	100
OE	518AEE	Open Elective Theory 1	3	0	0	3	50	50	100
PRACTICAL									
PC	518AEP07	Aircraft Structures Laboratory II	0	0	3	1	50	50	100
PC	518AEP08	Propulsion Laboratory	0	0	3	1	50	50	100
PE	518AEP	P E Laboratory	0	0	3	1	50	50	100
Total Credits						21			

Sl No.	TABLE-II									
	Core Elective									
	Sub. Code	THEORY	Hours/Week				Marks			
Sub. Code	Professional Elective	L	T	P	C	IA	EA	Total		
PE	PE1	518AEE01	Airlines operation and management	3	0	0	3	50	50	100
	PE2	518AEE02	Aero-Engine Testing and Performance Evaluation	3	0	0	3	50	50	100
	PE3	518AEE03	Aerospace Quality Assurance	3	0	0	3	50	50	100
	PE4	518AEE04	Space Flight Mechanics	3	0	0	3	50	50	100
	PE5	518AEE05	Aircraft System engineering	3	0	0	3	50	50	100
OE	Sl No.	Sub. Code	THEORY	Hours/Week				Marks		
	Sub. Code	Professional Elective	L	T	P	C	IA	EA	Total	
	OE1	518AEE06	Robotic Process and Industrial Automation	3	0	0	3	50	50	100
	OE2	518AEE07	Unmanned Aircraft Systems	3	0	0	3	50	50	100
	OE3	518AEE08	Introduction to Wind Tunnel Techniques	3	0	0	3	50	50	100
	OE4	518AEE09	Fundamentals of Flight	3	0	0	3	50	50	100
OE5	518AEE10	Introduction to Space Systems	3	0	0	3	50	50	100	
PE	Sl No.	Sub. Code	PRACTICAL	Hours/Week				Marks		
	Sub. Code	Professional Elective Lab	L	T	P	C	IA	EA	Total	
	PE1	518AEP09	Aircraft structures Repair laboratory	0	0	3	1	50	50	100
	PE2	518AEP10	MAT laboratory	0	0	3	1	50	50	100
	PE3	518AEP11	Computer Aided Modeling And Analysis Laboratory	0	0	3	1	50	50	100
	PE4	518AEP12	Hypermesh Laboratory	0	0	3	1	50	50	100
PE5	518AEP13	Aircraft System Control laboratory	0	0	3	1	50	50	100	



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Sl No.	TABLE-I								
	VI Semester		Hours/Week				Marks		
	Sub. Code	THEORY	L	T	P	C	IA	EA	Total
PC	618AET01	Composite Materials and Structures	3	0	0	3	50	50	100
PC	618AET02	Heat Transfer	3	0	0	3	50	50	100
PC	618AET03	Experimental Stress Analysis	3	0	0	3	50	50	100
PC	618AET04	Finite Element Analysis	3	0	0	3	50	50	100
E 1	618AEE	Professional Elective Theory 4	3	0	0	3	50	50	100
PE	618AEE	P E Theory 2	3	0	0	3	50	50	100
PRACTICAL									
PC	618AEP07	Aircraft Design Lab	0	0	3	1	50	50	100
PC	618AEP08	Materials Testing Lab	0	0	3	1	50	50	100
PE	618AEP	Choice 17	0	0	3	1	50	50	100
Total Credits						21			

Sl No.	TABLE-II									
	Core Elective									
	Sub. Code	THEORY	Hours/Week			Marks				
Sub. Code	Professional Elective-4	L	T	P	C	IA	EA	Total		
E I	PE1	618AEE05	Theory of Elasticity	3	0	0	3	50	50	100
	PE 2	618AEE06	Intellectual Property Rights	3	0	0	3	50	50	100
	PE 3	618AEE07	Wind Tunnel Techniques	3	0	0	3	50	50	100
	PE 4	618AEE08	Boundary layer theory	3	0	0	3	50	50	100
	PE 5	618AEE09	Flight Testing	3	0	0	3	50	50	100
Sl No.	Open Elective		Hours/Week				Marks			
	Sub. Code	THEORY	L	T	P	C	IA	EA	Total	
	Sub. Code	Professional Elective-4	L	T	P	C	IA	EA	Total	
PE II	PE1	618AEE10	Aircraft Electronics Microprocessor and Applications	3	0	0	3	50	50	100
	PE 2	618AEE11	Space flight Navigation and Guidance	3	0	0	3	50	50	100
	PE 3	618MEO01	Applied Hydraulics and Pneumatics	3	0	0	3	50	50	100
	PE 4	618AEE12	Structural Dynamics	3	0	0	3	50	50	100
	PE 5	618AEE13	Aircraft Maintenance Practice	3	0	0	3	50	50	100
Sl No.	Professional Elective Lab		Hours/Week				Marks			
	Sub. Code	PRACTICAL	L	T	P	C	IA	EA	Total	
	Sub. Code	PRACTICAL	L	T	P	C	IA	EA	Total	
PE L	PE1	618AEP09	Aero Engine Repair laboratory	0	0	3	1	50	50	100
	PE2	618AEP10	Aircraft Interior Design laboratory	0	0	3	1	50	50	100
	PE3	618AEP11	CAD/CAM laboratory	0	0	3	1	50	50	100
	PE4	618AEP12	MAT Laboratory	0	0	3	1	50	50	100
	PE5	618AEP13	Heat Transfer Laboratory	0	0	3	1	50	50	100



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SI No.	TABLE-I								
	VII Semester		Hours/Week				Marks		
	Sub. Code	THEORY	L	T	P	C	IA	EA	Total
PE	718AET01	Fracture Mechanics and Mechanisms	3	0	0	3	50	50	100
PE	718AET02	Avionics	3	0	0	3	50	50	100
PE	718AET03	Airline and Airport Management	3	0	0	3	50	50	100
PE	718AET04	Vibrations and Aero elasticity	3	0	0	3	50	50	100
PE	718AEE	Professional Elective-5	3	0	0	3	50	50	100
OE	718AEE	ELECTIVE III	3	0	0	3	50	50	100
PRACTICAL									
PE	718AEP07	Avionics and Aircraft Systems Lab	0	0	3	1	50	50	100
PE	718AEP08	Design and Fabrication of Aeromodelling (Mini Project)	0	0	3	1	50	50	100
PE	718AEP12	Industrial internship	0	0	3	1	50	50	100
Total Credits						21			

	SI No.	TABLE-II								
		Core Elective								
		Professional Elective -5		Hours/Week				Marks		
	Sub. Code	THEORY	L	T	P	C	IA	EA	Total	
E II	PE1	718AEE01	Helicopter Maintenance	3	0	0	3	50	50	100
	PE2	718AEE02	Helicopter Aerodynamics	3	0	0	3	50	50	100
	PE3	718AEE03	Airworthiness and Certification	3	0	0	3	50	50	100
	PE4	718AEE04	Theory of Plates and Shells	3	0	0	3	50	50	100
	PE5	718AEE05	High Temperature Materials	3	0	0	3	50	50	100
E III		Open Elective		Hours/Week				Marks		
	SI No.	Sub. Code	THEORY	L	T	P	C	IA	EA	Total
	OE1	718AEE06	EV Design	3	0	0	3	50	50	100
	OE2	718AEE07	Principles of Management and Business Concepts	3	0	0	3	50	50	100
	OE3	718AEE08	Total Quality Management	3	0	0	3	50	50	100
	OE4	718AEE09	Robotics and Automation	3	0	0	3	50	50	100
OE5	718AEE10	Industrial Engineering and Management	3	0	0	3	50	50	100	
PE		Professional Elective Lab		Hours/Week				Marks		
	SI No.	Sub. Code	PRACTICAL	L	T	P	C	IA	EA	Total
	PE1	718AEP09	Aerospace Computational Analysis Laboratory	0	0	3	1	50	50	100
	PE2	718AEP10	CFD Laboratory	0	0	3	1	50	50	100
	PE3	718AEP11	Autonomous UAV Laboratory	0	0	3	1	50	50	100
	PE4	718AEP12	Industrial internship	0	0	3	1	50	50	100
PE5	718AEP13	Employability Skills Laboratory	0	0	3	1	50	50	100	



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Sl No.	TABLE-I								
	VIII Semester		Hours/Week				Marks		
	Sub. Code	THEORY	L	T	P	C	IA	EA	Total
PC	818AET01	Rocket and missile	3	0	0	3	50	50	100
PE	818AEE	Professional Elective-VI	3	0	0	3	50	50	100
PE	818AEE	Professional Elective-VII	3	0	0	3	50	50	100
PRACTICAL									
PE	818AEP04	Project work	0	0	14	7	50	50	100
Total Credits						16			

Sl No.	TABLE-II									
	Professional Elective-VI		Hours/Week				Marks			
	Sub. Code	THEORY	L	T	P	C	IA	EA	Total	
E VI	PE1	818AEE02	Total Quality Management	3	0	0	3	50	50	100
	PE2	818AEE03	Computer Integrated Manufacturing	3	0	0	3	50	50	100
	PE3	818AEE04	Entrepreneurship Development, Management & IPR	3	0	0	3	50	50	100
	PE4	818AEE05	Computer Aided Design/Computer Aided Manufacturing	3	0	0	3	50	50	100
	PE5	818AEE06	Human Values and Professional Ethics	3	0	0	3	50	50	100
Sl No.	Professional Elective-VII		Hours/Week				Marks			
	Sub. Code	THEORY	L	T	P	C	IA	EA	Total	
	PE1	818AEE07	Operation Research	3	0	0	3	50	50	100
E VII	PE2	818AEE08	Combustion	3	0	0	3	50	50	100
	PE3	818AEE09	Air Transportation and Aircraft Maintenance Management	3	0	0	3	50	50	100
	PE4	818AEE10	Engineering optimization	3	0	0	3	50	50	100
	PE5	818AEE11	Gas Turbine Technology	3	0	0	3	50	50	100