



ADHIYAMAAN COLLEGE OF ENGINEERING - HOSUR
(An Autonomous institute affiliated to Anna University, Chennai)

REGULATION-2022

CURRICULUM

COURSE CODE DEFINITIONS

Course Code	Definitions
BSC	Basic Science Courses
HSMC	Humanities, Social Sciences including Management
ESC	Engineering Science Course
PCC	Professional Core Courses
PEC	Professional Elective Courses
OEC	Open Elective Course
MCC	Mandatory Course
SI	Summer Internship
EEC	Employability Enhancement Course

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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	தமிழர் மரபு / 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)

SEMESTER-III

S.No.	Course Code	Course Title	Category	L	T	P	C
THEORY							
1	322MAT01	Transforms and Partial Differential Equations	BS	3	1	0	4
2	322CET02	Mechanics of Solids	PC	3	1	0	4
3	322CET03	Mechanics of Fluids	PC	3	0	0	3
4	322CET04	Surveying – I*	PC	3	0	2	4
5	322CET05	Water supply and Waste water Engineering	PC	3	0	0	3
6	322CET06	Construction Techniques and Equipment Practices	ES	2	0	0	2
7	322CEV01	Professional Development	EEC	1	0	0	1
PRACTICALS							
7	322CEP07	Water supply and Waste water Analysis Laboratory	PC	0	0	2	1
8	322CEP08	Computer Aided Design-I	PC	0	0	2	1
	TOTAL			18	2	6	22

SEMESTER-IV

S.No.	Course Code	Course Title	Category	L	T	P	C
THEORY							
1	422CET01	Transportation, Infrastructure, Airports, Metros and Seaports	PC	3	0	0	3
2	422CET02	Strength of Materials	PC	3	1	0	4
3	422CET03	Applied Hydraulic Engineering	PC	3	1	0	4
4	422CET04	Geotechnical Engineering*	PC	3	0	2	3
5	422CET05	Digital Marketing	PC	3	0	0	3
6	422CET06	Surveying – II	PC	3	0	0	4
7	422CEV02	Maths Solver Software	EEC	1	0	0	1
8	422CEA01	Audit course	AC	1	0	0	0
PRACTICALS							
9	422CEP08	Strength of Materials Laboratory & NDT Lab	PC	0	0	2	1
10	422CEP09	Advanced Surveying Laboratory	PC	0	0	2	1
	TOTAL			20	1	8	23

SEMESTER V

S.No.	Course Code	Course Title	Category	L	T	P	C
THEORY							
1	522CET01	Concrete Technology*	PC	3	0	2	4
2	522CET02	Structural Analysis-I	PC	3	1	0	4
3	522CET03	Foundation Engineering	PC	3	0	0	3
4	522CET04	Design of Reinforced Concrete Elements	PC	3	0	0	3
5	522CEEXX	Professional Elective-I	PC	3	0	0	3
6	522CEOXX	Open Elective-I	OE	3	0	0	3
7	522CEM01	Mandatory course-I	MC	0	0	2	1
PRACTICALS							
8	522CEP08	<i>Building Information Modelling Lab</i>	PC	0	0	2	1
9	522CEP09	Hydraulic Engineering Laboratory	PC	0	0	2	1
9	522CEP09	Extensive Survey Camp	PC	0	0	2	1
10	522EEC10	Internship Training	EEC	0	0	2	1
	TOTAL			18	2	6	22

SEMESTER-VI

S.No.	Course Code	Course Title	Category	L	T	P	C
THEORY							
1	622CET01	Design and Construction of Steel Buildings	PC	3	0	0	3
2	622CET02	Structural Analysis-II	PC	3	1	0	4
3	622CET03	Irrigation Engineering*	PC	3	0	2	4
4	622CEEXX	Professional Elective-II	PE	3	0	0	3
5	622CEEXX	Professional Elective-III	PE	3	0	0	3
6	622CEEXX	Open Elective – II	OE	3	0	0	3
PRACTICALS							
7	622CEP07	<i>3D Printing Laboratory</i>	PC	0	0	2	1
8	622CEP08	Computer Aided Building Drawing-II	PC	0	0	2	1
	TOTAL			18	1	6	22

SEMESTER VII

S.No	Course Code	Course Title	Category	L	T	P	C
THEORY							
1	722CET01	Estimation and Quantity Surveying	PC	3	0	0	3
2	722CET02	Construction Planning and Scheduling	PC	3	0	0	3
3	722CET03	High rise Building	PC	3	0	0	3
4	722CEEXX	Professional Elective-IV	PE	3	0	0	3
5	722CEEXX	Professional Elective-V	PE	3	0	0	3
6	722CEEXX	Professional Elective-VI	OE	3	0	0	3
PRACTICALS							
7	722CEP07	<i>IOT Laboratory</i>	PC	0	0	2	1
8	722CEP08	Summer Internship Training	PC	0	0	4	2
9	722CEP09	Mini Project	PC	0	0	2	1
	TOTAL			17	0	6	21

SEMESTER-VIII

S.No	Course Code	Course Title	Category	L	T	P	C
THEORY							
1	822CEEXX	Professional Elective-VII	PE	3	0	0	3
2	822CEEXX	Professional Elective-VIII	PE	3	0	0	3
PRACTICALS							
3	822CEP03	Main Project	PC	0	0	18	9
	TOTAL			06	0	18	15

PROFESSIONAL ELECTIVE COURSES : VERTICALS

VERTICAL I (Structures)	VERTICAL II (Geotechnical)	VERTICAL III (Transportation infrastructure)	VERTICAL IV (Environment)	VERTICAL V (Water Resources)	VERTICAL VI (Diversified Course)
Concrete Structures	Geo-Environmental Engineering	Airports and Harbours	Climate Change Adaptation and Mitigation	Participatory Water Resources Management	Steel Concrete Composite Structures
Steel Structures	Ground Improvement Techniques	Traffic Engineering and Management	Air and Noise Pollution Control Engineering	Groundwater Engineering	Finance For Engineers
Prefabricated Structures	Soil Dynamics and Machine Foundations	Urban Planning and Development	Environmental Impact Assessment	Water Resources Systems Engineering	Earth and Rockfill Dams
Prestressed Concrete Structures	Rock Mechanics	Smart cities	Industrial Wastewater Management	Watershed Conservation and Management	Environmental quality Monitoring
Rehabilitation/ Heritage Restoration	Earth and Earth Retaining Structures	Transportation planning Process	Solid and Hazardous Waste Management	Integrated Water Resources Management	Rainwater Harvesting
Dynamics and Earthquake Resistant Structures	Pile Foundation	Pavement Engineering	Environment, Health and Safety	Water Quality and Management	Transport and Environment

Summary

HUMANITIES AND SOCIALS CIENCES INCLUDING MANAGEMENT COURSES (HSMC)

Sl. No	Course Code	CourseTitle	Periods per week			Credits	Semester
			Lecture	Tutorial	Practical		
1.	122ENT01	Professional English-I	2	0	0	2	1
2.	222ENT01	Professional English-II	2	0	2	3	2
Total Credits:						5	

BASIC SCIENCE COURSE (BSC)

Sl. No	Course Code	CourseTitle	Periods per week			Credits	Semester
			Lecture	Tutorial	Practical		
1	122MAT02	Engineering Mathematics-I	3	1	0	4	1
2	122PHT03	Engineering Physics	2	0	0	2	1
3	122CYT04	Engineering Chemistry	2	0	0	2	1
4	122CYP07	Engineering Chemistry Laboratory	0	0	2	1	1
5	222MAT02	Engineering Mathematics-II	3	1	0	4	2
6	222MST03	Material Science	2	0	0	2	2
7	222PHP07	Engineering Physics Laboratory	0	0	2	1	2
8	322CET01	Engineering Mathematics-III	3	1	0	4	3
9	422CET01	Numerical Methods	3	1	0	4	4
Total Credits:						24	

ENGINEERING SCIENCE COURSE [ESC]

Sl. No	Course Code	CourseTitle	Periods per week			Credits	Semester
			Lecture	Tutorial	Practical		
1.	122EGT05	Engineering Graphics	2	0	4	4	1
2.	122EET06	Basic Electrical Electronics and Instrumentation Engineering	3	0	0	3	1
3.	122EPP08	Engineering Practice Laboratory	0	0	2	1	1
4.	222EMT04	Engineering Mechanics	3	0	0	3	2
5.	222PPT05	Problem Solving and Python Programming	3	0	0	3	2

6.	222RST04	Renewable Sources of Energy	2	0	0	2	2
7.	222PPP08	Problem Solving and Python Programming Laboratory	0	0	2	1	2
8.	322CEP06	Engineering Geology	2	0	0	2	3
Total Credits:						19	

PROFESSIONAL CORE COURSES [PCC]

Sl.No	Course Code	CourseTitle	Periods per week			Credits	Semester
			Lec	Tutorial	Practical		
1.	322CET02	Mechanics of Solids	3	1	0	4	3
2.	322CET03	Fluid Mechanics	3	0	0	3	3
3.	322CET04	Surveying – I	3	0	0	3	3
4.	322CET05	Construction Materials and Techniques	3	0	0	3	3
5.	322CEP07	Construction Materials Laboratory	0	0	2	1	3
6.	322CEP08	Computer Aided Design – I	0	0	2	1	3
7.	322CEP09	Surveying – I Laboratory	0	0	2	1	3
8.	422CET02	Strength of Materials	3	1	0	4	4
9.	422CET03	Applied Hydraulic Engineering	3	0	0	3	4
10	422CET04	Geotechnical Engineering	3	0	0	3	4
11	422CET05	Environmental Engineering–I	3	0	0	3	4
12	422CET06	Surveying – II	3	0	0	3	4
13	422CEP07	Strength of Materials Laboratory	0	0	2	1	4
14	422CEP08	Fluid Mechanics Laboratory	0	0	2	1	4
15	422CEP09	Surveying – II Laboratory	0	0	2	1	4
16	522CET01	Highway Engineering	3	0	3	3	5
17	522CET02	Structural Analysis-I	3	1	0	4	5
18	522CET03	Foundation Engineering	3	0	0	3	5
19	522CET04	Design of Reinforced Concrete Elements	3	0	0	3	5
20	522CET05	Environmental Engineering – II	3	0	0	3	5
21	522CEP07	Environmental Engineering Laboratory	0	0	2	1	5
22	522CEP08	Geotechnical Engineering Laboratory	0	0	2	1	5
23	622CET01	Railways, Airports and Harbour Engineering	3	0	0	3	6
24	622CET02	Structural Analysis-II	3	1	0	4	6
25	622CET03	Design of Reinforced Concrete and Brick Masonry Structures	3	0	0	3	6
26	622CEEXX	Design of Steel Structures	3	0	0	3	
27	622CEP07	Computer Aided Design – II	0	0	2	1	7

28	622CEP08	Concrete and Highway Engineering Laboratory	0	0	2	1	7
29	722CET01	Estimation and Quantity Surveying	3	0	0	3	7
30	722CET02	Construction Planning and Scheduling	3	0	0	3	7
31	722CET03	Irrigation Engineering	3	0	0	3	7
32	722CEP07	Irrigation Engineering –Design and Drawing	0	0	2	1	7
33	722CEP08	Summer Internship Training	0	0	2	1	7
34	722CEP09	Mini Project	0	0	2	1	7
35	822CEP03	Main Project	0	0	18	9	8
Total Credits						89	

EMPLOYABILITY ENHANCEMENT COURSES (EEC)

Sl. No	Course Code	Course Title	Periods per week			Credits	Semester
			Lecture	Tutorial	Practical		
1	522CEP09	Extensive Survey Camp	0	0	2	1	5
2	622CEP09	Employability Skills Laboratory	0	0	2	1	6
3	722CEP07	Summer Internship Training	0	0	2	1	7
4	722CEP08	Mini Project	0	0	2	1	7
5	822CEP03	Main Project	0	0	18	9	8
Total Credits:						13	

LIST OF OPEN ELECTIVE COURSE - I (OEC-I)

Sl. No	Course Code	Course Title	Periods per week			Credits
			Lecture	Tutorial	Practical	
1.	522ARO01	Personality Development	3	0	0	3
2.	522EEO01	Electrical Drives and Controls	3	0	0	3
3.	522EIO01	Electrical and Electronic Measurements	3	0	0	3
4.	522EIO02	Environmental Instrumentation	3	0	0	3

OPEN ELECTIVE COURSE - II (OEC)

Sl.	Course	Course Title	Periods per week	Credits
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No	Code		Lecture	Tutorial	Practical	
1.	622ARO01	Energy Efficient Architecture	3	0	0	3
2.	622ARO02	Services for High- rise Buildings	3	0	0	3
3.	622ARO04	Urban Housing	3	0	0	3
4.	622EIO01	Building Automation	3	0	0	3

LIST OF PROFESSIONAL ELECTIVES

PROFESSIONAL ELECTIVE COURSES (PEC I) –Semester VI – Remote Sensing domain

Sl. No	Course Code	Course Title	Periods perweek			Credits
			Lecture	Tutorial	Practical	
1.	622CEE01	Remote Sensing	3	0	0	3
2.	622CEE02	Geographic Information System	3	0	0	3
3.	622CEE03	Geo informatics Applications for Civil Engineers	3	0	0	3
4.	622CEE04	Total Station and GPS surveying	3	0	0	3

PROFESSIONAL ELECTIVE COURSES (PEC II) –Semester VII – Soil Mechanics

Sl.No	Course Code	CourseTitle	Periods perweek			Credits
			Lecture	Tutorial	Practical	
1.	722CEE01	Geo-Environmental Engineering	3	0	0	3
2.	722CEE02	Ground Improvement Techniques	3	0	0	3
3.	722CEE03	Soil Dynamics and Machine Foundations	3	0	0	3
4.	722CEE04	Rock Mechanics	3	0	0	3
5.	722CEE05	Earth Retaining Structures	3	0	0	3

PROFESSIONAL ELECTIVE COURSES (PEC III) –Semester VII – Intelligent Structures

Sl.No	Course Code	CourseTitle	Periods perweek			Credits
			Lecture	Tutorial	Practical	
1	722CEE06	Technological Innovations in Civil	3	0	0	3
2	722CEE07	Structural Automation	3	0	0	3
3	722CEE08	Advanced Construction Techniques and Practices	3	0	0	3
4	722CEE09	Smart Techniques and Practices	3	0	0	3
5	722CEP10	Building Maintenance and Services	3	0	0	3

PROFESSIONAL ELECTIVE COURSES (PEC IV) –Semester VII – Structures

Sl.No	Course	CourseTitle	Periods per week	Credits
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	Code		Lecture	Tutorial	Practical	
1.	822CEE01	Design of Prestressed Concrete Structures	3	0	0	3
2.	822CEE02	Bridge Engineering	3	0	0	3
3.	822CEE03	Prefabricated Structures	3	0	0	3
4.	822CEE04	Structural Dynamics and Earthquake Engineering	3	0	0	3

PROFESSIONAL ELECTIVE COURSES (PEC V) –Semester VIII – Allied subjects

Sl.No	Course Code	CourseTitle	Periods perweek			Credits
			Lecture	Tutorial	Practical	
1	822CEE05	Maintenance, Repair and Rehabilitation of Structures	3	0	0	3
2	822CEE06	Instrumentation in Civil Engineering	3	0	0	3
3	822CEE07	Computer Aided Design of Structures	3	0	0	3
4	822CEE08	Disaster Management	3	0	0	3
5	822CEE09	Robotics in Civil Engineering	3	0	0	3

SUMMARY

Name of the Programme : B.E CIVIL ENGINEERING										
	Subject Area	Credits per Semester								Credits Total
		I	II	III	IV	V	VI	VII	VIII	
1	HSMC	2	3	0	0	0	0	0	0	05
2	BSC	9	7	4	4	0	0	0	0	24
3	ESC	8	9	2	0	0	0	0	0	19
4	PCC	0	0	16	19	18	15	10	0	78
5	PEC	0	0	0	0	0	3	9	6	18
6	OEC	0	0	0	0	3	3	0	0	6
7	EEC	0	0	0	0	1	1	2	9	13
8	Non Credit / Mandatory		✓							0
	Total	19	19	22	23	22	22	21	15	163

