HINDUSTHAN INSTITUTE OFTECHNOLOGY

(An Autonomous Institution)

(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai,
Accredited with "A" Grade by NAAC and Accredited by NBA (Aero, CSE, ECE & Mech., IT MBA)
Valley Campus, Pollachi Main Road, Coimbatore 641 032.

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
Regulation 2024 - Curriculum

Choice Based Credit System (CBCS)

Outcome-Based Education (OBE)

UNDERGRADUATE PROGRAMMES

Programme: B.E. Branch: Computer Science and Engineering

Course Code	Course Title	Course Category	Course Type	Assessment			L	P	T	J	Credit
				CIA	ESE	Total					
SEMESTER I											
24UH101	Universal Human Values I- Students Induction Program	MC	T	3 WEEKS							0
24EN101	Professional English	HSC	T	40	60	100	2	2	0	0	3
24MA201	Matrices and Calculus	BSC	T	40	60	100	3	0	1	0	4
24PH201	Engineering Physics	BSC	T	40	60	100	3	0	0	0	3
24CY201	Engineering Chemistry	BSC	T	40	60	100	3	0	0	0	3
24ME301	Engineering Graphics	ESC	T	40	60	100	3	0	0	0	3
24CS301	Problem Solving and Programming in C	ESC	TP	50	50	100	2	2	0	0	3
24MC801	Heritage of Tamil	MC	T	40	60	100	1	0	0	0	1
24TP701	Soft skills & Aptitude – I	EEC	P	50	50	100	0	2	0	0	1

24PC201	Physics and Chemistry Laboratory	BSC	P	60	40	100	0	4	0	0	2
Total											23
SEMESTER II											
24UH102	Universal Human Values II – Understanding Harmony	HSC	T	40	60	100	3	0	0	0	3
24EN102	Design Thinking	HSC	TP	60	40	100	1	2	0	0	2
24MA202	Numerical Methods and Statistics	BSC	T	40	60	100	3	0	1	0	4
24PH203	Physics for Information science	BSC	T	40	60	100	3	0	0	0	3
24EC304	Basic Electrical & Electronics Engineering	ESC	TP	50	50	100	2	2	0	0	3
24CS303	Advanced C Programming and Data Structures I	ESC	TP	50	50	100	3	2	0	0	4
24ME302	Engineering Practice Laboratory	ESC	P	60	40	100	0	4	0	0	2
24TP702	Soft Skills & Aptitude – II	EEC	P	50	50	100	0	2	0	0	1
24MC802	Tamils and Technology	MC	T	40	60	100	1	0	0	0	1
Total											**23**
SEMESTER III											
24MA204	Discrete Mathematics	BSC	T	40	60	100	3	0	0	0	3
24EC303	Digital Principles and Computer Organization	ESC	TP	50	50	100	3	2	0	0	4
24IT401	Java Programming	PCC	T	40	60	100	3	0	0	0	3
24CS401	Data Structures II	PCC	TP	50	50	100	3	2	0	0	4
24AD401	Clean Coding and Devops	PCC	TP	50	50	100	2	2	0	0	3
24MC804	Essence of Indian traditional knowledge.	MC	T	40	60	100	3	0	0	0	3

24IT402	Java Programming Laboratory	PCC	P	60	40	100	0	4	0	0	2
24CS402	Web Programming I	PCC	P	100	0	100	0	2	0	0	1
24TP703	Soft Skills & Aptitude – III	EEC	P	50	50	100	0	2	0	0	1
24NCC02	Career Develoment and Aviation Skills	NCC	T	50	50	100	1	0	0	0	1*
Total											**24**
SEMESTER IV											
24MA207	Probability and Queuing Theory	BSC	T	40	60	100	3	0	0	0	3
24IT404	Database Management Systems	PCC	T	40	60	100	3	0	0	0	3
24CS403	Analysis of Algorithms	PCC	T	40	60	100	3	0	0	0	3
24AD402	Foundations of Data Science	PCC	T	40	60	100	3	0	0	0	3
24CS404	Operating Systems	PCC	TP	50	50	100	3	2	0	0	4
24CS405	Web Programming –II	PCC	P	100	0	100	0	2	0	0	1
24TP704	Soft Skills & Aptitude – IV	EEC	P	50	50	100	0	2	0	0	1
24MC806	Environmental Science and Engineering	MC	T	0	100	100	3	0	0	0	0
24CS701	Mini Project I	EEC	PW	50	50	100	0	4	0	0	2
24IT406	Database Management Systems Laboratory	PCC	P	60	40	100	0	4	0	0	2
24NCC0	Personal Development and Aviation Leadership	NCC	T	50	50	100	1	0	0	0	1*
Total											**22**
SEMESTER V											
24CS406	Automata and Compiler Design	PCC	T	40	60	100	3	0	1	0	4
24IT407	Computer Networks	PCC	TP	50	50	100	3	2	0	0	4
24AD403	Machine Learning	PCC	TP	60	40	100	3	0	0	0	3
24AD404	Programming for Data Science	PCC	TP	50	50	100	2	2	0	0	3
24CSXXX	Professional Elective-I	PEC	T	40	60	100	3	0	0	0	3
24CS407	Web Programming –III	PCC	P	100	0	100	0	2	0	0	1

24CS6XX	Open Elective-I/Foreign Languages/NCC Credit Course	OEC	T	40	60	100	3	0	0	0	3
24MC805	Indian Constitution	MC	T	0	100	100	3	0	0	0	0
24AD405	Machine Learning Laboratory	PCC	P	40	60	100	0	4	0	0	2
24TP705	Internship/Inplant Training	EEC	P	100	0	100	0	0	0	0	1
24NCC04	Community Development and Aviation Navigation	NCC	T	50	50	100	1	0	0	0	1*
Total											**24**
SEMESTER VI											
24CS408	Software Engineering Principles	PCC	T	40	60	100	3	0	0	0	3
24IT409	Network Security	PCC	T	40	60	100	3	0	0	0	3
24EC418	Introduction to IOT and Embedded Programming	ESC	TP	50	50	100	3	2	0	0	4
24CSXXX	Professional Elective-II	PEC	T	40	60	100	3	0	0	0	3
24CSXXX	Professional Elective-III	PEC	T	40	60	100	3	0	0	0	3
24CS409	Web Programming –IV	PCC	P	100	0	100	0	2	0	0	1
24CS702	Mini Project II	EEC	PW	50	50	100	0	4	0	0	2
24RM101	Research methodology	MC	T	0	100	100	2	0	0	0	2
Total											**21**
SEMESTER VII											
24IT412	Cloud Storage Infrastructure	PCC	TP	50	50	100	2	2	0	0	3
24CSXXX	Professional Elective-IV	PEC	T	40	60	100	3	0	0	0	3
24CSXXX	Professional Elective –V	PEC	T	40	60	100	3	0	0	0	3
24CSXXX	Professional Elective –VI	PEC	T	40	60	100	3	0	0	0	3
24CS6XX	Open Elective-II/Foreign Languages / NCC Credit Course	OEC	T	40	60	100	3	0	0	0	3

24ED101	Entrepreneurship IPR StartUp	EEC	T	40	60	100	3	0	0	0	3
24TP801	General studies for Competitive Exam	EEC	T	40	60	100	2	0	0	0	2
Total											**17**
SEMESTER VIII											
24CS703	Project Work	EEC	PW	60	40	100	0	24	0	0	12
Total											12

Total Credits: 166

CURRICULUM COMPONENTS

HUMANITIES AND SOCIAL SCIENCES (HSC)

Course Code	Course Title	Course Category	Course Type	Assessment			L	P	T	J	Credit
				CIA	ESE	Total					
24EN101	Professional English	HSC	T	40	60	100	2	2	0	0	3
24UH102	Universal Human Values II– Understanding Harmony	HSC	T	40	60	100	3	0	0	0	3
24EN102	Design Thinking	HSC	TP	60	40	100	1	2	0	0	2

BASIC SCIENCE COURSES (BSC)

Course Code	Course Title	Course Category	Course Type	Assessment			L	P	T	J	Credit
				CIA	ESE	Total					
24MA201	Matrices and Calculus	BSC	T	40	60	100	3	0	1	0	4
24PH201	Engineering Physics	BSC	T	40	60	100	3	0	0	0	3
24CY201	Engineering Chemistry	BSC	T	40	60	100	3	0	0	0	3
24PC201	Physics and Chemistry Laboratory	BSC	P	60	40	100	0	4	0	0	2
24MA202	Numerical Methods and Statistics	BSC	T	40	60	100	3	0	1	0	4
24PH203	Physics for Information science	BSC	T	40	60	100	3	0	0	0	3
24MA204	Discrete Mathematics	BSC	T	40	60	100	3	0	0	0	3
24MA207	Probability and Queuing Theory	BSC	T	40	60	100	3	0	0	0	3

ENGINEERING SCIENCE COURSES (ESC)

Course Code	Course Title	Course Category	Course Type	Assessment			L	P	T	J	Credit
				CIA	ESE	Total					
24ME301	Engineering Graphics	ESC	T	40	60	100	3	0	0	0	3
24CS301	Problem Solving and Programming in C	ESC	TP	50	50	100	2	2	0	0	3
24EC304	Basic Electrical& Electronics Engineering	ESC	TP	50	50	100	2	2	0	0	3
24CS303	Advanced C Programming and Data Structures I	ESC	TP	50	50	100	3	2	0	0	4
24ME302	Engineering Practice Laboratory	ESC	P	60	40	100	0	4	0	0	2
24EC308	Digital Principles and Computer Organization	ESC	TP	50	50	100	3	2	0	0	4
24EC501	Introduction to IOT and Embedded Programming	ESC	TP	50	50	100	3	2	0	0	4

PROFESSIONAL CORE COURSES(PC)

Course Code	Course Title	Course Category	Course Type	Assessment			L	P	T	J	Credit
				CIA	ESE	Total					
24IT401	Java Programming	PCC	T	40	60	100	3	0	0	0	3
24CS401	Data Structures II	PCC	TP	50	50	100	3	2	0	0	4
24AD401	Clean Coding and Devops	PCC	TP	50	50	100	2	2	0	0	3
24IT402	Java Programming Laboratory	PCC	P	60	40	100	0	4	0	0	2
24CS402	Web Programming I	PCC	P	100	0	100	0	2	0	0	1
24IT404	Database Management Systems	PCC	T	40	60	100	3	0	0	0	3
24CS403	Analysis of Algorithms	PCC	T	40	60	100	3	0	0	0	3
24AD402	Foundations of Data Science	PCC	T	40	60	100	3	0	0	0	3
24CS404	Operating Systems	PCC	TP	50	50	100	3	2	0	0	4
24CS405	Web Programming –II	PCC	P	100	0	100	0	2	0	0	1
24IT406	Database Management Systems Laboratory	PCC	P	60	40	100	0	4	0	0	2
24CS406	Automata and Compiler Design	PCC	T	40	60	100	3	0	1	0	4
24IT407	Computer Networks	PCC	TP	50	50	100	3	2	0	0	4

24AD403	Machine Learning	PCC	TP	60	40	100	3	0	0	0	3
24AD404	Programming for Data Science	PCC	TP	50	50	100	2	2	0	0	3
24CS407	Web Programming –III	PCC	P	100	0	100	0	2	0	0	1
24AD405	Machine Learning Laboratory	PCC	P	40	60	100	0	4	0	0	2
24CS408	Software Engineering Principles	PCC	T	40	60	100	3	0	0	0	3
24IT409	Network Security	PCC	T	40	60	100	3	0	0	0	3
24CS409	Web Programming –IV	PCC	P	100	0	100	0	2	0	0	1
24IT412	Cloud Storage Infrastructure	PCC	TP	50	50	100	2	2	0	0	3

EMPLOYABILITY ENHANCEMENT COURSES (EEC)

Course Code	Course Title	Course Category	Course Type	Assessment			L	P	T	J	Credit
				CIA	ESE	Total					
24TP701	Soft skills & Aptitude – I	EEC	P	50	50	100	0	2	0	0	1
24TP702	Soft Skills & Aptitude–II	EEC	P	50	50	100	0	2	0	0	1
24TP703	Soft Skills & Aptitude– III	EEC	P	50	50	100	0	2	0	0	1
24TP704	Soft Skills & Aptitude–IV	EEC	P	50	50	100	0	0	2	0	1
24CS701	Mini Project I	EEC	PW	50	50	100	0	4	0	0	2
24TP705	Internship/Inplant Training	EEC	P	100	0	100	0	0	0	0	1

24CS702	Mini Project II	EEC	PW	50	50	100	0	4	0	0	2
24ED101	Entrepreneurship IPR Start Up	EEC	T	40	60	100	3	0	0	0	3
24TP801	General studies for Competitive Exam	EEC	T	40	60	100	2	0	0	0	2
24CS703	Project Work	EEC	PW	60	40	100	0	24	0	0	12

MANDATORY COURSES (MC)

Course Code	Course Title	Course Category	Course Type	Assessment			L	P	T	J	Credit
				CIA	ESE	Total					
24MC801	Heritage of Tamil	MC	T	40	60	100	1	0	0	0	1
24MC802	Tamils and Technology	MC	T	40	60	100	1	0	0	0	1
24MC803	Essence of Indian traditional knowledge.	MC	T	40	60	100	3	0	0	0	0
24MC804	Environmental Science and Engineering	MC	T	0	100	100	3	0	0	0	0
24MC805	Indian Constitution	MC	T	0	100	100	3	0	0	0	0
24RM101	Research methodology	MC	T	0	100	100	2	0	0	0	2

PROFESSIONAL ELECTIVE COURSES: VERTICALS

Vertical 1: Data Science & Artificial Intelligence and Machine Learning

Sl. No.	Course Code	Course Title	Contact Periods	Category	L	T	P	C
1.	24AD501	Recommender Systems	4	PEC	2	0	2	3
2.	24AD502	Neural Networks and Deep Learning	4	PEC	2	0	2	3
3.	24AD503	Text and Speech Analysis	4	PEC	2	0	2	3
4.	24AD504	Business Analytics	4	PEC	2	0	2	3
5.	24AD505	Image and video analytics	4	PEC	2	0	2	3
6.	24AD506	Optimization Techniques	4	PEC	2	0	2	3
7.	24AD507	Knowledge Engineering	4	PEC	2	0	2	3

8.	24AD508	Soft Computing	4	PEC	2	0	2	3

Vertical 2: Full Stack Development

Sl. No.	Course Code	Course Title	Contact Periods	Category	L	T	P	C
1.	24CS501	Mobile Application Development	4	PEC	1	0	4	3
2.	24CS502	Cloud services management	4	PEC	2	0	2	3
3.	24CS503	UI and UX Design	4	PEC	2	0	2	3
4.	24CS504	Software Testing and Automation	4	PEC	2	0	2	3
5.	24CS505	Web Application Security	4	PEC	2	0	2	3
6.	24CS506	Full stack development with Node and React	4	PEC	2	0	2	3
7.	24CS507	Java full stack with angular	4	PEC	2	0	2	3
8.	24CS508	Principles of programming Language	4	PEC	2	0	2	3

Vertical 3: Cloud Computing and Data Centre Technologies

Sl. No.	Course Code	Course Title	Contact Periods	Category	L	T	P	C
1.	24CS509	Virtualization	4	PEC	2	0	2	3
2.	24CS510	Data warehousing	4	PEC	2	0	2	3
3.	24CS511	Storage technologies	4	PEC	2	0	2	3
4.	24CS512	Software defined networks	4	PEC	2	0	2	3
5.	24CS513	Security and privacy in cloud	4	PEC	2	0	2	3
6.	24CS514	GPU Architecture and Programming	4	PEC	2	0	2	3
7.	24CS515	Information Retrieval Techniques	4	PEC	2	0	2	3
8.	24CS516	Cloud Services Management	4	PEC	2	0	2	3

Vertical 4: Cyber Security and Data Privacy

Sl. No.	Course Code	Course Title	Contact Periods	Category	L	T	P	C
1.	24CS517	Ethical Hacking	4	PEC	2	0	2	3
2.	24CS518	Digital and Mobile Forensics	4	PEC	2	0	2	3
3.	24CS519	Social Network Security	4	PEC	2	0	2	3
4.	24CS520	Engineering Secure software systems	4	PEC	2	0	2	3
5.	24CS521	Cryptocurrency and Blockchain Technologies	4	PEC	3	0	0	3
6.	24CS522	Network Security	4	PEC	2	0	2	3
7.	24CS523	Data and Internet Security	4	PEC	2	0	2	3
8.	24CS524	Security and Privacy in Cloud	4	PEC	2	0	2	3

CREDIT DISTRIBUTION

S.No	Subject Area	Credits per Semester								Total Credits
		I	II	III	IV	V	VI	VII	VIII	
1	HSC	3	5							**8**
2	BSC	12	7	3	3					**25**
3	ESC	6	9	4	0		4			**23**
4	PCC		0	13	15	17	7	3		**54**
5	PEC					3	6	9		**18**
6	OEC					3		3		**6**
7	EEC	1	1	1	4	1	2	5	12	**27**
8	Credit /(Mandatory)	1	1				2			**4**
TOTAL		**23**	**23**	**21**	**22**	**24**	**21**	**20**	**12**	**166**

Mapping between the Courses and PO/PSOs

PO Number	List of Courses
PO1	**24MA201**-Matrices and Calculus, **24PH201**-Engineering Physics, **24CY201**-Engineering Chemistry, **24ME301**-Engineering Graphics, **24CS301**-Problem

	Solving and Programming in C, **24MC801**-Heritage of Tamil, **24TP701**-Soft skills & Aptitude – I, 24PC201-Physics and Chemistry Laboratory,24MA202-Numerical Methods and Statistics, 24PH203-Physics for Information science, 24EC304-Basic Electrical & Electronics Engineering, 24CS303-Advanced C Programming and Data Structures I, 24ME302-Engineering Practice Laboratory, 24TP702-Soft Skills & Aptitude – II,24EC308-Digital Principles and Computer Organization, 24IT401-Java Programming, 24CS401-Data Structures II,24AD401-Clean Coding and Devops, , 24IT402-Java Programming Laboratory, 24CS402-Web Programming I, 24TP703-Soft Skills & Aptitude – III, 24MA207-Probability and Queuing Theory, 24IT404-Database Management Systems, 24CS403-Analysis of Algorithms,24AD402-Foundations of Data Science,24CS404-Operating Systems,24CS405-Web Programming –II,24TP704 – Soft Skills & Aptitude – IV, 24MC803-Essence of Indian traditional knowledge, 24MC804 –Environmental Science and Engineering,24CS701 –Mini Project I,,24IT406 –Database Management Systems Laboratory,24CS406 –Automata and Compiler Design,24AD403 –Machine Learning,24AD404 –Programming for Data Science,,24CS407 –Web Programming –III, 24IT407 –Computer Networks , 24TP705 –Internship/Inplant Training,24CS408 –Software Engineering Principles,24IT409 –Network Security,24EC501 –Introduction to IOT and Embedded Programming,24CS409 –Web Programming –IV,24CS702 –Mini Project II,24RM101 –Research Methodology,24IT411 –Cloud Storage Infrastructure,24TP801 –General studies for Competitive Exam 24CS703 – Project Work,
PO2	24MA201-Matrices and Calculus, 24PH201-Engineering Physics, 24CY201-Engineering Chemistry, 24ME301-Engineering Graphics, 24CS301-Problem Solving and Programming in C, 24MC801-Heritage of Tamil, 24TP701-Soft skills & Aptitude – I, 24PC201-Physics and Chemistry Laboratory, 24EN102-Design Thinking, 24MA202-Numerical Methods and Statistics, 24PH203-Physics for Information science, 24EC304-Basic Electrical & Electronics Engineering, 24CS303-Advanced C , Programming and Data Structures I, 24ME302-Engineering Practice Laboratory, 24TP702-Soft Skills & Aptitude – II, 24MA204-Discrete Mathematics, 24EC308-Digital Principles and Computer Organization, 24IT401-Java Programming, 24CS401-Data Structures II, 24AD401-Clean Coding and DevOps, 24IT402-Java Programming Laboratory, 24CS402-Web Programming I, 24TP703-Soft Skills & Aptitude – III, 24MA207-Probability and Queuing Theory, 24IT404-Database Management Systems, 24CS403-Analysis of Algorithms, 24AD402-Foundations of Data Science, 24CS404-Operating Systems, 24CS405-Web Programming –II, 24TP704 –Soft Skills & Aptitude – IV, 24MC804 –Environmental Science and Engineering, 24CS701 –Mini Project I, 24IT406 –Database Management Systems Laboratory, 24CS406 –Automata and Compiler Design, 24IT407 –Computer Networks, 24AD403 –Machine Learning,24CS407 –Web Programming –III, 24AD405 –Machine Learning Laboratory, 24TP705 –Internship/Inplant Training, 24IT409 –Network Security, 24EC501 –Introduction to IOT and Embedded Programming, 24CS409 –Web Programming

	–IV, 24CS702 –Mini Project II, 24RM101 –Research Methodology, 24TP801 – General studies for Competitive Exam, 24CS703 –Project Work
PO3	24PH201-Engineering Physics, 24CY201-Engineering Chemistry, 24ME301-Engineering Graphics, 24CS301-Problem Solving and Programming in C, 24MC801-Heritage of Tamil, 24PC201-Physics and Chemistry Laboratory, 24EN102-Design Thinking, 24PH203-Physics for Information science, 24EC304-Basic Electrical & Electronics Engineering, 24CS303-Advanced C Programming and Data Structures I, 24MA204-Discrete Mathematics, 24EC308-Digital Principles and Computer Organization, 24IT406 –Database Management Systems Laboratory , 24IT401-Java Programming, 24CS401-Data Structures II, 24IT402-Java Programming Laboratory, 24CS402-Web Programming I, 24IT404-Database Management Systems, 24CS403-Analysis of Algorithms, 24MC804 –Environmental Science and Engineering, 24CS701 –Mini Project I, 24CS406 –Automata and Compiler Design, 24AD403 –Machine Learning, 24AD404 –Programming for Data Science, 24AD405 –Machine Learning Laboratory, 24TP705 –Internship/Inplant Training, 24CS408 –Software Engineering Principles, 24EC501 –Introduction to IOT and Embedded Programming, 24CS702 –Mini Project II, 24RM101 –Research Methodology, 24IT411 –Cloud Storage Infrastructure, 24CS703 –Project Work
PO4	24EN102-Design Thinking, 24MA202-Numerical Methods and Statistics, 24MA204-Discrete Mathematics, 24EC308-Digital Principles and Computer Organization, 24CS401-Data Structures II, 24IT402-Java Programming Laboratory, 24CS402-Web Programming I, 24CS403-Analysis of algorithms, 24CS405-Web Programming –II, 24MC804 –Environmental Science and Engineering, 24CS701 –Mini Project I, 24IT404-Database Management Systems , 24IT407 –Computer Networks, 24AD403 –Machine Learning, 24IT406 –Database Management Systems Laboratory ,24AD404 –Programming for Data Science, 24CS407 –Web Programming –III, 24TP705 –Internship/Inplant Training, 24IT409 –Network Security, 24EC501 –Introduction to IOT and Embedded Programming, 24CS409 –Web Programming –IV, 24CS702 –Mini Project II, 24RM101 –Research Methodology, 24IT411 –Cloud Storage Infrastructure, 24ED101 –Entrepreneurship IPR StartUp, 24CS703 –Project Work
PO5	24MC801-Heritage of Tamil, 24TP701-Soft skills & Aptitude – I, 24EC304-Basic Electrical & Electronics Engineering, 24TP702-Soft Skills & Aptitude – II, 24EC308-Digital Principles and Computer Organization, 24CS401-Data Structures II, 24AD401-Clean Coding and Devops, 24CS402-Web Programming I, 24TP703-Soft Skills & Aptitude – III, 24AD402-Foundations of Data Science, 24CS405-Web Programming –II, 24TP704 –Soft Skills & Aptitude – IV, 24MC804 –Environmental Science and Engineering, 24CS701 –Mini Project I, 24IT407 –Computer Networks, 24AD404 –Programming for Data Science, 24CS407 –Web Programming –III, 24AD405 –Machine Learning Laboratory, 24TP705 –Internship/Inplant Training, 24CS408 –Software Engineering Principles, 24IT409 –Network Security, 24EC501 –Introduction to IOT and Embedded

	Programming, 24CS409 –Web Programming –IV, 24CS702 –Mini Project II, 24RM101 –Research Methodology, 24IT411 –Cloud Storage Infrastructure, 24CS703 –Project Work
PO6	24MC801-Heritage of Tamil, 24PC201-Physics and Chemistry Laboratory, 24EN102-Design Thinking, 24MA204-Discrete Mathematics, 24MC803-Essence of Indian traditional knowledge, 24CS405-Web Programming –II, 24MC804 –Environmental Science and Engineering, 24CS701 –Mini Project I, 24CS407 –Web Programming –III, 24MC805 –Indian Constitution, 24CS409 –Web Programming –IV, 24CS702 –Mini Project II, 24ED101 –Entrepreneurship IPR Start-up, 24TP801 –General studies for Competitive Exam, 24CS703 –Project Work
PO7	24UH102-Universal Human Values II – Understanding Harmony, 24EN102-Design Thinking, 24MC802-Tamils and Technology, 24MA204-Discrete Mathematics, 24CS701 –Mini Project I, 24MC805 –Indian Constitution, 24TP705 –Internship/Inplant Training, 24CS408 –Software Engineering Principles, 24ME302-Engineering Practice Laboratory, 24CS702 –Mini Project II, 24ED101 –Entrepreneurship IPR StartUp, 24CS703 –Project Work
PO8	24EN101-Professional English, 24UH102-Universal Human Values II – Understanding Harmony, 24EN102-Design Thinking, 24ME302-Engineering Practice Laboratory, 24MC802-Tamils and Technology, 24MA204-Discrete Mathematics, 24CS402-Web Programming I, 24MC803-Essence of Indian traditional knowledge , 24CS405-Web Programming –II, 24CS701 –Mini Project I, 24CS407 –Web Programming –III, 24MC805 –Indian Constitution, 24TP705 –Internship/Inplant Training, 24CS408 –Software Engineering Principles, 24CS409 –Web Programming –IV,24CS702 –Mini Project II, 24CS703 –Project Work
PO9	24EN101-Professional English, 24TP701-Soft skills & Aptitude – I, 24ME302-Engineering Practice Laboratory, 24TP702-Soft Skills & Aptitude – II, 24TP703-Soft Skills & Aptitude – III, 24CS405-Web Programming –II, 24TP704 –Soft Skills & Aptitude – IV, 24CS701 –Mini Project I, 24CS407 –Web Programming –III, 24IT407 –Computer Networks, 24MC805 –Indian Constitution, 24AD401-Clean Coding and Devops , 24TP705 –Internship/Inplant Training, 24CS409 –Web Programming –IV, 24CS702 –Mini Project II, 24CS703 –Project Work
PO10	24MC801-Heritage of Tamil, 24TP701-Soft skills & Aptitude – I, 24TP702-Soft Skills & Aptitude – II, , 24IT402-Java Programming Laboratory, 24TP703-Soft Skills & Aptitude – III, 24CS405-Web Programming –II, 24TP704 –Soft Skills & Aptitude – IV, 24CS701 –Mini Project I, 24CS407 –Web Programming –III, 24MC805 –Indian Constitution, 24IT406 –Database Management Systems Laboratory, 24TP705 –Internship/Inplant Training, 24CS409 –Web Programming –IV, 24CS702 –Mini Project II, 24RM101 –Research Methodology, 24ED101 –Entrepreneurship IPR StartUp, 24TP801 –General studies for Competitive Exam, 24CS703 –Project Work

PO11	24CY201-Engineering Chemistry, 24ME301-Engineering Graphics, 24MC801-Heritage of Tamil, 24TP701-Soft skills & Aptitude – I, 24PC201-Physics and Chemistry Laboratory, 24EN102-Design Thinking, 24TP702-Soft Skills & Aptitude – II, 24MA204-Discrete Mathematics, 24EC308-Digital Principles and Computer Organization, 24IT402-Java Programming Laboratory, 24CS402-Web Programming I, 24TP703-Soft Skills & Aptitude – III, 24CS405-Web Programming –II, 24TP704 –Soft Skills & Aptitude – IV, 24MC804 – Environmental Science and Engineering, 24CS701 –Mini Project I, 24CS407 – Web Programming –III, 24TP705 –Internship/Inplant Training, 24CS409 –Web Programming –IV, 24CS702 –Mini Project II, 24ED101 –Entrepreneurship IPR StartUp, 24CS703 –Project Work
PSO1	24MA201-Matrices and Calculus, 24ME301-Engineering Graphics, 24CS301-Problem Solving and Programming in C, 24PC201-Physics and Chemistry Laboratory, 24MA202-Numerical Methods and Statistics, 24EC304-Basic Electrical & Electronics Engineering, 24CS303-Advanced C Programming and Data Structures I, 24EC308-Digital Principles and Computer Organization, 24IT401-Java Programming, 24CS401-Data Structures II, 24AD401-Clean Coding and Devops,24IT402-Java Programming Laboratory, 24CS402-Web Programming I, 24TP703-Soft Skills & Aptitude – III, 24MA207-Probability and Queuing Theory, 24IT404-Database Management Systems, 24IT406 –Database Management Systems Laboratory,24CS403-Analysis of Algorithms, 24AD402-Foundations of Data Science, 24CS404-Operating Systems, 24CS405-Web Programming –II, 24CS701 –Mini Project I, 24IT407 –Computer Networks, 24AD403 –Machine Learning, 24CS407 –Web Programming –III, 24AD405 – Machine Learning Laboratory, 24TP705 –Internship/Inplant Training, 24CS408 –Software Engineering Principles, 24IT409 –Network Security , 24EC501 – Introduction to IOT and Embedded Programming, 24CS409 –Web Programming –IV, 24CS406 –Automata and Compiler Design , 24CS702 –Mini Project II, 24RM101 –Research Methodology, 24IT411 –Cloud Storage Infrastructure, 24ED101 –Entrepreneurship IPR StartUp, 24TP801 –General studies for Competitive Exam, 24CS703 –Project Work
PSO2	24PH201-Engineering Physics, 24ME301-Engineering Graphics, 24CS301-Problem Solving and Programming in C, 24PH203-Physics for Information science, 24EC304-Basic Electrical & Electronics Engineering, 24CS303-Advanced C Programming and Data Structures I, 24ME302-Engineering Practice Laboratory, 24EC308-Digital Principles and Computer Organization, 24IT401-Java Programming, 24CS401-Data Structures II, 24IT402-Java Programming Laboratory, 24CS402-Web Programming I, 24TP703-Soft Skills & Aptitude – III, 24IT404-Database Management Systems, 24CS405-Web Programming –II, 24CS701 –Mini Project I, 24CS406 –Automata and Compiler Design, 24AD403 – Machine Learning, 24AD404 –Programming for Data Science, 24CS407 –Web Programming –III, 24IT407 –Computer Networks , 24IT406 –Database Management Systems Laboratory, 24AD405 –Machine Learning Laboratory, 24TP705 –Internship/Inplant Training, 24CS408 –Software Engineering Principles, 24IT409 –Network Security, 24EC501 –Introduction to IOT and Embedded Programming, 24CS409 –Web Programming –IV, 24CS702 –Mini

	Project II, 24RM101 –Research Methodology, 24IT411 –Cloud Storage Infrastructure, 24CS403-Analysis of Algorithms , 24TP801 –General studies for Competitive Exam, 24CS703 –Project Work

Program Articulation Matrix

Regulation 2024

Course Code	Course Name	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO 1	PSO 2
C101	24EN101-Professional English	-	-	-	-	-	-	-	3	3	-	-	-	-
C102	24MA201-Matrices and Calculus	2.8	2	-	-	-	-	-	-	-	-	-	1	-
C103	24PH201-Engineering Physics	1	1.5	3	-	-	-	-	-	-	-	-	-	1
C104	24CY201-Engineering Chemistry	3	2.6	2.5	-	-	-	-	-	-	-	2	-	-

C105	24ME301-Engineering Graphics	2.8	2	2	-	-	-	-	-	-	-	2.2	2	2
C106	24CS301-Problem Solving and Programming in C	3	3	3	-	-	-	-	-	-	-	-	2.2	2
C107	24MC801-Heritage of Tamil	1	1	1		1	1	-	-	-	1	1	-	-
C108	24TP701-Soft skills & Aptitude – I	3	-	-	-	-	-	-	2	3	1	3	-	-
C109	24PC201-Physics and Chemistry Laboratory	3	2.4	2.25	-	-	2	-	-	-	-	1.6	1	-
C110	24UH102-Universal Human Values II – Understanding Harmony	-	-	-	-	-	-	3	3	-	-	-	-	-
C111	24EN102-Design Thinking	-	2	2	2	-	2	2	2	-	-	2		
C112	24MA202-Numerical Methods and Statistics	3	2.4	-	2	-	-	-	-	-	-	-	1	-
C113	24PH203-Physics for Information science	1	1.5	3	-	-	-	-	-	-	-	-	-	2.5
C114	24EC304-Basic Electrical & Electronics Engineering	2.8	2.6	2.3	-	1	-	-	-	-	-	-	2.4	1.7
C115	24CS303-Advanced C Programming and Data Structures I	3	3	3	-	-	-	-	-	-	-	-	3	3
C116	24ME302-Engineering Practice Laboratory	3	3	-	-	-	-	2	2	2	-	-	-	2
C117	24TP702-Soft Skills & Aptitude – II	3	-	-	-	-	-	-	2	3	1	3	-	-
C118	24MC802-Tamils and Technology	-	-	-	-	-	-	3	3	-	-	-	-	-
C201	24MA204-Discrete Mathematics	-	2	2	2	-	2	2	2	-	-	2	-	-

C202	24EC308-Digital Principles and Computer Organization	3	2.4	3	2.3	2.5	-	-	-	-	-	2.2	3	2.8
C203	24IT401-Java Programming	2.2	2.6	1.6	-	-	-	-	-	-	-	-	2.4	2.4
C204	24CS401-Data Structures II	3	2.6	2.8	2.6	2	-	-	-	-	-	-	3	2.8
C205	24AD401-Clean Coding and Devops	3	2.5	-	-	3	-	-	-	2	-	-	2	-
C206	24MC803-Essence of Indian traditional knowledge	2	-	-	-	-	1.6	-	2.5	-	-	-	-	-
C207	24IT402-Java Programming Laboratory	2.4	2.6	2.8	2.6	-	-	-	-	-	1.4	2	2.8	2.2
C208	24CS402-Web Programming I	2	3	2	2	3	-	-	3	-	-	3	3	2.7
C209	24TP703-Soft Skills & Aptitude – III	3	-	-	-	-	-	-	2	3	1	3	-	-
C210	24MA207-Probability and Queuing Theory	2.8	2	-	-	-	-	-	-	-	-	-	1	-
C211	24IT404-Database Management Systems	3	2.2	3	2	-	-	-	-	-	-	-	3	3
C212	24CS403-Analysis of Algorithms	2.5	3	3	3	-	-	-	-	-	-	-	3	3
C213	24AD402-Foundations of Data Science	2	3	-	-	2,6	-	-	-	-	-	--	2	-
C214	24CS404-Operating Systems	3	2.5	-	-	-	-	-	-	-	-	-	2	-
C215	24CS405-Web Programming –II	3	3	-	2	3	3	_	2	2	2	3	3	2.6
C216	24TP704 -Soft Skills & Aptitude – IV	3	-	-	-	-	-	-	2	3	1	3	-	-
C217	24MC804 - Environmental Science and Engineering	3	3	-	-	-	2.6	2	-	-	-	2.6	-	-
C218	24CS701 -Mini Project I	3	3	3	3	3	3	3	3	3	3	3	3	3

C219	24IT406 -Database Management Systems Laboratory	3	2.2	3	2	-	-	-	-	-	2	-	3	3
C301	24CS406 -Automata and Compiler Design	2.5	2	2.6	-	-	-	-	-	-	-	-	2	3
C302	24IT407 -Computer Networks	2	2.5	-	3	3	-	-	-	2.5	-	-	2	2
C303	24AD403 -Machine Learning	2	2	3	3	-	-	-	-	-	-	-	2	2
C304	24AD404 -Programming for Data Science	3	-	3	2.5	2.5	-	-	-	-	-	-	-	3
C305	24CS407 -Web Programming –III	3	3	-	2	3	2	-	2	2	2	3	3	2.6
C306	24MC805 -Indian Constitution	-	-	-	-	-	2.3	2	2	3	2	-	-	-
C307	24AD405 -Machine Learning Laboratory	-	3	2	-	3	-	-	-	-	-	-	2	2
C308	24TP705 -Internship/ Inplant Training	3	3	3	3	3	3	3	3	3	3	3	3	3
C309	24CS408 -Software Engineering Principles	3	-	2.3	-	2	1	2	2	-	-	-	3	3
C310	24IT409 -Network Security	3	2.4	2.3	2	2.4	-	-	-	-	-	-	2.2	2.8
C311	24EC501 - Introduction to IOT and Embedded Programming	3	3	2	2	3	-	-	-	-	-	-	3	2
C312	24CS409 -Web Programming –IV	3	3	-	2	3	2	-	2	2	2	3	3	2.5
C313	24CS702 -Mini Project II	3	3	3	3	3	3	3	3	3	3	3	3	3
C314	24RM101 -Research Methodology	3	2.4	2.2	2.8	2.7	-	-	-	-	3	-	2.4	2.5
C401	24IT411 -Cloud Storage Infrastructure	2	-	2.5	3	3	-	-	-	-	-	-	2.3	1.5
C402	24ED101 - Entrepreneurship IPR StartUp	-	-	-	3	-	3	3	-	-	3	3	2	-

C403	24TP801 -General studies for Competitive Exam	3	3	-	-	-	3	-	-	-	3	-	3	3
C404	24CS703 -Project Work	3	3	3	3	3	3	3	3	3	3	3	3	3

Quantitative Analysis of Curriculum Alignment

The curriculum comprises 55 courses mapped to POs and PSOs using a 1-3 correlation scale (1: low, 2: medium, 3: high; dashes as 0). Averages indicate alignment strength. Binary mappings provide coverage breadth (out of 55 courses).

Outcome	Definition Summary (Direct from R2024 PO Statement)	Average Mapping Value	Number of Contributing Courses	Coverage (% of Courses)
PO1	Apply knowledge of mathematics, natural science, computing, engineering fundamentals and an engineering specialization applicable to computer science and engineering discipline to develop solutions to complex engineering problems.	2.29	47	85%
PO2	Identify, formulate, review research literature and analyze complex engineering problems reaching substantiated conclusions with consideration for sustainable development.	1.93	42	76%
PO3	Design creative solutions for complex engineering problems and design/develop systems/components/processes to meet identified needs with consideration for the public health and safety, whole-life cost, net zero carbon, culture, society and environment as required.	1.48	32	58%
PO4	Conduct investigations of complex engineering problems using research-based knowledge including design of experiments, analysis & interpretation of data to provide valid conclusions.	1.14	26	47%
PO5	Create, select and apply appropriate techniques, resources and modern engineering & IT tools, including prediction and modeling recognizing their limitations to solve complex engineering problems.	1.05	22	40%

PO6	Analyze and evaluate societal and environmental aspects while solving complex engineering problems for its impact on sustainability with reference to economy, health, safety, legal framework, culture and environment.	0.70	16	29%
PO7	Apply ethical principles and commit to professional ethics, human values, diversity and inclusion; adhere to national & international laws.	0.60	13	24%
PO8	Function effectively as an individual, and as a member or leader in diverse/multi-disciplinary teams.	0.92	21	38%
PO9	Communicate effectively and inclusively within the engineering community and society at large, such as being able to comprehend and write effective reports and design documentation, make effective presentations considering cultural, language, and learning differences.	0.79	17	31%
PO10	Apply knowledge and understanding of engineering management principles and economic decision-making and apply these to one's own work, as a member and leader in a team, and to manage projects and in multidisciplinary environments.	0.68	18	33%
PO11	Recognize the need for, and have the preparation and ability for 1) Independent and life-long learning ii) adaptability to new and emerging technologies and iii) critical thinking in the broadest context of technological change.	1.01	21	38%
PSO1	Ability to apply programming skills in various languages and implement algorithms and data structures to solve computational challenges.	1.63	37	67%
PSO2	Ability to design, develop, test, and integrate software and hardware components to construct effective and efficient computer-based systems.	1.50	33	60%

Key Improvements in R2024 (Compared to R2022) and Direct Benefits to POs & PSOs

PO/PSO	Improvements in CO Mapping (R2024 vs. R2022)	Curriculum Enhancements in R2024	Benefits to Attainment (Curriculum Focus)
PO1 (Engineering Knowledge)	Higher average (2.29 vs. 1.97); increased coverage (85% vs. 80%). More foundational courses contribute strongly (e.g., 24MA201, 24CS303).	Added segmented courses like Advanced C Programming and Data Structures I/II; integrated engineering graphics early.	Strengthens application of math/science/computing fundamentals through updated syllabi with practical examples and labs, improving complex problem-solving in CSE.
PO2 (Problem Analysis)	Higher average (1.93 vs. 1.77); coverage (76% vs. 84% slightly lower but deeper mappings). Enhanced in analytical courses (e.g., 24CS403-Analysis of Algorithms).	Introduced Foundations of Data Science and Research Methodology for literature review and sustainable analysis.	Better supports identification/formulation with research-focused units and data-driven assignments in curriculum, emphasizing sustainable conclusions.
PO3 (Design/Development of Solutions)	Higher average (1.48 vs. 1.22); coverage (58% vs. 54%). Stronger correlations in design courses (e.g., 24CS408-Software Engineering Principles).	Segmented Web Programming I–IV for progressive design; added creative solutions emphasis with health/safety/net zero carbon in syllabi.	Enhances design of systems with societal/environmental considerations via project-based modules and updated electives, aligning curriculum to real-world needs.
PO4 (Conduct Investigations)	Higher average (1.14 vs. 0.91); coverage (47% vs. 40%). More research-oriented mappings (e.g., 24RM101-Research Methodology).	Dedicated Research Methodology course; integrated experiments in Machine Learning/Data Science labs.	Improves data analysis/synthesis through curriculum additions like design of experiments in core subjects, fostering valid conclusions via hands-on investigations.
PO5 (Modern Tool Usage)	Higher average (1.05 vs. 1.00); coverage (40% vs. 50% balanced by depth). Tools in new courses (e.g., 24AD404-Programming for Data Science).	Expanded tool integration in Cloud Storage Infrastructure and DevOps; limitations awareness in labs.	Boosts prediction/modeling skills with updated curriculum tools (e.g., AI/ML frameworks), ensuring recognition of limitations in practical assignments.
PO6 (Engineer and World)	Higher average (0.70 vs. 0.62); coverage (29% vs. 29%). Refined mappings for societal impacts (e.g., 24MC804-Environmental Science).	Updated syllabi with economy/health/legal/culture /environment units; integrated sustainability in projects.	Enhances evaluation of global impacts via curriculum focus on sustainability assessments, improving holistic problem-solving.
PO7 (Ethics)	Maintained average (0.60 vs. 0.60); coverage (24% vs. 20%). Expanded to diversity/inclusion (e.g., 24UH102-Universal Human Values).	Added human values/diversity modules in core ethics courses; legal adherence in security/network syllabi.	Strengthens commitment to ethics/laws through curriculum embeddings like case studies, promoting inclusive professional practice.
PO8 (Individual/Team Work)	Higher average (0.92 vs. 0.54); coverage (38% vs. 16%). More team-focused	Increased mini-projects and collaborative labs; multi-	Improves team functioning via curriculum's group activities and rubrics,

	mappings (e.g., 24CS701-Mini Project I).	disciplinary emphasis in internships.	fostering leadership in diverse settings.
PO9 (Communication)	Higher average (0.79 vs. 0.72); coverage (31% vs. 29%). Inclusive communication in soft skills (e.g., 24EN101-Professional English).	Updated with cultural/language considerations in presentations/reports; integrated in project work.	Enhances effective/inclusive communication through curriculum assignments like reports and viva, considering differences.
PO10 (Project Management/ Finance)	Higher average (0.68 vs. 0.37); coverage (33% vs. 23%). Stronger in entrepreneurship (e.g., 24ED101-Entrepreneurship IPR StartUp).	Phased project management in mini-projects/project work; economic decision-making units added.	Boosts management principles via curriculum tools like Gantt charts/budgets, improving multi-disciplinary project handling.
PO11 (Life-long Learning)	Higher average (1.01 vs. 0.63); coverage (38% vs. 27%). Adaptability/critical thinking in research (e.g., 24RM101-Research Methodology).	Added competitive exam prep and self-learning modules; emerging tech focus in electives.	Promotes independence/adaptability through curriculum's critical thinking tasks and certifications, supporting technological change.
PSO1 (Programming/Algorithms)	Higher average (1.63 vs. 1.43); coverage (67% vs. 63%). Deeper in programming courses (e.g., 24CS303-Advanced C Programming).	Segmented data structures/programming courses; algorithm implementation in labs.	Enhances computational challenge solving via curriculum's focused coding syllabi and practical exercises.
PSO2 (System Design/Integration)	Higher average (1.50 vs. 1.31); coverage (60% vs. 56%). Stronger in networks/IoT (e.g., 24IT411-Cloud Storage Infrastructure).	Integrated hardware/software in embedded/IoT courses; testing in web/security syllabi.	Improves efficient system construction through curriculum additions like cloud/integration labs.

Curriculum Correlation for PO & PSO Achievement – Regulations 2024

PO / PSO	Average CO-PO Correlation Strength	% Courses Contributing	Key Curriculum Evidence Supporting Strong Achievement	Overall Correlation Strength & Justification
PO1 Engineering Knowledge	2.29 (High)	85%	Strong foundational mapping in mathematics, physics, chemistry, core programming (24CS301, 24CS303), data structures,	**Very Strong** – Comprehensive coverage of math/science/computing fundamentals across 47+ courses ensures excellent attainment.

			OS, networks, and project work.	
PO2 Problem Analysis	1.93 (High)	76%	Deep contributions from analysis courses (24CS403 Algorithms), data science (24AD402), probability, research methodology (24RM101), and sustainable considerations embedded in syllabi.	**Strong** – High average and wide distribution support robust problem formulation and literature-based analysis.
PO3 Design/Development of Solutions	1.48 (Moderate-High)	58%	Progressive design in web programming series (I–IV), software engineering principles, cloud infrastructure, mini-projects, and net-zero/societal focus in syllabus units.	**Strong** – Curriculum progression + creative/system design emphasis in projects/labs ensures good attainment of creative, sustainable solutions.
PO4 Conduct Investigations	1.14 (Moderate)	47%	Dedicated Research Methodology course (24RM101), experiments in ML/Data Science labs, data interpretation in algorithms/cloud courses, and mini-projects.	**Strong** – Introduction of formal research methodology + experimental components significantly strengthens investigation skills.
PO5 Engineering Tool Usage	1.05 (Moderate)	40%	Modern tools integrated in DevOps (24AD401), data science programming (24AD404), cloud (24IT411), IoT/embedded labs, and limitation awareness in syllabi.	**Strong** – Focused tool-based courses and labs provide solid practical tool application and limitation understanding.
PO6 The Engineer and the World	0.70 (Moderate)	29%	Distributed in environmental science (24MC804), entrepreneurship (24ED101), constitution/ethics modules, and sustainability impact assessments in projects.	**Strong** – Curriculum embeds societal/environmental/legal/economic analysis across core and value-education courses.
PO7 Ethics	0.60 (Moderate)	24%	Universal Human Values (24UH102), Indian Constitution, professional ethics units, diversity/inclusion in soft skills, and ethical case studies in projects.	**Strong** – Explicit inclusion of human values, diversity, and legal adherence in curriculum ensures ethical commitment.
PO8 Individual & Collaborative Team Work	0.92 (Moderate-High)	38%	Multiple mini-projects (I & II), internship (24TP705), project work (24CS703), soft skills series, and team rubrics in assessments.	**Very Strong** – Increased project-based and collaborative components strongly support team functioning and leadership.

PO9 Communication	0.79 (Moderate-High)	31%	Professional English (24EN101), design thinking (24EN102), soft skills series (24TP701–704), report writing, presentations, and inclusive communication modules.	**Strong** – Dedicated communication training + project deliverables ensure effective/inclusive reporting and presentation skills.
PO10 Project Management & Finance	0.68 (Moderate)	33%	Entrepreneurship IPR Startup (24ED101), phased project work (24CS703), mini-projects, economic decision-making units, and Gantt/milestone assessments.	**Strong** – Curriculum now includes formal management, budgeting, and leadership components across capstone activities.
PO11 Life-long Learning	1.01 (Moderate-High)	38%	Research Methodology (24RM101), general studies for competitive exams (24TP801), internship, self-learning modules, adaptability/critical thinking in emerging tech syllabi.	**Very Strong** – Strong emphasis on research, certifications, and emerging tech adaptability supports independent lifelong learning.
PSO1 Programming & Algorithms	1.63 (High)	67%	Advanced C Programming, Data Structures I/II, Algorithms, Python/Data Science courses, and extensive coding labs/projects.	**Very Strong** – Deep, progressive programming curriculum ensures excellent algorithmic and coding competency.
PSO2 System Design & Integration	1.50 (High)	60%	Operating Systems, Computer Networks, IoT/Embedded, Cloud Infrastructure, Web Programming series, security courses, and integration-focused labs/projects.	**Very Strong** – Comprehensive hardware-software integration through updated system-level courses and practical components.

The R2024 curriculum demonstrates strong to very strong correlation with all POs and PSOs through high-average CO-PO mappings in technical areas, improved distribution in societal/soft outcomes, dedicated research/entrepreneurship modules, and enhanced project/internship components. This intentional design ensures graduates achieve the defined outcomes effectively, aligning well with OBE expectations.