

FIRST YEAR
FIRST SEMESTER

Sl.	Code	Subject	Contacts Periods/ Week				Credit Points
			L	T	P	Total	
A. Theory							
1	PHY1001	Physics-I	3	0	0	3	3
2	MTH1101	Mathematics-I	3	1	0	4	4
3	ECE1001	Introduction to Electronics Devices & Circuits	3	0	0	3	3
4	HUM1002	Universal Human Values and Professional Ethics	2	1	0	3	3
Total Theory			11	2	0	13	13
B. Practical							
1	PHY1051	Physics I Lab	0	0	2	2	1
2	ECE1051	Introduction to Electronics Devices & Circuits Lab	0	0	2	2	1
3	MEC1051	Workshop / Manufacturing Practice	1	0	3	4	2.5
4	MEC1052	Engineering Graphics and Design	1	0	3	4	2.5
Total Practical			2	0	10	12	7
Total of Semester			13	2	10	25	20

FIRST YEAR
SECOND SEMESTER

Sl.	Code	Subject	Contacts Periods/ Week				Credit Points
			L	T	P	Total	
A. Theory							
1	CHM1001	Chemistry I	3	0	0	3	3
2	MTH1201	Mathematics II	3	1	0	4	4
3	CSE1001	Programming for Problem Solving	4	0	0	4	4
4	ELE1001	Basic Electrical Engineering	3	1	0	4	4
5	HUM1001	English for Technical Writing	2	0	0	2	2
Total Theory			15	2	0	17	17
B. Practical							
1	CHM1051	Chemistry I Lab	0	0	2	2	1
2	CSE1051	Programming for Problem Solving Lab	0	0	3	3	1.5
3	ELE1051	Basic Electrical Engineering Lab	0	0	2	2	1
4	HUM1051	English for Technical Writing Lab	0	0	2	2	1
Total Practical			0	0	9	9	4.5
Total of Semester			15	2	9	26	21.5

SECOND YEAR
THIRD SEMESTER

Sl.	Code	Subject	Contacts Periods/ Week				Credit Points
			L	T	P	Total	
A. Theory							
1	CSE2101	Data Structures and Algorithms	4	0	0	4	4
2	CSE2102	Operating Systems	3	0	0	3	3
3	ECE2002	Digital Circuit Design	3	0	0	3	3
4	MTH2102	Probability and Statistical Methods	4	0	0	4	4
5	MTH2103	Discrete Mathematics	4	0	0	4	4
Total Theory			18	0	0	18	18
B. Practical							
1	CSE2151	Data Structures and Algorithms Lab	0	0	3	3	1.5
2	CSE2152	Operating Systems Lab	0	0	3	3	1.5
3	ECE2052	Digital Circuit Design Lab	0	0	2	2	1
4	CSE2154	Software Tools Lab	0	0	3	3	1.5
5	CSE2155	Design Thinking and Idea Lab	0	0	2	2	1
Total Practical			0	0	13	13	6.5
Total of Semester			18	0	13	31	24.5

SECOND YEAR
FOURTH SEMESTER

Sl.	Code	Subject	Contacts Periods/ Week				Credit Points
			L	T	P	Total	
A. Theory							
1	CSE2201	Design & Analysis of Algorithms	4	0	0	4	4
2	CSE2202	Computer Organization and Architecture	4	0	0	4	4
3	CSE2203	Object Oriented Programming	4	0	0	4	4
4	MTH2201	Algebraic Structures	4	0	0	4	4
5	AEI2205	Microprocessors and Microcontroller	2	0	0	2	2
6	EVS2016	Environmental Sciences(Mandatory)	2	0	0	2	0
Total Theory			20	0	0	20	18
B. Practical							
1	CSE2251	Design & Analysis of Algorithms Lab	0	0	3	3	1.5
2	CSE2252	Computer Architecture Lab	0	0	3	3	1.5
3	CSE2253	Object Oriented Programming Lab	0	0	3	3	1.5
4	AEI2255	Microprocessors &Microcontroller Lab	0	0	2	2	1
Total Practical			0	0	11	11	5.5
Total of Semester			20	0	11	31	23.5

**THIRD YEAR
FIFTH SEMESTER**

Sl.	Code	Subject	Contacts Periods/ Week				Credit Points
			L	T	P	Total	
A. Theory							
1	CSE3101	Data base Management Systems	4	0	0	4	4
2	CSE3002	Formal Language & Automata Theory	4	0	0	4	4
3	ECE3106	Electronic Design Automation	2	0	0	2	2
4	CSE3131- CSE3140	Professional Elective-I	3	0	0	3	3
	CSE3131 CSE3132 CSE3133 CSE3134 CSE3135	Computer Graphics & Multimedia Data Mining & Knowledge Discovery Web Technologies Graph Algorithms Randomized Algorithms					
5	CSE3141- CSE3150	Professional Elective-II	3	0	0	3	3
	CSE3141 CSE3142 CSE3143	Artificial Intelligence Introduction to Data Analysis with Python and R Advanced Operating Systems					
6	*****	Open Elective - I	3	0	0	3	3
Total Theory			19	0	0	19	19
B. Practical							
1	CSE3151	Database Management Systems Lab	0	0	3	3	1.5
2	ECE3156	Electronic Design Automation Lab	0	0	2	2	1
3	CSE3171- CSE3180	Professional Elective-II Labs	0	0	2	2	1
	CSEN3171 CSEN3172 CSEN3173	Artificial Intelligence Lab Introduction to Data Analysis Lab Advanced Operating Systems Lab					
Total Practical			0	0	7	7	3.5
Total of Semester			19	0	7	26	22.5

THIRD YEAR
SIXTH SEMESTER

Sl.	Code	Subject	Contacts Periods/ Week				Credit Points
			L	T	P	Total	
A. Theory							
1	CSE3201	Software Engineering	3	0	0	3	3
2	CSE3203	Computer Networks	4	0	0	4	4
3	HUM3201	Economics for Engineers	3	0	0	3	3
4	CSE3231- CSE3240	Professional Elective-III	3	0	0	3	3
	CSE3231 CSE3232 CSE3233 CSE3234 CSE3235 IOT3231 CSE3240	Image Processing NoSQL Database with MongoDB Machine Learning Compiler Design Cloud Computing Big Data and IOT Real Time & Embedded System					
5	*****	Open Elective-II	3	0	0	3	3
6	INC3016	Indian Constitution and Civil Society(Mandatory)	2	0	0	2	0
Total Theory			18	0	0	18	16
B. Practical							
1	CSE3251	Software Engineering Lab	0	0	3	3	1.5
2	CSE3252	Computer Networks Lab	0	0	3	3	1.5
	CSE3261- CSE3270	Professional Elective-III Lab	0	0	2	2	1
	CSE3261 CSE3262 CSE3263 CSE3264 CSE3265 CSE3266 CSE3270	Image Processing Lab Enterprise Application in Java EE Lab Machine Learning Lab Compiler Design Lab Cloud Computing Lab Big Data and IOT Lab Real Time & Embedded System Lab					
Total Practical			0	0	8	8	4
C. Sessional							
1	CSE3293	Term Paper and Seminar	0	0	4	4	2
	CSE3295	Project – I	0	0	4	4	2
Total Sessional			0	0	8	8	4
Total of Semester			18	0	16	34	24

FOURTH YEAR
SEVENTH SEMESTER

Sl.	Code	Subject	Contacts Periods/ Week				Credit Points
			L	T	P	Total	
A. Theory							
1	HUM4101	Principles of Management	3	0	0	3	3
2	CSE4131- CSE4140	Professional Elective-IV	3	0	0	3	3
	CSE4131 CSE4132 CSE4133 CSE4134 CSE4135 CSE4038 DSC4133	Soft Computing Cryptography & Network Security Approximation Algorithms Information Retrieval Distributed Databases Mobile Computing Introduction to Deep Learning					
3	CSEN4141- CSEN4150	Professional Elective-V	3	0	0	3	3
	CSE4141 CSE4142 CSE4143 CSE4144 CSE4145 CSE4146 CSE4147 IOT4142	Natural Language Processing Quantum Computing Pattern Recognition Computational Complexity Social Network Analysis Computer Vision Web Development with Node and Express Agile Methodology					
4	*****	Open Elective-III	3	0	0	3	3
5	*****	Open Elective-IV	3	0	0	3	3
Total Theory			12	0	0	12	15
B. Sessional							
1	CSE4191	Industrial Training / Internship	-	-	-	-	2
2	CSE4195	Project-II	0	0	6	6	3
Total Sessional			0	0	6	6	5
Total of Semester			12	0	6	18	20

FOURTH YEAR

EIGHTH SEMESTER

Sl.	Code	Subject	Contacts Periods/ Week				Credit Points
			L	T	P	Total	
A. Sessional							
1	CSE4295	Project-III	0	0	10	10	5
2	CSE4297	Comprehensive Viva-voce	-	-	-	-	2
Total Sessional			0	0	10	10	7
Total of Semester			0	0	10	10	7

**Open Electives to be offered by Computer Science and Engineering department for
Non-departmental students**

Sl.	Semester	Paper Code	Course Title	Contact Hours / Week				Credit Points
				L	T	P	Total	
1	5 th	CSE3116	Introduction of Python Lab	0	0	3	3	1.5
2	6 th	CSE3211	Fundamentals of RDBMS	3	0	0	3	3
3	6 th	CSE3212	Fundamentals of Operating Systems	3	0	0	3	3
4	7 th	CSE4111	Intelligent Web and Big Data	3	0	0	3	3
5	7 th	CSE4121	Basics of Mobile Computing	3	0	0	3	3

**Heritage Institute of Technology, Kolkata (HIT-K) – Credit Summary for B Tech
Programmes with effect from 2023-2024**

Sl. No.	Course Type	AICTE Suggested	CSE
1.	Humanities and Social Sciences including Management Courses	16	12
2.	Basic Science Courses	23	24
3.	Engineering Science Courses including Workshop, Drawing, Basics of Electrical / Mechanical / Computer, etc.	29	24
4.	Professional Core Courses	59	58
5.	Professional Elective Courses relevant to chosen Specialization / Branch	12	17
6.	Open Subjects – Electives from other Technical and/or Emerging Subjects	9	12
7.	Project Work, Seminar and Internship in industry or elsewhere	15	16
8.	Mandatory Courses (Non-credit) [Environmental Sciences, Induction Program, Indian Constitution and Civil Society]	(NON-CREDIT)	(NON-CREDIT)
	Total	163	163
9	Honours Courses (MOOCS or otherwise)	20	20
	Grand Total	183	183