Computer Science and Engineering (2017)						
Semester 1						
	Code	**Course**	**L**	**T**	**P**	**Credits**
1	CS 111	Engineering Mathematics-I	3	1	0	3
2	CS 112	Physics for Computer Engineers	3	1	0	3
3	CS 113	Computer Fundamentals & Programming	3	1	0	3
4	CS 114	Computer Workshop	1	0	3	2
5	CS 115	Basic Electrical Engineering	3	1	0	3
6	CS 116	Engineering Economics and Management	3	1	0	3
7	CS 117	Physics Lab	0	0	3	1
8	CS 118	Computer Fundamentals & Programming Lab	0	0	3	1
9	CS 119	Basic Electrical Engineering Lab	0	0	3	1
10	HS 102	French Language & Culture – I	0	2	0	0
						20
		Total contact hours	16	7	12	
Semester 2						
	Code	**Course**	**L**	**T**	**P**	**Credits**
1	CS 121	Engineering Mathematics-II	3	1	0	3
2	CS 122	Chemistry for Computer Engineers	3	1	0	3
3	CS 123	Communication Skills	3	1	0	3
4	CS 124	Basic Electronics Engineering	3	1	0	3
5	CS 125	Chemistry Lab	0	0	3	1
6	CS 126	Communication Skills Lab	0	0	3	1
7	CS 127	Engineering Graphics	1	0	3	3
8	CS 128	Media Project	1	0	3	2
9	HS 104	French Language & Culture II	0	2	0	0
						19
		Total contact hours	14	6	12	

Semester 3						
	Code	**Course**	**L**	**T**	**P**	**Credits**
1	MA 203	Mathematics – III	3	1	0	4
2	PH 202	Physics – II	3	1	2	5
3	ES 208	Mechanics	2	1	0	3
4	ES 209	Signals & Systems	2	1	2	4
5	ES 210	Data Structures	2	2	2	5
6	CS 201	Discrete Mathematical Structures	2	0	0	2
7	HS 206	French Language & Culture - III	0	2	0	0
						23
			14	9	6	
		Total contact hours	29			

Semester 4						
	Code	**Course**	**L**	**T**	**P**	**Credits**
1	ES 211	Numerical Methods	3	0	2	4
2	CS 202	Digital Logic Design and Computer Architecture	3	1	0	4
3	CS 203	Design and Analysis of Algorithms	2	1	2	4
4	CS 204	Object Oriented Programming	3	0	2	4
5	CS 205	Theory of Computation	3	0	0	3
6	SE 203	Design Thinking	1	0	2	2
7	ES 212	Earth & Environmental Sciences	2	0	2	2
8	HS 208	French Language & Culture - IV	0	2	0	0
						23

Semester 5						
	Code	**Course**	**L**	**T**	**P**	**Credits**
1	MA 304	Mathematics – IV	3	1	0	4
2	ES 312	Introduction to Materials Sciences	2	0	2	3
3	CS 306	Principles of Programming Languages	2	1	0	3
4	CS 307	Operating Systems	3	0	2	4
5	CS 308	Database Management Systems	3	0	2	4
6	CS 309	Microprocessors and Interfacing	2	0	2	3
7	HS-E1	HSS + Mgmt. - Elective – I	2	0	0	2
8	HS 310	French Language & Culture - V	0	2	0	0
						23
			17	3	8	
		Total contact hours	28			
Semester 6						
	Code	**Course**	**L**	**T**	**P**	**Credits**
1	CS 310	Computer Networks	3	0	2	4
2	CS 311	Web Programming	2	0	2	3
3	CS 312	Software Engineering	2	0	2	3
4	CS 313	Machine Learning	2	0	2	3
5	CS 314	High Performance Computing	3	0	0	3
6	PR 301	Third year team project	0	0	6	3
7	E1	Elective – I	3	0	0	3
8	HS-E2	HSS + Mgmt. - Elective – II	2	0	0	2
9	HS 312	French Language & Culture - VI	0	2	0	0
						24
		Total contact hours				

Semester 7						
	Code	**Course**	**L**	**T**	**P**	**Credits**
1	CS 415	Distributed Systems	3	0	2	4
2	CS 416	Compiler Design	3	0	0	3
3	CS 417	Cryptography and Network Security	3	0	2	4
4	HS-E3	HSS + Mgmt. - Elective - III	2	0	0	2
5	E2	Elective – II	3	0	0	3
6	E3	Elective – III	3	0	0	3
7	PR402	Year-4 Project	0	1	4	3
8	HS 401	Professional Ethics	0	1	0	1
9	HS 414	French Language & Culture -VII	0	2	0	0
						23
Semester 8						
	Code	**Course**	**L**	**T**	**P**	**Credits**
1	E4	Elective – IV	3	0	0	3
2	E5	Elective – V	3	0	0	3
3	PR 403	Year-4 Project	0	5	8	9
4	HS 416	French Language & Culture - VIII	0	2	0	0
						15
			6	7	8	
		Total contact hours	21			

Total credits **170**

List of Electives for Semesters 6, 7 and 8:

S.No.	Code	Course	L	T	P
1	CS 452	Advanced Data Analytics	3	0	0
2	CS 453	Mobile Communication and Computing	3	0	0
3	CS 454	VLSI Design Using Verilog	3	0	0
4	CS 456	Social Computing	3	0	0
5	CS 457	Deep Learning	3	0	0
6	CS 458	Information Retrieval and Natural Language Processing	3	0	0
7	CS 461	High Performance Computing	3	0	0
8	CS 462	Cryptography and Information Security	3	0	0
9	CS 463	Performance Evaluation of Computer Networks	3	0	0
10	CS 464	Wireless Sensor Networks	3	0	0
11	EE 451	Information Theory and Coding	3	0	0
12	EE 471	Digital Image Processing	3	0	0
13	EE 472	Computer Vision	3	0	0
14	EE 484	Advanced Microprocessors	3	0	0
15	EE 485	IoT System Architecture and Design	3	0	0
16	EE 486	Sensors and Instrumentation	3	0	0
17	EE 487	High Performance Embedded Systems	3	0	0
18	ME 452	Introduction to Operations Research	3	0	0
19	ME 467	Introduction to Robotics	3	0	0
20	ME 469	Computational Fluid Dynamics	3	0	0
21	ME 470	Robotics: Dynamics and Control	3	0	0
22	MA 450	Numerical Linear Algebra	3	0	0

23	MA 451	Meshfree Methods	3	0	0	
24	MA 452	Boundary Element Method and Boundary Integral Equations	3	0	0	
25	MA 453	PDE Based Image Processing	3	0	0	
26	MA 454	Topology and Operator Theory	3	0	0	
27	MA 455	Infinite dimensional Control Theory	3	0	0	
28	MA 456	Bayesian Statistics	3	0	0	
29	MA 457	Financial Mathematics	3	0	0	
30	MA 458	Nonlinear Conservation Laws and Applications	3	0	0	
31	CE 473	Introduction to Structural Health Monitoring	3	0	0	

List of HS Electives: Semesters 6 & 7						
S.No.	**Code**	**Course**	**L**	**T**	**P**	**Credits**
1	HS 500	Selections from World Literature	2	0	0	2
2	HS 501	Business Communication	2	0	0	2
3	HS 502	Visual Story Telling	2	0	0	2
4	HS 503	Introduction to Culture Studies	2	0	0	2
5	HS 504	Literature and Visual Arts	2	0	0	2
6	HS 505	Cinema and Philosophy	2	0	0	2
7	HS 506	The Humanities for a Critical Understanding of the World	2	0	0	2
8	HS 507	Academic Writing	2	0	0	2
9	HS 508	Urban Studies: Reading the City	2	0	0	2
10	HS 509	Contemporary Shakespeare: Readings and Adaptations	2	0	0	2
11	HS 510	Philosophical Arguments	2	0	0	2