

### VI SEMESTER Electives (2018-22 BATCH)

Elective – III									
9	UE18CS331	Generic Programming <sup>#</sup>	4	0	0	4	4	C, C++, C#	EC
10	UE18CS332	Algorithms for Intelligence Web and Information Retrieval <sup>**</sup>	4	0	0	4	4	Scikit, Tensorflow, Solr, Lucene Search Engines/ Python	EC
11	UE18CS333	Digital Image Processing <sup>**</sup>	4	0	0	4	4	Matlab	EC
12	UE18CS334	Natural Language Processing <sup>##</sup>	4	0	0	4	4	Tensorflow, Spacy, NLTK, SCIKIT Learn/ Python 3.x	EC
13	UE18CS335	Computer Network Security <sup>%%</sup>	4	0	0	4	4	Seed Labs, Wireshark, netwox, Scapy	EC
14	UE18CS336	Wireless Network Communication <sup>%%</sup>	4	0	0	4	4	Claynet, Python	EC
15	UE18CS337	Cyber Forensics	4	0	0	4	4	Open source Forensics Tools	EC
16	UE18CS338	Enterprise and Resource Planning	4	0	0	4	4		EC
17	UE18CS339	Hardware Accelerated Computing <sup>?</sup>	4	0	0	4	4		EC
Elective – IV									
18	UE18CS341	Design Patterns <sup>**</sup>	4	0	0	4	4	UML/ Python	EC
19	UE18CS342	Heterogeneous Parallelism <sup>!!!</sup>	4	0	0	4	4	pthread, OpenMP, CUDA, openCL, Chapel, UPC.	EC
20	UE18CS343	Topics in Deep Learning <sup>&amp;&amp;&amp;</sup>	4	0	0	4	4	Tensorflow 1.15, Keras 2.3.1/ Python 3.7	EC
21	UE18CS344	Advance Computer Networks <sup>***</sup>	4	0	0	4	4	Claynet, Cisco packet tracer	EC

22	UE18CS345	Bio-inspired Computing**	4	0	0	4	4	Matlab	EC
23	UE18CS346	Social Network Analytics%%%	4	0	0	4	4	Gephi, VNetLogo, NetwokX, SocNetV	EC
24	UE18CS347	Information Security	4	0	0	4	4	Seed Labs, Scapy, Burp-Suit,N-Map, 'C'	EC
25	UE18CS348	Human Computer Interaction	4	0	0	4	4		EC

**Note: Desirable Knowledge:** <sup>1</sup>UE18CS202, UE18CS254, <sup>@</sup>UE18CS301,UE18CS302.

**Pre-requisite Courses:** <sup>#</sup>UE18CS151, UE18CS202, UE18CS251 <sup>\*\*</sup> - UE18CS251, <sup>##</sup>UE18CS303, <sup>%%</sup>UE18CS301.

**Pre-requisite Courses:** <sup>!!!</sup>UE18CS151, UE18CS253, <sup>&&&</sup>UE18CS303, <sup>\*\*\*</sup>UE18CS301, <sup>%</sup>UE18CS202, UE18MA251, <sup>?</sup>UE18CS201.

#### ELECTIVES TO BE OPTED FOR SPECIALIZATION

Sl. No.	SPECIALIZATION	ELECTIVE – III	ELECTIVE – IV
A	System and Core Computing(SCC)	UE18CS331, UE18CS332, UE18CS339.	UE18CS341, UE18CS342
B	Machine Intelligence and Data Science(MIDS)	UE18CS332, UE18CS333, UE18CS334, UE18CS335, UE18CS338.	UE18CS343, UE18CS345 UE18CS346, UE18CS347, UE18CS348.
C	Network and Cyber Security(NWCS)	UE18CS335, UE18CS336, UE18CS337.	UE18CS344, UE18CS347.