CREDIT INFO

S.no	Catagory	Credits
1	Foundation Core - Basic Sciences and Mathematics	24
2	Foundation Core - Basic Engineering Sciences	14
3	Foundation Core - Humanities, Social Sciences and Management	15
4	Discipline-linked Engineering Sciences	12
5	Discipline Core	47
6	Projects and Internship	9
7	Open Elective	9
8	Non-graded Core Requirement	11
9	Bridge Course	2
10	Specialization Elective	21
Total Credits		151

Foundation Core - Basic Sciences and Mathematics

sl.no	Course Code	Course Title	Course Type	Version	L	T	P	J	Credits
1	BCHY101L	Engineering Chemistry	Theory Only	1.0	3	0	0	0	3.0
2	BCHY101P	Engineering Chemistry Lab	Lab Only	1.0	0	0	2	0	1.0
3	BMAT101L	Calculus	Theory Only	1.0	3	0	0	0	3.0
4	BMAT101P	Calculus Lab	Lab Only	1.0	0	0	2	0	1.0
5	BMAT102L	Differential Equations and Transforms	Theory Only	1.0	3	1	0	0	4.0
6	BMAT201L	Complex Variables and Linear Algebra	Theory Only	1.0	3	1	0	0	4.0
7	BMAT202L	Probability and Statistics	Theory Only	1.0	3	0	0	0	3.0
8	BMAT202P	Probability and Statistics Lab	Lab Only	1.0	0	0	2	0	1.0
9	BPHY101L	Engineering Physics	Theory Only	1.0	3	0	0	0	3.0
10	BPHY101P	Engineering Physics Lab	Lab Only	1.0	0	0	2	0	1.0

Foundation Core - Basic Engineering Sciences

sl.no	Course Code	Course Title	Course Type	Version	L	T	P	J	Credits
1	BCSE101E	Computer Programming: Python	Embedded Theory and Lab	1.0	1	0	4	0	3.0
2	BCSE102L	Structured and Object-Oriented Programming	Theory Only	1.0	2	0	0	0	2.0
3	BCSE102P	Structured and Object-Oriented Programming Lab	Lab Only	1.0	0	0	4	0	2.0
4	BCSE103E	Computer Programming: Java	Embedded Theory and Lab	1.0	1	0	4	0	3.0
5	BEEE102L	Basic Electrical and Electronics Engineering	Theory Only	1.0	3	0	0	0	3.0
6	BEEE102P	Basic Electrical and Electronics Engineering Lab	Lab Only	1.0	0	0	2	0	1.0

Foundation Core - Humanities, Social Sciences and Management

sl.no	Course Code	Course Title	Course Type	Version	L	T	P	J	Credits
1	BENG101L	Technical English Communication	Theory Only	1.0	2	0	0	0	2.0
2	BENG101P	Technical English Communication Lab	Lab Only	1.0	0	0	2	0	1.0
3	BENG102P	Technical Report Writing	Lab Only	1.0	0	0	2	0	1.0
4	BFLE200L	Foreign Language	Basket	1.0	0	0	0	0	2.0
5	BHSM200L	HSM Elective	Basket	1.0	0	0	0	0	3.0
6	BSTS101P	Quantitative Skills Practice I	Soft Skill	1.1	3	0	0	0	1.5
7	BSTS102P	Quantitative Skills Practice II	Soft Skill	1.0	3	0	0	0	1.5
8	BSTS201P	Qualitative Skills Practice I	Soft Skill	1.0	3	0	0	0	1.5
9	BSTS202P	Qualitative Skills Practice II	Soft Skill	1.1	3	0	0	0	1.5

Discipline-linked Engineering Sciences

sl.no	Course Code	Course Title	Course Type	Version	L	T	P	J	Credits
1	BECE102L	Digital Systems Design	Theory Only	1.0	3	0	0	0	3.0
2	BECE102P	Digital Systems Design Lab	Lab Only	1.0	0	0	2	0	1.0
3	BECE204L	Microprocessors and Microcontrollers	Theory Only	1.0	3	0	0	0	3.0
4	BECE204P	Microprocessors and Microcontrollers Lab	Lab Only	1.0	0	0	2	0	1.0
5	BMAT205L	Discrete Mathematics and Graph Theory	Theory Only	1.0	3	1	0	0	4.0

Discipline Core

sl.no	Course Code	Course Title	Course Type	Version	L	T	P	J	Credits
1	BCSE202L	Data Structures and Algorithms	Theory Only	1.0	3	0	0	0	3.0
2	BCSE202P	Data Structures and Algorithms Lab	Lab Only	1.0	0	0	2	0	1.0
3	BCSE203E	Web Programming	Embedded Theory and Lab	1.0	1	0	4	0	3.0
4	BCSE204L	Design and Analysis of Algorithms	Theory Only	1.0	3	0	0	0	3.0
5	BCSE204P	Design and Analysis of Algorithms Lab	Lab Only	1.0	0	0	2	0	1.0
6	BCSE205L	Computer Architecture and Organization	Theory Only	1.0	3	0	0	0	3.0
7	BCSE301L	Software Engineering	Theory Only	1.0	3	0	0	0	3.0
8	BCSE301P	Software Engineering Lab	Lab Only	1.0	0	0	2	0	1.0
9	BCSE302L	Database Systems	Theory Only	1.0	3	0	0	0	3.0
10	BCSE302P	Database Systems Lab	Lab Only	1.0	0	0	2	0	1.0
11	BCSE303L	Operating Systems	Theory Only	1.0	3	0	0	0	3.0
12	BCSE303P	Operating Systems Lab	Lab Only	1.0	0	0	2	0	1.0
13	BCSE304L	Theory of Computation	Theory Only	1.0	3	0	0	0	3.0
14	BCSE305L	Embedded Systems	Theory Only	1.0	3	0	0	0	3.0
15	BCSE306L	Artificial Intelligence	Theory Only	1.0	3	0	0	0	3.0

			Discipline Core						
16	BCSE307L	Compiler Design	Theory Only	1.0	3	0	0	0	3.0
17	BCSE307P	Compiler Design Lab	Lab Only	1.0	0	0	2	0	1.0
18	BCSE308L	Computer Networks	Theory Only	11.0	3	0	0	0	3.0
19	BCSE308P	Computer Networks Lab	Lab Only	1.0	0	0	2	0	1.0
20	BCSE309L	Cryptography and Network Security	Theory Only	1.0	3	0	0	0	3.0
21	BCSE309P	Cryptography and Network Security Lab	Lab Only	1.0	0	0	2	0	1.0

			Projects and Internship						
sl.no	Course Code	Course Title	Course Type	Version	L	T	P	J	Credits
1	BCSE399J	Summer Industrial Internship	Project	1.0	0	0	0	0	1.0
2	BCSE497J	Project - I	Project	1.0	0	0	0	0	3.0
3	BCSE498J	Project-II / Internship	Project	1.0	0	0	0	0	5.0
4	BCSE499J	One Semester Internship	Project	1.0	0	0	0	0	14.0

			Open Elective						
sl.no	Course Code	Course Title	Course Type	Version	L	T	P	J	Credits
1	BCSE355L	AWS Solutions Architect	Theory Only	1.0	3	0	0	0	3.0
2	BECE201L	Electronic Materials and devices	Theory Only	1.0	3	0	0	0	3.0
3	BECE203L	Circuit Theory	Theory Only	1.0	3	1	0	0	4.0
4	BECE351E	Internet of Things	Embedded Theory and Lab	1.0	1	0	2	0	2.0
5	BECE352E	IoT Domain Analyst	Embedded Theory and Lab	1.0	1	0	2	0	2.0
6	BEEE201L	Electronic Materials	Theory Only	1.0	3	0	0	0	3.0
7	BEEE203L	Circuit Theory	Theory Only	1.0	3	1	0	0	4.0
8	BEEE206L	Digital Electronics	Theory Only	1.0	3	0	0	0	3.0
9	BEEE206P	Digital Electronics Lab	Lab Only	1.0	0	0	2	0	1.0
10	BFST213E	Garment Designing and Manufacturing	Embedded Theory and Lab	1.0	2	0	2	0	3.0
11	BHUM201L	Mass Communication	Theory Only	1.0	3	0	0	0	3.0
12	BHUM202L	Rural Development	Theory Only	1.0	3	0	0	0	3.0
13	BHUM203L	Introduction to Psychology	Theory Only	1.0	3	0	0	0	3.0
14	BHUM204L	Industrial Psychology	Theory Only	1.0	3	0	0	0	3.0
15	BHUM205L	Development Economics	Theory Only	1.0	3	0	0	0	3.0
16	BHUM206L	International Economics	Theory Only	1.0	3	0	0	0	3.0
17	BHUM207L	Engineering Economics	Theory Only	1.0	3	0	0	0	3.0
18	BHUM208L	Economics of Strategy	Theory Only	1.0	3	0	0	0	3.0
19	BHUM209L	Game Theory	Theory Only	1.0	3	0	0	0	3.0

			Open Elective							
20	BHUM210E	Econometrics	Embedded Theory and Lab	1.0	2	0	2	0	3.0
21	BHUM211L	Behavioral Economics	Theory Only	1.0	3	0	0	0	3.0
22	BHUM212L	Mathematics for Economic Analysis	Theory Only	1.0	3	0	0	0	3.0
23	BHUM213L	Corporate Social Responsibility	Theory Only	1.0	3	0	0	0	3.0
24	BHUM214L	Political Science	Theory Only	1.0	3	0	0	0	3.0
25	BHUM215L	International Relations	Theory Only	1.0	3	0	0	0	3.0
26	BHUM216L	Indian Culture and Heritage	Theory Only	1.0	3	0	0	0	3.0
27	BHUM217L	Contemporary India	Theory Only	1.0	3	0	0	0	3.0
28	BHUM218L	Financial Management	Theory Only	1.0	3	0	0	0	3.0
29	BHUM219L	Principles of Accounting	Theory Only	1.0	3	0	0	0	3.0
30	BHUM220L	Financial Markets and Institutions	Theory Only	1.0	3	0	0	0	3.0
31	BHUM221L	Economics of Money, Banking and Financial Markets	Theory Only	1.0	3	0	0	0	3.0
32	BHUM222L	Security Analysis and Portfolio Management	Theory Only	1.0	3	0	0	0	3.0
33	BHUM223L	Options, Futures and other Derivatives	Theory Only	1.0	3	0	0	0	3.0
34	BHUM224L	Fixed Income Securities	Theory Only	1.0	3	0	0	0	3.0
35	BHUM225L	Personal Finance	Theory Only	1.0	3	0	0	0	3.0
36	BHUM226L	Corporate Finance	Theory Only	1.0	3	0	0	0	3.0
37	BHUM227L	Financial Statement Analysis	Theory Only	1.0	3	0	0	0	3.0
38	BHUM228L	Cost and Management Accounting	Theory Only	1.0	3	0	0	0	3.0
39	BHUM229L	Mind, Embodiment, and Technology	Theory Only	1.0	3	0	0	0	3.0
40	BHUM230L	Health Humanities in Biotechnological Era	Theory Only	1.0	3	0	0	0	3.0
41	BHUM231L	Reproductive choices for a Sustainable Society	Theory Only	1.0	3	0	0	0	3.0
42	BHUM232L	Introduction to Sustainable Aging	Theory Only	1.0	3	0	0	0	3.0
43	BHUM233L	Environmental Psychology	Theory Only	1.0	3	0	0	0	3.0
44	BHUM234L	Indian Psychology	Theory Only	1.0	3	0	0	0	3.0
45	BHUM235E	Psychology of Wellness	Embedded Theory and Lab	1.0	2	0	2	0	3.0
46	BHUM236L	Taxation	Theory Only	1.0	3	0	0	0	3.0
47	BMEE102P	Engineering Design Visualisation Lab	Lab Only	1.0	0	0	4	0	2.0
48	BMEE201L	Engineering Mechanics	Theory Only	1.0	2	1	0	0	3.0
49	BMHA202L	Manufacturing Processes	Theory Only	1.0	3	0	0	0	3.0
50	BMHA202P	Manufacturing Processes Lab	Lab Only	1.0	0	0	2	0	1.0
51	BSTS301P	Advanced Competitive Coding – I	Soft Skill	1.0	3	0	0	0	1.5
52	BSTS302P	Advanced Competitive Coding - II	Soft Skill	1.0	3	0	0	0	1.5
53	CFOC101M	Advanced Green Manufacturing Systems	Online Course	1.0	0	0	0	0	3.0
54	CFOC102M	Introduction to Cognitive Psychology	Online Course	1.0	0	0	0	0	3.0
55	CFOC103M	Introduction to Political Theory	Online Course	1.0	0	0	0	0	3.0
56	CFOC104M	Six Sigma	Online Course	1.0	0	0	0	0	3.0
57	CFOC105M	Emotional Intelligence	Online Course	1.0	0	0	0	0	2.0
58	CFOC106M	Manufacturing Strategy	Online Course	1.0	0	0	0	0	2.0
59	CFOC107M	Supply Chain Analytics	Online Course	1.0	0	0	0	0	2.0
60	CFOC108M	Systems Engineering: Theory and Practice	Online Course	1.0	0	0	0	0	2.0
61	CFOC109M	Design Thinking - A Primer	Online Course	1.0	0	0	0	0	1.0

		Open Elective							
62	CFOC110M	MCDM Techniques Using R and MARLAB	Online Course	1.0	0	0	0	0	1.0
63	CFOC111M	Perspectives on Neurolinguistic	Online Course	1.0	0	0	0	0	1.0
64	CFOC112M	Sociology of Science	Online Course	1.0	0	0	0	0	1.0
65	CFOC113M	Contemporary Themes in India's Economic Development and Economic Survey	Online Course	1.0	0	0	0	0	3.0
66	CFOC114M	Problem Solving through Programming in C	Online Course	1.0	0	0	0	0	3.0
67	CFOC115M	Design and Analysis of Algorithms	Online Course	1.0	0	0	0	0	2.0
68	CFOC116M	Computer Vision	Online Course	1.0	0	0	0	0	3.0
69	CFOC117M	Spatial Informatics	Online Course	1.0	0	0	0	0	2.0
70	CFOC118M	Practical Machine Learning with Tensorflow	Online Course	1.0	0	0	0	0	2.0
71	CFOC119M	Training of Trainers	Online Course	1.0	0	0	0	0	3.0
72	CFOC120M	Knowledge Management	Online Course	1.0	0	0	0	0	2.0
73	CFOC121M	Leadership	Online Course	1.0	0	0	0	0	1.0
74	CFOC122M	Educational Leadership	Online Course	1.0	0	0	0	0	2.0
75	CFOC123M	Cost Accounting	Online Course	1.0	0	0	0	0	1.0
76	CFOC124M	Practitioners Course In Descriptive, Predictive and Prescriptive Analytics	Online Course	1.0	0	0	0	0	2.0
77	CFOC125M	Decision Making Under Uncertainty	Online Course	1.0	0	0	0	0	1.0
78	CFOC126M	Data Analysis and Decision Making - III	Online Course	1.0	0	0	0	0	3.0
79	CFOC127M	Business Analytics and Data Mining Modeling Using R Part II	Online Course	1.0	0	0	0	0	1.0
80	CFOC128M	Business Analytics and Text Mining Modeling Using Python	Online Course	1.0	0	0	0	0	2.0
81	CFOC129M	Economics of Health and Health Care	Online Course	1.0	0	0	0	0	2.0
82	CFOC130M	Human Resource Development	Online Course	1.0	0	0	0	0	3.0
83	CFOC131M	Performance and Reward Management	Online Course	1.0	0	0	0	0	3.0
84	CFOC132M	Corporate Social Responsibility	Online Course	1.0	0	0	0	0	2.0
85	CFOC133M	E-Business	Online Course	1.0	0	0	0	0	3.0
86	CFOC134M	Innovation, Business Models and Entrepreneurship	Online Course	1.0	0	0	0	0	2.0
87	CFOC135M	The Ethical Corporation	Online Course	1.0	0	0	0	0	2.0
88	CFOC136M	Toyota Production System	Online Course	1.0	0	0	0	0	2.0
89	CFOC137M	Intellectual Property Rights and Competition Law	Online Course	1.0	0	0	0	0	2.0
90	CFOC138M	Patent Search for Engineers and Lawyers	Online Course	1.0	0	0	0	0	2.0
91	CFOC139M	Role of Craft and Technology in Interior - Architecture	Online Course	1.0	0	0	0	0	2.0
92	CFOC140M	Glass In Buildings : Design And Applications	Online Course	1.0	0	0	0	0	3.0
93	CFOC141M	Visual Perception and Art: A Survey Across the Cultures	Online Course	1.0	0	0	0	0	1.0
94	CFOC142M	Mapping Signal Processing Algorithms to Architectures	Online Course	1.0	0	0	0	0	3.0
95	CFOC143M	Introduction to Computer Vision	Online Course	1.0	0	0	0	0	3.0
96	CFOC144M	Op-Amp Practical Applications: Design, Simulation and Implementation	Online Course	1.0	0	0	0	0	3.0
97	CFOC145M	Fabrication Techniques for MEMs - based sensors: clinical Perspective	Online Course	1.0	0	0	0	0	3.0
98	CFOC146M	Linear System Theory	Online Course	1.0	0	0	0	0	3.0

		Open Elective							
99	CFOC147M	Advanced Linear Continuous Control Systems: Applications with MATLAB Programming and Simulink	Online Course	1.0	0	0	0	0	2.0
100	CFOC148M	Introduction to Wireless and Cellular Communications	Online Course	1.0	0	0	0	0	3.0
101	CFOC149M	Digital Switching - I	Online Course	1.0	0	0	0	0	2.0
102	CFOC150M	Microelectronics: Devices To Circuits	Online Course	1.0	0	0	0	0	3.0
103	CFOC151M	Digital Image Processing	Online Course	1.0	0	0	0	0	3.0
104	CFOC152M	Pattern Recognition and Application	Online Course	1.0	0	0	0	0	3.0
105	CFOC153M	Microwave Theory and Techniques	Online Course	1.0	0	0	0	0	3.0
106	CFOC154M	Principles and Techniques of Modern Radar Systems	Online Course	1.0	0	0	0	0	3.0
107	CFOC155M	Computational Electromagnetics	Online Course	1.0	0	0	0	0	3.0
108	CFOC156M	Microwave Engineering	Online Course	1.0	0	0	0	0	3.0
109	CFOC157M	Introduction to parallel Programming in Open MP	Online Course	1.0	0	0	0	0	1.0
110	CFOC158M	Reinforcement Learning	Online Course	1.0	0	0	0	0	3.0
111	CFOC159M	Applied Natural Language Processing	Online Course	1.0	0	0	0	0	3.0
112	CFOC160M	Python for Data Science	Online Course	1.0	0	0	0	0	1.0
113	CFOC161M	Data Science for Engineers	Online Course	1.0	0	0	0	0	2.0
114	CFOC162M	Scalable Data Science	Online Course	1.0	0	0	0	0	2.0
115	CFOC163M	Advanced Computer Architecture	Online Course	1.0	0	0	0	0	2.0
116	CFOC164M	Software Project Management	Online Course	1.0	0	0	0	0	3.0
117	CFOC165M	Software testing	Online Course	1.0	0	0	0	0	3.0
118	CFOC166M	Hardware Modeling using Verilog	Online Course	1.0	0	0	0	0	2.0
119	CFOC167M	Synthesis of Digital Systems	Online Course	1.0	0	0	0	0	3.0
120	CFOC168M	Switching Circuits and Logic Design	Online Course	1.0	0	0	0	0	3.0
121	CFOC169M	Demystifying networking	Online Course	1.0	0	0	0	0	1.0
122	CFOC170M	Modern Algebra	Online Course	1.0	0	0	0	0	2.0
123	CFOC171M	Introduction to Haskell Programming 2	Online Course	1.0	0	0	0	0	2.0
124	CFOC172M	Flow through Porous Media	Online Course	1.0	0	0	0	0	3.0
125	CFOC173M	Bioenergy	Online Course	1.0	0	0	0	0	2.0
126	CFOC174M	Introduction to Biostatistics	Online Course	1.0	0	0	0	0	2.0
127	CFOC175M	Nanotechnology in Agriculture	Online Course	1.0	0	0	0	0	2.0
128	CFOC176M	Computer Aided Drug Design	Online Course	1.0	0	0	0	0	2.0
129	CFOC177M	Drug Delivery: Principles and Engineering	Online Course	1.0	0	0	0	0	3.0
130	CFOC178M	Functional Genomics	Online Course	1.0	0	0	0	0	1.0
131	CFOC179M	Introduction to Proteogenomics	Online Course	1.0	0	0	0	0	3.0
132	CFOC180M	Introduction to Mechanobiology	Online Course	1.0	0	0	0	0	2.0
133	CFOC181M	WildLife Conservation	Online Course	1.0	0	0	0	0	2.0
134	CFOC182M	Organic Chemistry in Biology and Drug Development	Online Course	1.0	0	0	0	0	3.0
135	CFOC183M	Bioinorganic Chemistry	Online Course	1.0	0	0	0	0	1.0
136	CFOC184M	Spectroscopic Techniques for Pharmaceutical and Biopharmaceutical Industries	Online Course	1.0	0	0	0	0	3.0
137	CFOC185M	Biophysical chemistry	Online Course	1.0	0	0	0	0	3.0
138	CFOC186M	Deep Learning	Online Course	1.0	0	0	0	0	3.0
139	CFOC187M	Blockchain Architecture Design and use Cases	Online Course	1.0	0	0	0	0	3.0
140	CFOC188M	Ethical Hacking	Online Course	1.0	0	0	0	0	3.0

		Open Elective							
141	CFOC189M	Organic Farming for Sustainable Agricultural Production	Online Course	1.0	0	0	0	0	2.0
142	CFOC190M	Positive Psychology	Online Course	1.0	0	0	0	0	2.0
143	CFOC191M	Forests and their Management	Online Course	1.0	0	0	0	0	3.0
144	CFOC192M	Forest Biometry	Online Course	1.0	0	0	0	0	2.0
145	CFOC193M	Bioengineering: An Interface with Biology and Medicine	Online Course	1.0	0	0	0	0	2.0
146	CFOC194M	Human Molecular Genetics	Online Course	1.0	0	0	0	0	1.0
147	CFOC195M	Bioenergetics of Life Processes	Online Course	1.0	0	0	0	0	1.0
148	CFOC196M	Computational Systems Biology	Online Course	1.0	0	0	0	0	3.0
149	CFOC197M	Bio-Informatics: Algorithms and Applications	Online Course	1.0	0	0	0	0	3.0
150	CFOC198M	Biostatistics and Design of Experiments	Online Course	1.0	0	0	0	0	2.0
151	CFOC199M	Medical Biomaterials	Online Course	1.0	0	0	0	0	2.0
152	CFOC200M	Demystifying the Brain	Online Course	1.0	0	0	0	0	1.0
153	CFOC201M	Principles and Applications of NMR Spectroscopy	Online Course	1.0	0	0	0	0	2.0
154	CFOC202M	Cell Culture Technologies	Online Course	1.0	0	0	0	0	2.0
155	CFOC203M	Natural Hazards	Online Course	1.0	0	0	0	0	2.0
156	CFOC204M	Modern Construction Materials	Online Course	1.0	0	0	0	0	3.0
157	CFOC205M	Energy Efficiency, Acoustics and Daylighting in Building	Online Course	1.0	0	0	0	0	3.0
158	CFOC206M	Fire Protection, Services and Maintenance Management of Building	Online Course	1.0	0	0	0	0	3.0
159	CFOC207M	Electronic Waste Management - Issues And Challenges	Online Course	1.0	0	0	0	0	1.0
160	CFOC208M	Higher Surveying	Online Course	1.0	0	0	0	0	3.0
161	CFOC209M	Environmental Remediation of Contaminated Sites	Online Course	1.0	0	0	0	0	3.0
162	CFOC210M	Soil Structure Interaction	Online Course	1.0	0	0	0	0	3.0
163	CFOC211M	Introduction to Accounting and Finance for Civil Engineers	Online Course	1.0	0	0	0	0	2.0
164	CFOC212M	Scheduling Techniques in Projects	Online Course	1.0	0	0	0	0	1.0
165	CFOC213M	GPS Surveying	Online Course	1.0	0	0	0	0	1.0
166	CFOC214M	Sustainable Materials and Green Buildings	Online Course	1.0	0	0	0	0	3.0
167	CFOC215M	Geomorphic Processes: Landforms and Landscapes	Online Course	1.0	0	0	0	0	2.0
168	CFOC216M	Introduction To Process Modeling in the Membrane Separation Process	Online Course	1.0	0	0	0	0	1.0
169	CFOC217M	Computational Geometry	Online Course	1.0	0	0	0	0	3.0
170	CFOC218M	Compiler Design	Online Course	1.0	0	0	0	0	3.0
171	CFOC219M	Embedded System Design with ARM	Online Course	1.0	0	0	0	0	2.0
172	CFOC220M	VLSI Physical Design	Online Course	1.0	0	0	0	0	3.0
173	CFOC221M	Cloud computing	Online Course	1.0	0	0	0	0	2.0
174	CFOC222M	Artificial Intelligence : Knowledge Representation And Reasoning	Online Course	1.0	0	0	0	0	3.0
175	CFOC223M	Privacy and Security in Online Social Media	Online Course	1.0	0	0	0	0	2.0
176	CFOC224M	Information Security - 5 - Secure Systems Engineering	Online Course	1.0	0	0	0	0	2.0

		Open Elective							
177	CFOC225M	Model Checking	Online Course	1.0	0	0	0	0	3.0
178	CFOC226M	Randomized Algorithms	Online Course	1.0	0	0	0	0	3.0
179	CFOC227M	GPU Architectures and Programming	Online Course	1.0	0	0	0	0	3.0
180	CFOC228M	Multi-Core Computer Architecture - Storage and Interconnects	Online Course	1.0	0	0	0	0	2.0
181	CFOC229M	Data Analytics with Python	Online Course	1.0	0	0	0	0	3.0
182	CFOC230M	Arithmetic Circuit Complexity	Online Course	1.0	0	0	0	0	3.0
183	CFOC231M	Google Cloud Computing Foundation Course	Online Course	1.0	0	0	0	0	2.0
184	CFOC232M	Consumer Behaviour	Online Course	1.0	0	0	0	0	2.0
185	CFOC233M	Enhancing Soft Skills and Personality	Online Course	1.0	0	0	0	0	2.0
186	CFOC234M	Introduction to Airplane Performance	Online Course	1.0	0	0	0	0	2.0
187	CFOC235M	Rocket Propulsion	Online Course	1.0	0	0	0	0	3.0
188	CFOC236M	Aircraft Maintenance	Online Course	1.0	0	0	0	0	1.0
189	CFOC237M	Sustainable Architecture	Online Course	1.0	0	0	0	0	3.0
190	CFOC238M	Introduction to History of Architecture in India	Online Course	1.0	0	0	0	0	1.0
191	CFOC239M	Structure, Form, and Architecture : The Synergy	Online Course	1.0	0	0	0	0	2.0
192	CFOC240M	Interactomics : Basics and Applications	Online Course	1.0	0	0	0	0	3.0
193	CFOC241M	Introduction to Professional Scientific Communication	Online Course	1.0	0	0	0	0	1.0
194	CFOC242M	Material and Energy Balances	Online Course	1.0	0	0	0	0	3.0
195	CFOC243M	Thermodynamics for Biological Systems: Classical and Statistical Aspect	Online Course	1.0	0	0	0	0	3.0
196	CFOC244M	Optical Spectroscopy and Microscopy : Fundamentals of Optical Measurements and Instrumentation	Online Course	1.0	0	0	0	0	3.0
197	CFOC245M	Fundamentals of Semiconductor Devices	Online Course	1.0	0	0	0	0	3.0
198	CFOC246M	Characterization of Construction Materials	Online Course	1.0	0	0	0	0	3.0
199	CFOC247M	Introduction to Civil Engineering Profession	Online Course	1.0	0	0	0	0	2.0
200	CFOC248M	Environmental Geomechanics	Online Course	1.0	0	0	0	0	3.0
201	CFOC249M	Mechanical Characterization of Bituminous Materials	Online Course	1.0	0	0	0	0	3.0
202	CFOC250M	Geosynthetics and Reinforced Soil Structures	Online Course	1.0	0	0	0	0	3.0
203	CFOC251M	Geotechnical Engineering II Foundation Engineering	Online Course	1.0	0	0	0	0	3.0
204	CFOC252M	Landscape Architecture and Site Planning - Basic Fundamentals	Online Course	1.0	0	0	0	0	2.0
205	CFOC253M	Plastic Waste Management	Online Course	1.0	0	0	0	0	2.0
206	CFOC254M	Advanced Topics in the Science and Technology of Concrete	Online Course	1.0	0	0	0	0	1.0
207	CFOC255M	Applied Environmental Microbiology	Online Course	1.0	0	0	0	0	3.0
208	CFOC256M	Digital Land Surveying And Mapping (DLS&M)	Online Course	1.0	0	0	0	0	2.0
209	CFOC257M	Earthquake Geology: A tool for Seismic Hazard Assessment	Online Course	1.0	0	0	0	0	3.0
210	CFOC258M	Introduction to Geographic Information Systems	Online Course	1.0	0	0	0	0	1.0
211	CFOC259M	Structural Dynamics	Online Course	2.0	0	0	0	0	4.0
212	CFOC260M	Water Supply Engineering	Online Course	1.0	0	0	0	0	3.0
213	CFOC261M	Geo Spatial Analysis in Urban Planning	Online Course	1.0	0	0	0	0	1.0
214	CFOC262M	Geotechnical Engineering - 1	Online Course	1.0	0	0	0	0	3.0
215	CFOC263M	Maintenance and Repair of Concrete Structures	Online Course	1.0	0	0	0	0	3.0

			Open Elective						
216	CFOC264M	Thermodynamics	Online Course	1.0	0	0	0	0	3.0
217	CFOC265M	Geomorphology	Online Course	1.0	0	0	0	0	3.0
218	CFOC266M	Remote Sensing Essentials	Online Course	1.0	0	0	0	0	3.0
219	CFOC267M	Hydraulic Engineering	Online Course	1.0	0	0	0	0	3.0
220	CFOC268M	Environmental Quality Monitoring and Analysis	Online Course	1.0	0	0	0	0	3.0
221	CFOC269M	Electrochemical Technology in Pollution Control	Online Course	1.0	0	0	0	0	2.0
222	CFOC270M	Advanced Thermodynamics	Online Course	1.0	0	0	0	0	3.0
223	CFOC271M	Membrane Technology	Online Course	1.0	0	0	0	0	3.0
224	CFOC272M	Computational Fluid Dynamics	Online Course	1.0	0	0	0	0	3.0
225	CFOC273M	Transport phenomena	Online Course	1.0	0	0	0	0	3.0
226	CFOC274M	Optimization in Chemical Engineering	Online Course	1.0	0	0	0	0	3.0
227	CFOC275M	Soft Nano Technology	Online Course	1.0	0	0	0	0	2.0
228	CFOC276M	Transport processes I - Heat and Mass Transfer	Online Course	1.0	0	0	0	0	3.0
229	CFOC277M	Process Control - Design, Analysis and Assessment	Online Course	1.0	0	0	0	0	3.0
230	CFOC278M	Heat Transfer	Online Course	1.0	0	0	0	0	3.0
231	CFOC279M	Chemical Reaction Engineering II	Online Course	1.0	0	0	0	0	3.0
232	CFOC280M	Multiphase Flows	Online Course	1.0	0	0	0	0	2.0
233	CFOC281M	Mass Transfer Operations - I	Online Course	1.0	0	0	0	0	3.0
234	CFOC282M	Waste to Energy Conversion	Online Course	1.0	0	0	0	0	2.0
235	CFOC283M	Equipment Design : Mechanical Aspects	Online Course	1.0	0	0	0	0	1.0
236	CFOC284M	An Introduction to Cardiovascular Fluid Mechanics	Online Course	1.0	0	0	0	0	1.0
237	CFOC285M	Computer Aided Applied Single Objective Optimization	Online Course	1.0	0	0	0	0	2.0
238	CFOC286M	Basic Principles and Calculations in Chemical Engineering	Online Course	1.0	0	0	0	0	3.0
239	CFOC287M	Introduction to Blockchain Technology and Applications	Online Course	1.0	0	0	0	0	2.0
240	CFOC288M	Foundations of Cryptography	Online Course	1.0	0	0	0	0	3.0
241	CFOC289M	Introduction to Database Systems	Online Course	1.0	0	0	0	0	3.0
242	CFOC290M	Operating System	Online Course	1.0	0	0	0	0	3.0
243	CFOC291M	Programming in C++	Online Course	1.0	0	0	0	0	2.0
244	CFOC292M	Programming in Java	Online Course	1.0	0	0	0	0	3.0
245	CFOC293M	Data Base Management System	Online Course	1.0	0	0	0	0	2.0
246	CFOC294M	Introduction to Algorithms and Analysis	Online Course	1.0	0	0	0	0	3.0
247	CFOC295M	Data Mining	Online Course	1.0	0	0	0	0	2.0
248	CFOC296M	Embedded Systems Design	Online Course	1.0	0	0	0	0	3.0
249	CFOC297M	Real Time Operating System	Online Course	1.0	0	0	0	0	1.0
250	CFOC298M	Introduction to Soft Computing	Online Course	1.0	0	0	0	0	2.0
251	CFOC299M	Cryptography and Network Security	Online Course	1.0	0	0	0	0	3.0
252	CFOC300M	Introduction to Internet of Things	Online Course	1.0	0	0	0	0	3.0
253	CFOC301M	Computer Networks and Internet Protocol	Online Course	1.0	0	0	0	0	3.0
254	CFOC302M	Introduction to Industry 4.0 and Industrial Internet of Things	Online Course	1.0	0	0	0	0	3.0
255	CFOC303M	Computer Architecture	Online Course	1.0	0	0	0	0	3.0

			Open Elective							
256	CFOC304M	Programming, Data Structures And Algorithms Using Python	Online Course	1.0	0	0	0	0	0	2.0
257	CFOC305M	Introduction to Machine Learning	Online Course	1.0	0	0	0	0	0	3.0
258	CFOC306M	Social Networks	Online Course	1.0	0	0	0	0	0	3.0
259	CFOC307M	Foundations to Computer Systems Design	Online Course	1.0	0	0	0	0	0	3.0
260	CFOC308M	The Joy of Computing using Python	Online Course	1.0	0	0	0	0	0	3.0
261	CFOC309M	Discrete Mathematics	Online Course	1.0	0	0	0	0	0	3.0
262	CFOC310M	An Introduction to Artificial Intelligence	Online Course	1.0	0	0	0	0	0	3.0
263	CFOC311M	User-centric Computing for Human-Computer Interaction	Online Course	1.0	0	0	0	0	0	3.0
264	CFOC312M	Cloud Computing and Distributed Systems	Online Course	1.0	0	0	0	0	0	2.0
265	CFOC313M	Machine Learning	Online Course	1.0	0	0	0	0	0	2.0
266	CFOC314M	Modern Application Development	Online Course	1.0	0	0	0	0	0	3.0
267	CFOC315M	An Introduction To Programming Through C++	Online Course	1.0	0	0	0	0	0	3.0
268	CFOC316M	Design and Pedagogy of the Introductory Programming Course	Online Course	1.0	0	0	0	0	0	1.0
269	CFOC317M	Quantitative Methods in Chemistry	Online Course	1.0	0	0	0	0	0	3.0
270	CFOC318M	Basics in Inorganic Chemistry	Online Course	1.0	0	0	0	0	0	1.0
271	CFOC319M	Ultrafast Laser Spectroscopy	Online Course	1.0	0	0	0	0	0	3.0
272	CFOC320M	Transition Metal Organometallics in Catalysis and Biology	Online Course	1.0	0	0	0	0	0	3.0
273	CFOC321M	Essentials of Biomolecules : Nucleic Acids and Peptides	Online Course	1.0	0	0	0	0	0	3.0
274	CFOC322M	Fundamentals of Spectroscopy	Online Course	1.0	0	0	0	0	0	3.0
275	CFOC323M	Advanced Chemical Thermodynamics and Kinetics	Online Course	1.0	0	0	0	0	0	3.0
276	CFOC324M	Biochemistry	Online Course	1.0	0	0	0	0	0	3.0
277	CFOC325M	Organometallic Chemistry	Online Course	1.0	0	0	0	0	0	1.0
278	CFOC326M	Chemical Applications of Symmetry and Group Theory	Online Course	1.0	0	0	0	0	0	2.0
279	CFOC327M	Basic Thermodynamics : Classical and Statistical Approaches	Online Course	1.0	0	0	0	0	0	3.0
280	CFOC328M	Medicinal Chemistry	Online Course	1.0	0	0	0	0	0	3.0
281	CFOC329M	Design, Technology and Innovation	Online Course	1.0	0	0	0	0	0	2.0
282	CFOC330M	Geographic Information System	Online Course	1.0	0	0	0	0	0	3.0
283	CFOC331M	Product Design and Innovation	Online Course	1.0	0	0	0	0	0	1.0
284	CFOC332M	Fundamentals of Automotive Systems	Online Course	1.0	0	0	0	0	0	3.0
285	CFOC333M	Electronics Equipment Integration and Prototype Building	Online Course	1.0	0	0	0	0	0	2.0
286	CFOC334M	High Power Multilevel Converters-Analysis, Design and Operational Issues	Online Course	1.0	0	0	0	0	0	3.0
287	CFOC335M	Fuzzy Sets, Logic and Systems and Applications	Online Course	1.0	0	0	0	0	0	3.0
288	CFOC336M	Transmission Lines and Electromagnetic Waves	Online Course	1.0	0	0	0	0	0	3.0
289	CFOC337M	Digital IC Design	Online Course	1.0	0	0	0	0	0	3.0
290	CFOC338M	Signals and Systems	Online Course	1.0	0	0	0	0	0	3.0
291	CFOC339M	Power Management Integrated Circuits	Online Course	1.0	0	0	0	0	0	3.0

		Open Elective							
292	CFOC340M	DC Power Transmission Systems	Online Course	1.0	0	0	0	0	3.0
293	CFOC341M	Microprocessors and Interfacing	Online Course	1.0	0	0	0	0	3.0
294	CFOC342M	Design and Simulation of Power Conversion using Open Source Tools	Online Course	1.0	0	0	0	0	1.0
295	CFOC343M	Integrated Circuits, MOSFETs, OP-Amps and their Applications	Online Course	1.0	0	0	0	0	3.0
296	CFOC344M	Electronic Systems for Cancer Diagnosis	Online Course	1.0	0	0	0	0	3.0
297	CFOC345M	Principles of Signals and Systems	Online Course	1.0	0	0	0	0	3.0
298	CFOC346M	Principles of Communication Systems - I	Online Course	1.0	0	0	0	0	3.0
299	CFOC347M	Principles of Digital Communication	Online Course	1.0	0	0	0	0	3.0
300	CFOC348M	Electric Vehicles - Part 1	Online Course	1.0	0	0	0	0	1.0
301	CFOC349M	Nonlinear Adaptive Control	Online Course	1.0	0	0	0	0	1.0
302	CFOC350M	Antennas	Online Course	1.0	0	0	0	0	3.0
303	CFOC351M	Multirate DSP	Online Course	1.0	0	0	0	0	3.0
304	CFOC352M	Control Engineering	Online Course	1.0	0	0	0	0	3.0
305	CFOC353M	Introduction to Photonics	Online Course	1.0	0	0	0	0	3.0
306	CFOC354M	Microwave Integrated Circuits 2	Online Course	1.0	0	0	0	0	2.0
307	CFOC355M	Analog IC Design	Online Course	1.0	0	0	0	0	3.0
308	CFOC356M	Analog Circuits	Online Course	1.0	0	0	0	0	3.0
309	CFOC357M	Advance Power Electronics and Control	Online Course	1.0	0	0	0	0	2.0
310	CFOC358M	CMOS Digital VLSI Design	Online Course	1.0	0	0	0	0	2.0
311	CFOC359M	Analog Circuits and Systems through SPICE Simulation	Online Course	1.0	0	0	0	0	3.0
312	CFOC360M	Discrete Time Signal Processing	Online Course	1.0	0	0	0	0	2.0
313	CFOC361M	Digital Electronic Circuits	Online Course	1.0	0	0	0	0	3.0
314	CFOC362M	Fundamentals of MIMO Wireless Communication	Online Course	1.0	0	0	0	0	2.0
315	CFOC363M	Spread Spectrum Communications and Jamming	Online Course	1.0	0	0	0	0	3.0
316	CFOC364M	Basic Building Blocks of Microwave Engineering & Design Principles of RF and Microware filters and Amplifiers	Online Course	1.0	0	0	0	0	2.0
317	CFOC365M	Evolution of Air Interface towards 5G	Online Course	1.0	0	0	0	0	2.0
318	CFOC366M	Architectural Design of Digital Integrated Circuits	Online Course	1.0	0	0	0	0	3.0
319	CFOC367M	Electrical Machines - II	Online Course	1.0	0	0	0	0	3.0
320	CFOC368M	Medical Image Analysis	Online Course	1.0	0	0	0	0	1.0
321	CFOC369M	Biomedical Signal Processing	Online Course	1.0	0	0	0	0	3.0
322	CFOC370M	Microprocessors And Microcontrollers	Online Course	1.0	0	0	0	0	3.0
323	CFOC371M	Recent Advances in Transmission Insulator	Online Course	1.0	0	0	0	0	1.0
324	CFOC372M	VLSI Signal Processing	Online Course	1.0	0	0	0	0	2.0
325	CFOC373M	Analog Electronic Circuits	Online Course	1.0	0	0	0	0	3.0
326	CFOC374M	Network Analysis	Online Course	1.0	0	0	0	0	3.0
327	CFOC375M	Optical Engineering	Online Course	1.0	0	0	0	0	3.0
328	CFOC376M	Mathematical Methods and Techniques in Signal Processing	Online Course	1.0	0	0	0	0	3.0
329	CFOC377M	A brief introduction of Micro â€" Sensors	Online Course	1.0	0	0	0	0	1.0
330	CFOC378M	Statistical Signal Processing	Online Course	1.0	0	0	0	0	3.0

		Open Elective							
331	CFOC379M	Nonlinear System Analysis	Online Course	1.0	0	0	0	0	3.0
332	CFOC380M	Ethics in Engineering Practice	Online Course	1.0	0	0	0	0	2.0
333	CFOC381M	Introduction to Research	Online Course	1.0	0	0	0	0	2.0
334	CFOC382M	Matlab Programming for Numerical Computation	Online Course	1.0	0	0	0	0	2.0
335	CFOC383M	Roadmap for Patent Creation	Online Course	1.0	0	0	0	0	2.0
336	CFOC384M	Entrepreneurship Essentials	Online Course	1.0	0	0	0	0	3.0
337	CFOC385M	Fuzzy Logic and Neural Networks	Online Course	1.0	0	0	0	0	2.0
338	CFOC386M	Microeconomics : Theory & Applications	Online Course	1.0	0	0	0	0	3.0
339	CFOC387M	Introduction to Environmental Economics	Online Course	1.0	0	0	0	0	3.0
340	CFOC388M	Energy Resources, Economics and Environment	Online Course	1.0	0	0	0	0	3.0
341	CFOC389M	Literary Criticism (From Plato to Leavis)	Online Course	1.0	0	0	0	0	3.0
342	CFOC390M	Twentieth Century Fiction	Online Course	1.0	0	0	0	0	3.0
343	CFOC391M	Effective Writing	Online Course	1.0	0	0	0	0	1.0
344	CFOC392M	Strategic Trade and Protectionism - Theories and Empirics	Online Course	1.0	0	0	0	0	2.0
345	CFOC393M	Introduction to Cultural Studies	Online Course	1.0	0	0	0	0	3.0
346	CFOC394M	Introduction to Basic Spoken Sanskrit	Online Course	1.0	0	0	0	0	1.0
347	CFOC395M	Speaking Effectively	Online Course	1.0	0	0	0	0	2.0
348	CFOC396M	Soft Skill Development	Online Course	1.0	0	0	0	0	2.0
349	CFOC397M	Intellectual Property	Online Course	1.0	0	0	0	0	3.0
350	CFOC398M	English Language for Competitive Exams	Online Course	1.0	0	0	0	0	3.0
351	CFOC399M	English Literature for Competitive Exams	Online Course	1.0	0	0	0	0	2.0
352	CFOC400M	Language and Mind	Online Course	1.0	0	0	0	0	2.0
353	CFOC401M	The Nineteenth - Century English Novel	Online Course	1.0	0	0	0	0	3.0
354	CFOC402M	Introduction to World Literature	Online Course	1.0	0	0	0	0	3.0
355	CFOC403M	Patent Drafting for Beginners	Online Course	1.0	0	0	0	0	1.0
356	CFOC404M	Patent Law for Engineers and Scientists	Online Course	1.0	0	0	0	0	3.0
357	CFOC405M	Economic Growth & Development	Online Course	1.0	0	0	0	0	2.0
358	CFOC406M	Human Behaviour	Online Course	1.0	0	0	0	0	2.0
359	CFOC407M	Introduction to Modern Indian Political Thought	Online Course	1.0	0	0	0	0	3.0
360	CFOC408M	English Literature of the Romantic Period, 1798 - 1832	Online Course	1.0	0	0	0	0	2.0
361	CFOC409M	Literature, Culture and Media	Online Course	1.0	0	0	0	0	3.0
362	CFOC410M	Introduction to Brain & Behaviour	Online Course	1.0	0	0	0	0	2.0
363	CFOC411M	Modern Indian Writing in Translation	Online Course	1.0	0	0	0	0	3.0
364	CFOC412M	Introduction to Political Ideologies : Contexts, Ideas, and Practices	Online Course	1.0	0	0	0	0	3.0
365	CFOC413M	Indian Business History	Online Course	1.0	0	0	0	0	2.0
366	CFOC414M	German - II	Online Course	1.0	0	0	0	0	3.0
367	CFOC415M	German - I	Online Course	1.0	0	0	0	0	3.0
368	CFOC416M	Feminism : Concepts and Theories	Online Course	1.0	0	0	0	0	3.0
369	CFOC417M	An Introduction to Smooth Manifolds	Online Course	1.0	0	0	0	0	3.0
370	CFOC418M	Measure Theory	Online Course	1.0	0	0	0	0	3.0
371	CFOC419M	Basic Real Analysis	Online Course	1.0	0	0	0	0	3.0

		Open Elective							
372	CFOC420M	Probabilistic Methods in PDE	Online Course	1.0	0	0	0	0	3.0
373	CFOC421M	Graph Theory	Online Course	1.0	0	0	0	0	2.0
374	CFOC422M	Transform Calculus and its applications in Differential Equations	Online Course	1.0	0	0	0	0	3.0
375	CFOC423M	Integral and Vector Calculus	Online Course	1.0	0	0	0	0	3.0
376	CFOC424M	Basic Linear Algebra	Online Course	1.0	0	0	0	0	2.0
377	CFOC425M	Introduction to Rings And Fields	Online Course	1.0	0	0	0	0	2.0
378	CFOC426M	Numerical Methods : Finite Difference Approach	Online Course	1.0	0	0	0	0	1.0
379	CFOC427M	Numerical Linear Algebra	Online Course	1.0	0	0	0	0	3.0
380	CFOC428M	Ordinary and Partial Differential Equations and Applications	Online Course	1.0	0	0	0	0	3.0
381	CFOC429M	Advanced Engineering Mathematics	Online Course	1.0	0	0	0	0	3.0
382	CFOC430M	Mathematical Methods and its Applications	Online Course	1.0	0	0	0	0	3.0
383	CFOC431M	Multivariable Calculus	Online Course	1.0	0	0	0	0	2.0
384	CFOC432M	Chaotic Dynamical System	Online Course	1.0	0	0	0	0	3.0
385	CFOC433M	Engineering Mathematics II	Online Course	1.0	0	0	0	0	3.0
386	CFOC434M	Advanced Probability Theory	Online Course	1.0	0	0	0	0	3.0
387	CFOC435M	Statistical Inference	Online Course	1.0	0	0	0	0	2.0
388	CFOC436M	Introduction to Algebraic Geometry and Commutative Algebra	Online Course	1.0	0	0	0	0	3.0
389	CFOC437M	Linear Algebra	Online Course	1.0	0	0	0	0	3.0
390	CFOC438M	Introduction to Probability and Statistics	Online Course	1.0	0	0	0	0	1.0
391	CFOC439M	Descriptive Statistics with R Software	Online Course	1.0	0	0	0	0	2.0
392	CFOC440M	Engineering Mechanics - Statics and Dynamics	Online Course	1.0	0	0	0	0	2.0
393	CFOC441M	Experimental Stress Analysis	Online Course	1.0	0	0	0	0	3.0
394	CFOC442M	Robotics and Control : Theory and Practice	Online Course	1.0	0	0	0	0	2.0
395	CFOC443M	Computational Fluid Dynamics for Incompressible Flows	Online Course	1.0	0	0	0	0	3.0
396	CFOC444M	Experimental Methods in Fluid Mechanics	Online Course	1.0	0	0	0	0	3.0
397	CFOC445M	Foundations of Computational Materials Modelling	Online Course	1.0	0	0	0	0	3.0
398	CFOC446M	Acoustic Materials and Metamaterials	Online Course	1.0	0	0	0	0	2.0
399	CFOC447M	Power Plant Engineering	Online Course	1.0	0	0	0	0	2.0
400	CFOC448M	Applied Ergonomics	Online Course	1.0	0	0	0	0	3.0
401	CFOC449M	Product Design and Manufacturing	Online Course	1.0	0	0	0	0	3.0
402	CFOC450M	Manufacturing Process Technology I & II	Online Course	1.0	0	0	0	0	3.0
403	CFOC451M	Introduction To Mechanical Micro Machining	Online Course	1.0	0	0	0	0	3.0
404	CFOC452M	Non Traditional Abrasive Machining Processes Ultrasonic, Abrasive Jet and Abrasive Water Jet Machining	Online Course	1.0	0	0	0	0	1.0
405	CFOC453M	Gear And Gear Unit Design : Theory And Practice	Online Course	1.0	0	0	0	0	2.0
406	CFOC454M	Conduction and Convection Heat Transfer	Online Course	1.0	0	0	0	0	3.0
407	CFOC455M	Laws of Thermodynamics	Online Course	1.0	0	0	0	0	1.0
408	CFOC456M	Kinematics of Mechanisms and Machines	Online Course	1.0	0	0	0	0	2.0
409	CFOC457M	Introduction To Fluid Mechanics	Online Course	1.0	0	0	0	0	3.0
410	CFOC458M	Fundamental of Welding Science and Technology	Online Course	1.0	0	0	0	0	2.0

		Open Elective							
411	CFOC459M	Introduction to Abrasive Machining and Finishing Processes	Online Course	1.0	0	0	0	0	2.0
412	CFOC460M	Automatic Control	Online Course	1.0	0	0	0	0	2.0
413	CFOC461M	Inspection and Quality Control in Manufacturing	Online Course	1.0	0	0	0	0	1.0
414	CFOC462M	Diffusion in Multicomponent Solids	Online Course	1.0	0	0	0	0	3.0
415	CFOC463M	Processing of Polymers and Polymer Composites	Online Course	1.0	0	0	0	0	2.0
416	CFOC464M	Operations Management	Online Course	1.0	0	0	0	0	3.0
417	CFOC465M	Convective Heat Transfer	Online Course	1.0	0	0	0	0	1.0
418	CFOC466M	Two phase flow and heat transfer	Online Course	1.0	0	0	0	0	1.0
419	CFOC467M	Steam and Gas Power Systems	Online Course	1.0	0	0	0	0	2.0
420	CFOC468M	Principles of Casting Technology	Online Course	1.0	0	0	0	0	2.0
421	CFOC469M	Financial Mathematics	Online Course	1.0	0	0	0	0	3.0
422	CFOC470M	Modelling and Simulation of Dynamic Systems	Online Course	1.0	0	0	0	0	2.0
423	CFOC471M	Fundamentals of combustion for propulsion	Online Course	1.0	0	0	0	0	2.0
424	CFOC472M	Industrial Automation And Control	Online Course	1.0	0	0	0	0	3.0
425	CFOC473M	Fundamentals of Nuclear Power Generation	Online Course	1.0	0	0	0	0	3.0
426	CFOC474M	Mechanics of Machining	Online Course	1.0	0	0	0	0	2.0
427	CFOC475M	IC Engines and Gas Turbines	Online Course	1.0	0	0	0	0	3.0
428	CFOC476M	Principles of Industrial Engineering	Online Course	1.0	0	0	0	0	3.0
429	CFOC477M	Computer Integrated Manufacturing	Online Course	1.0	0	0	0	0	3.0
430	CFOC478M	Machining Science	Online Course	1.0	0	0	0	0	1.0
431	CFOC479M	Introduction to Stochastic Processes	Online Course	1.0	0	0	0	0	3.0
432	CFOC480M	Introduction to System Dynamics Modeling	Online Course	1.0	0	0	0	0	2.0
433	CFOC481M	Management of New Products and Services	Online Course	1.0	0	0	0	0	1.0
434	CFOC482M	Integrated Marketing Management	Online Course	1.0	0	0	0	0	2.0
435	CFOC483M	Simulation of Business Systems: An Applied Approach	Online Course	1.0	0	0	0	0	2.0
436	CFOC484M	Production and Operation Management	Online Course	1.0	0	0	0	0	3.0
437	CFOC485M	Services Marketing : Integrating People, Technology, Strategy	Online Course	1.0	0	0	0	0	2.0
438	CFOC486M	Managerial Skills for Interpersonal Dynamics	Online Course	1.0	0	0	0	0	3.0
439	CFOC487M	Financial Institutions and Markets	Online Course	1.0	0	0	0	0	3.0
440	CFOC488M	Business Analytics For Management Decision	Online Course	1.0	0	0	0	0	3.0
441	CFOC489M	Services Marketing : A Practical Approach	Online Course	1.0	0	0	0	0	1.0
442	CFOC490M	Sales and Distribution Management	Online Course	1.0	0	0	0	0	2.0
443	CFOC491M	Principles of Human Resource Management	Online Course	1.0	0	0	0	0	2.0
444	CFOC492M	Managing change in organizations	Online Course	1.0	0	0	0	0	2.0
445	CFOC493M	Management of Inventory Systems	Online Course	1.0	0	0	0	0	3.0
446	CFOC494M	Quality Design And Control	Online Course	1.0	0	0	0	0	3.0
447	CFOC495M	Foundation Course in Managerial Economics	Online Course	1.0	0	0	0	0	2.0
448	CFOC496M	Engineering Econometrics	Online Course	1.0	0	0	0	0	3.0
449	CFOC497M	Financial Statement Analysis and Reporting	Online Course	1.0	0	0	0	0	3.0
450	CFOC498M	Business Statistics	Online Course	1.0	0	0	0	0	3.0
451	CFOC499M	Global Marketing Management	Online Course	1.0	0	0	0	0	2.0

				Open Elective							
452	CFOC500M	Marketing Research and Analysis - II	Online Course	1.0	0	0	0	0	3.0
453	CFOC501M	Infrastructure Planning and Managements	Online Course	1.0	0	0	0	0	3.0
454	CFOC502M	Modelling and Analytics for Supply Chain Management	Online Course	1.0	0	0	0	0	3.0
455	CFOC503M	Marketing Analytics	Online Course	1.0	0	0	0	0	3.0
456	CFOC504M	Financial Management For Managers	Online Course	1.0	0	0	0	0	3.0
457	CFOC505M	Management of Commercial Banking	Online Course	1.0	0	0	0	0	3.0
458	CFOC506M	Behavioral and Personal Finance	Online Course	1.0	0	0	0	0	2.0
459	CFOC507M	Total Quality Management - 1	Online Course	1.0	0	0	0	0	2.0
460	CFOC508M	Entrepreneurship	Online Course	1.0	0	0	0	0	3.0
461	CFOC509M	Modeling of Tundish Steelmaking Process in Continuous Casting	Online Course	1.0	0	0	0	0	2.0
462	CFOC510M	Fundamentals of Electronic Materials and Devices	Online Course	1.0	0	0	0	0	2.0
463	CFOC511M	Introduction to Materials Science and Engineering	Online Course	1.0	0	0	0	0	3.0
464	CFOC512M	Corrosion - Part I	Online Course	1.0	0	0	0	0	2.0
465	CFOC513M	Solar Photovoltaics: Principles, Technologies and Materials	Online Course	1.0	0	0	0	0	2.0
466	CFOC514M	Welding Processes	Online Course	1.0	0	0	0	0	3.0
467	CFOC515M	Theory and Practice of Non Destructive Testing	Online Course	1.0	0	0	0	0	2.0
468	CFOC516M	Steel Quality: Role of Secondary Refining and Continuous Casting	Online Course	1.0	0	0	0	0	3.0
469	CFOC517M	Materials Science and Engineering	Online Course	1.0	0	0	0	0	2.0
470	CFOC518M	Surface Engineering of Nanomaterials	Online Course	1.0	0	0	0	0	2.0
471	CFOC519M	Dealing with Materials Data: Collection, Analysis and Interpretation	Online Course	1.0	0	0	0	0	3.0
472	CFOC520M	Friction and Wear of Materials: Principle and Case Studies	Online Course	1.0	0	0	0	0	2.0
473	CFOC521M	Material Characterization	Online Course	1.0	0	0	0	0	3.0
474	CFOC522M	Offshore Structures Under Special Environmental Loads Including Fire Resistance	Online Course	1.0	0	0	0	0	3.0
475	CFOC523M	Physics of Biological Systems	Online Course	1.0	0	0	0	0	3.0
476	CFOC524M	Group Theory methods in Physics	Online Course	1.0	0	0	0	0	3.0
477	CFOC525M	Experimental Physics - II	Online Course	1.0	0	0	0	0	3.0
478	CFOC526M	Quantum Mechanics I	Online Course	1.0	0	0	0	0	3.0
479	CFOC527M	A Brief Course on Superconductivity	Online Course	1.0	0	0	0	0	1.0
480	CFOC528M	Fiber Optics	Online Course	1.0	0	0	0	0	2.0
481	CFOC529M	Electromagnetism	Online Course	1.0	0	0	0	0	3.0
482	CFOC530M	Experimental Physics III	Online Course	1.0	0	0	0	0	3.0
483	CFOC531M	Electronic Theory of Solids	Online Course	1.0	0	0	0	0	3.0
484	CFOC532M	Introduction to Atmospheric and Space Sciences	Online Course	1.0	0	0	0	0	3.0
485	CFOC533M	Optical Sensors	Online Course	1.0	0	0	0	0	1.0
486	CFOC534M	Evaluation of Textiles Materials	Online Course	1.0	0	0	0	0	3.0
487	CFOC535M	Advanced Textile Printing Technology	Online Course	1.0	0	0	0	0	2.0
488	CFOC536M	Textured Yarn Technology	Online Course	1.0	0	0	0	0	3.0
489	CFOC537M	Theory of Yarn Structure	Online Course	1.0	0	0	0	0	3.0

		Open Elective							
490	CFOC538M	Testing of Functional and Technical Textiles	Online Course	1.0	0	0	0	0	2.0
491	CFOC539M	Applied Optimization for Wireless, Machine Learning, Big Data	Online Course	1.0	0	0	0	0	3.0
492	CFOC540M	Deep Learning for Computer Vision	Online Course	1.0	0	0	0	0	3.0
493	CFOC541M	Deep Learning for Visual Computing	Online Course	1.0	0	0	0	0	3.0
494	CFOC542M	Principles of Compiler Design	Online Course	1.0	0	0	0	0	3.0
495	CFOC543M	International Business	Online Course	1.0	0	0	0	0	3.0
496	CFOC544M	Learning Analytics Tools	Online Course	1.0	0	0	0	0	3.0
497	CFOC545M	Advanced IoT Applications	Online Course	1.0	0	0	0	0	2.0
498	CFOC546M	Algorithms for Big Data	Online Course	1.0	0	0	0	0	2.0
499	CFOC547M	Decision Making Using Financial Accounting	Online Course	1.0	0	0	0	0	2.0
500	CFOC548M	Introduction on Intellectual Property to Engineers and Technologists	Online Course	1.0	0	0	0	0	2.0
501	CFOC549M	Introduction to Quantum Computing: Quantum Algorithms and Qiskit	Online Course	1.0	0	0	0	0	1.0
502	CFOC550M	Numerical Analysis	Online Course	1.0	0	0	0	0	4.0
503	CFOC551M	Quantum Technology and Quantum Phenomena in Macroscopic Systems	Online Course	1.0	0	0	0	0	3.0
504	CFOC552M	Electrochemical Impedance Spectroscopy	Online Course	1.0	0	0	0	0	3.0
505	CFOC553M	Carbon Materials and Manufacturing	Online Course	1.0	0	0	0	0	3.0
506	CFOC554M	Electronic Packaging and Manufacturing	Online Course	1.0	0	0	0	0	2.0
507	CFOC555M	Finite Element Method	Online Course	1.0	0	0	0	0	3.0
508	CFOC556M	Physics of Materials	Online Course	1.0	0	0	0	0	3.0
509	CFOC557M	X-ray Crystallography and Diffraction	Online Course	1.0	0	0	0	0	3.0
510	CFOC558M	Solar Photovoltaics Fundamentals, Technology and Applications	Online Course	1.0	0	0	0	0	2.0
511	CFOC559M	Design of Photovoltaic Systems	Online Course	1.0	0	0	0	0	3.0
512	CFOC560M	Fundamentals of Micro and Nanofabrication	Online Course	1.0	0	0	0	0	3.0
513	CFOC561M	Biomedical Nanotechnology	Online Course	1.0	0	0	0	0	1.0
514	CFOC562M	Design and Analysis of VLSI Subsystems	Online Course	1.0	0	0	0	0	3.0
515	CFOC563M	Physics of Nanoscale Devices	Online Course	1.0	0	0	0	0	3.0
516	CFOC564M	Photonic Integrated Circuit	Online Course	1.0	0	0	0	0	3.0
517	CFOC565M	Technologies for Clean and Renewable Energy Production	Online Course	1.0	0	0	0	0	2.0
518	CFOC566M	Elements of Solar Energy Conversion	Online Course	1.0	0	0	0	0	3.0
519	CFOC567M	Physics of Renewable Energy Systems	Online Course	1.0	0	0	0	0	3.0
520	CFOC568M	Structural Analysis of Nanomaterials	Online Course	1.0	0	0	0	0	1.0
521	CFOC569M	Computational Approach to Materials Science and Engineering	Online Course	1.0	0	0	0	0	2.0
522	CFOC570M	Public Speaking	Online Course	1.0	0	0	0	0	3.0
523	CFOC571M	Introduction To CFD	Online Course	1.0	0	0	0	0	3.0
524	CFOC572M	Dairy And Food Process And Products Technology	Online Course	1.0	0	0	0	0	3.0
525	CFOC573M	Fundamentals Of Food Process Engineering	Online Course	1.0	0	0	0	0	3.0
526	CFOC574M	Micro Irrigation Engineering	Online Course	1.0	0	0	0	0	3.0
527	CFOC575M	Wildlife Ecology	Online Course	1.0	0	0	0	0	3.0

		Open Elective							
528	CFOC576M	Integrated Waste Management For A Smart City	Online Course	1.0	0	0	0	0	3.0
529	CFOC577M	Introduction To Multimodal Urban Transportation Systems (MUTS)	Online Course	1.0	0	0	0	0	3.0
530	CFOC578M	Wastewater Treatment And Recycling	Online Course	1.0	0	0	0	0	3.0
531	CFOC579M	Structural Geology	Online Course	1.0	0	0	0	0	3.0
532	CFOC580M	Real-Time Systems	Online Course	1.0	0	0	0	0	3.0
533	CFOC581M	Algorithmic Game Theory	Online Course	1.0	0	0	0	0	3.0
534	CFOC582M	Computational Number Theory and Algebra	Online Course	1.0	0	0	0	0	3.0
535	CFOC583M	Power System Protection	Online Course	1.0	0	0	0	0	3.0
536	CFOC585M	Great Experiments In Psychology	Online Course	1.0	0	0	0	0	1.0
537	CFOC586M	Spoken Sanskrit: Basic and Intermediate Levels	Online Course	1.0	0	0	0	0	3.0
538	CFOC587M	Economics of Banking and Finance Markets	Online Course	1.0	0	0	0	0	3.0
539	CFOC588M	Concepts Of Thermodynamics	Online Course	1.0	0	0	0	0	3.0
540	CFOC589M	Engineering Drawing And Computer Graphics	Online Course	1.0	0	0	0	0	3.0
541	CFOC590M	Management Information System	Online Course	1.0	0	0	0	0	3.0
542	CFOC591M	Principles Of Management	Online Course	1.0	0	0	0	0	3.0
543	CFOC592M	Stress Management	Online Course	1.0	0	0	0	0	1.0
544	CFOC593M	Corporate Finance	Online Course	1.0	0	0	0	0	3.0
545	CFOC594M	Customer Relationship Management	Online Course	1.0	0	0	0	0	2.0
546	CFOC595M	Urbanization and Environment	Online Course	1.0	0	0	0	0	2.0
547	CFOC596M	Digital Speech Processing	Online Course	1.0	0	0	0	0	2.0
548	CFOC597M	Globalization And Culture	Online Course	1.0	0	0	0	0	2.0
549	CFOC598M	Elements of Visual Representation	Online Course	1.0	0	0	0	0	2.0
550	CFOC599M	Leadership and Team Effectiveness	Online Course	1.0	0	0	0	0	3.0
551	CFOC600M	Data Analysis for Biologists	Online Course	1.0	0	0	0	0	2.0
552	CFOC601M	Advance Course in Social Psychology	Online Course	1.0	0	0	0	0	3.0
553	CFOC602M	Product and Brand Management	Online Course	1.0	0	0	0	0	3.0
554	CFOC603M	Quantitative Investment Management	Online Course	1.0	0	0	0	0	2.0
555	CFOC604M	Entrepreneurship and IP Strategy	Online Course	1.0	0	0	0	0	2.0
556	CFOC605M	Sensor Technologies: Physics, Fabrication, and Circuits	Online Course	1.0	0	0	0	0	2.0
557	CFOC606M	Ecology and Environment	Online Course	1.0	0	0	0	0	2.0
558	CFOC607M	Analog VLSI Design	Online Course	1.0	0	0	0	0	1.0
559	CFOC608M	The Science of Happiness and Wellbeing	Online Course	1.0	0	0	0	0	2.0
560	CFOC609M	Introduction to Basic Spoken Sanskrit and Intermediate Level of Spoken Sanskrit	Online Course	1.0	0	0	0	0	3.0
561	CFOC610M	Advanced Algorithmic Trading and Portfolio Management	Online Course	1.0	0	0	0	0	2.0
562	CFOC611M	Advanced Quantum Mechanics with Applications	Online Course	1.0	0	0	0	0	2.0
563	CFOC612M	Business Fundamentals for Entrepreneurs	Online Course	1.0	0	0	0	0	1.0
564	CFOC613M	C-Based VLSI Design	Online Course	1.0	0	0	0	0	3.0
565	CFOC614M	The Popular Gothic Novel	Online Course	1.0	0	0	0	0	3.0
566	CFOC615M	Introduction To Biomimicry	Online Course	1.0	0	0	0	0	2.0
567	CFOC616M	Applied Linguistics	Online Course	1.0	0	0	0	0	3.0

		Open Elective							
568	CFOC617M	Gender and Literature	Online Course	1.0	0	0	0	0	2.0
569	CFOC618M	Developing Soft Skills and Personality	Online Course	1.0	0	0	0	0	2.0
570	CFOC619M	Corporate Finance_2	Online Course	1.0	0	0	0	0	2.0
571	CFOC620M	Architectural Acoustics	Online Course	1.0	0	0	0	0	2.0
572	CFOC621M	An Introduction to Indian Literary Theory	Online Course	1.0	0	0	0	0	2.0
573	CFOC622M	Indian Art: Materials, Techniques and Artistic Practices	Online Course	1.0	0	0	0	0	3.0
574	CFOC623M	Space Flight Mechanics	Online Course	1.0	0	0	0	0	3.0
575	CFOC624M	Industrial Safety Engineering	Online Course	1.0	0	0	0	0	1.0
576	CFOC625M	Advanced Thermodynamics and Combustion	Online Course	1.0	0	0	0	0	3.0
577	CFOC626M	Postmodernism in Literature	Online Course	1.0	0	0	0	0	2.0
578	CFOC627M	Natural Language Processing	Online Course	1.0	0	0	0	0	3.0
579	CFOC628M	Appreciating Carnatic Music	Online Course	1.0	0	0	0	0	2.0
580	CFOC629M	Body language:Key to Professional Success	Online Course	1.0	0	0	0	0	1.0
581	CFOC630M	Business To Business Marketing	Online Course	1.0	0	0	0	0	3.0
582	CFOC631M	Conservation Geography	Online Course	1.0	0	0	0	0	3.0
583	CFOC632M	Enclosure design of Electronics equipment	Online Course	1.0	0	0	0	0	3.0
584	CFOC633M	Environment And Development	Online Course	1.0	0	0	0	0	3.0
585	CFOC634M	Introduction to Aerospace Engineering	Online Course	1.0	0	0	0	0	3.0
586	CFOC635M	Operations And Supply Chain Management	Online Course	1.0	0	0	0	0	3.0
587	CFOC636M	Programming in modern c++	Online Course	1.0	0	0	0	0	3.0
588	CFOC637M	Psychology Of Learning	Online Course	1.0	0	0	0	0	3.0
589	CFOC638M	Urban Utilities Planning : Water Supply, Sanitation And Drainage	Online Course	1.0	0	0	0	0	3.0
590	CFOC639M	Research Methodology	Online Course	1.0	0	0	0	0	2.0
591	CFOC640M	Communication Networks	Online Course	1.0	0	0	0	0	3.0
592	CFOC641M	Aircraft Design	Online Course	1.0	0	0	0	0	3.0
593	CFOC642M	Conservation Economics	Online Course	1.0	0	0	0	0	3.0
594	CFOC643M	Cryogenic Hydrogen Technology	Online Course	1.0	0	0	0	0	2.0
595	CFOC644M	Explosions and Safety	Online Course	1.0	0	0	0	0	3.0
596	CFOC645M	Financial Accounting	Online Course	1.0	0	0	0	0	2.0
597	CFOC646M	Philosophy and Critical Thinking	Online Course	1.0	0	0	0	0	3.0
598	CFOC647M	Air pollution and Control	Online Course	1.0	0	0	0	0	3.0
599	CFOC648M	Centre-State Relations in India	Online Course	1.0	0	0	0	0	2.0
600	CFOC649M	Energy Resources, Economics, and Sustainability	Online Course	1.0	0	0	0	0	2.0
601	CFOC650M	Human Physiology	Online Course	1.0	0	0	0	0	3.0
602	CFOC651M	Psychology of Stress, Health and Well-being	Online Course	1.0	0	0	0	0	3.0
603	CFOC652M	Signal Processing Techniques and its Applications	Online Course	1.0	0	0	0	0	3.0
604	CFOC653M	Strength & Conditioning for the Indian Population	Online Course	1.0	0	0	0	0	3.0
605	CFOC654M	The Evolution of the Earth and Life	Online Course	1.0	0	0	0	0	3.0
606	CFOC655M	United Nations Sustainable Development Goals (UN SDGs)	Online Course	1.0	0	0	0	0	3.0
607	CFOC656M	Usability Engineering	Online Course	1.0	0	0	0	0	3.0
608	CFOC658M	Design Practice - II	Online Course	1.0	0	0	0	0	2.0

			Open Elective							
609	CFOC659M	Essentials of Data Science With R Software - 1: Probability and Statistical Inference	Online Course	1.0	0	0	0	0	3.0
610	CFOC660M	Applied Linear Algebra in AI and ML	Online Course	1.0	0	0	0	0	3.0

			Non-graded Core Requirement						
sl.no	Course Code	Course Title	Course Type	Version	L	T	P	J	Credits
1	BCHY102N	Environmental Sciences	Online Course	1.0	0	0	0	0	2.0
2	BCSE101N	Introduction to Engineering	Project	1.0	0	0	0	0	1.0
3	BEXC100N	Extra curricular activities	Basket	1.0	0	0	0	0	2.0
4	BHUM101N	Ethics and Values	Online Course	1.0	0	0	0	0	2.0
5	BSSC101N	Essence of Traditional Knowledge	Online Course	1.0	0	0	0	0	2.0
6	BSSC102N	Indian Constitution	Online Course	1.0	0	0	0	0	2.0

			Bridge Course						
sl.no	Course Code	Course Title	Course Type	Version	L	T	P	J	Credits
1	BENG101N	Effective English Communication	Lab Only	1.0	0	0	4	0	2.0

			Specialization Elective						
sl.no	Course Code	Course Title	Course Type	Version	L	T	P	J	Credits
1	BCSE420L	Sensors, Actuators and Signal Conditioning	Theory Only	1.0	2	0	0	0	2.0
2	BCSE420P	Sensors, Actuators and Signal Conditioning Lab	Lab Only	1.0	0	0	2	0	1.0
3	BCSE421L	Robotics: Kinematics, Dynamics and Motion Control	Theory Only	1.0	3	0	0	0	3.0
4	BCSE422L	Robot Modeling and Simulation	Theory Only	1.0	2	0	0	0	2.0
5	BCSE422P	Robot Modeling and Simulation Lab	Lab Only	1.0	0	0	2	0	1.0
6	BCSE423L	Robot Programming	Theory Only	1.0	2	0	0	0	2.0
7	BCSE423P	Robot Programming Lab	Lab Only	1.0	0	0	2	0	1.0
8	BCSE424L	Machine Learning for Robotics	Theory Only	1.0	2	0	0	0	2.0
9	BCSE424P	Machine Learning for Robotics Lab	Lab Only	1.0	0	0	2	0	1.0
10	BCSE425L	Robotic Perception	Theory Only	1.0	3	0	0	0	3.0
11	BCSE425P	Robotic Perception Lab	Lab Only	1.0	0	0	2	0	1.0
12	BCSE426L	Robotic Process Automation	Theory Only	1.0	2	0	0	0	2.0
13	BCSE426P	Robotic Process Automation Lab	Lab Only	1.0	0	0	2	0	1.0
14	BCSE427L	Cognitive Robotics	Theory Only	1.0	2	0	0	0	2.0
15	BCSE427P	Cognitive Robotics Lab	Lab Only	1.0	0	0	2	0	1.0
16	BCSE428L	Autonomous Drones	Theory Only	1.0	2	0	0	0	2.0
17	BCSE428P	Autonomous Drones Lab	Lab Only	1.0	0	0	2	0	1.0

		Specialization Elective							
18	BCSE432E	Reinforcement Learning	Embedded Theory and Lab	1.0	3	0	2	0	4.0