



Karunya INSTITUTE OF TECHNOLOGY AND SCIENCES

(Declared as Deemed to be University under Sec.3 of the UGC Act, 1956)

MoE, UGC & AICTE Approved

NAAC A++ Accredited

17.4.1 Education for SDGs commitment to meaningful education

2021-22 ODD Semester									
S. No	Course Code	Name of the Course	% of SDG in syllabus content						
			Zero Hunger	Good Health and Well-Being	Quality Education	Gender Equality	Clean Water and Sanitation	Affordable and Clean Energy	Sustainable Cities and Communities
1	20FP3021	Green Technology in Food Processing	0	0	0	0	20	20	20
2	20FP3014	Advances in Refrigeration and Cold Supply Chain Management	0	0	65	0	0	18	17
3	18FP2016	Unit Operations in Food Process Engineering - II	0	0	80	0	0	0	0
4	18FP2010	Heat and Mass Transfer	0	0	80		0	20	0
5	18ME2035	Technical Aptitude	0	0	100	0	0	0	0
6	18ME2050	Finite Element Analysis	0	0	100	0	0	0	0
7	20FP2001	Food Process Calculations	0	0	100	0	0	0	0
8	20FP3018	Emerging Trends in Food Process Engineering	0	0	100	0	0	0	0

9	20ME1003	Soft skills-2021 B.Tech Mech A	0	0	100	0	0	0	0
10	20ME3998	Dissertation Phase I	0	0	100	0	0	0	0
11	21ME3003	Design for Manufacture and Assembly	0	0	100	0	0	0	0
12	20FP3022	Food Supply Chain Management	0	0	100	0	0	0	20
13	18ME1001	Engineering Drawing	0	0	100	0	20	0	0
14	18ME1002	Engineering Graphics (AutoCAD)	0	0	100	0	20	0	0
15	20ME1009	Engineering Drawing and Graphics-2021 B.Tech BME A	0	0	100	0	20	0	0
16	20ME2016	Fluid Mechanics and Fluid Machines	0	0	100	0	20	0	0
17	19EC2020	Analysis and Design of Digital IC	0	5	5	2	0	5	10
18	20ME3002	Intelligent Robotics systems in Manufacturing	0	10	100	0	0	0	0
19	20ME3003	Internet of Things in Manufacturing	0	10	100	0	0	0	0
20	20ME3009	New-Age Materials	0	10	100	0	0	0	0
21	21ME3016	Microcontrollers for Sensor Control and Interfaces	0	10	100	0	0	0	0
22	19ME2020	Drone Technology	0	10	100	0	0	0	20
23	19ME2002	Industrial Practice - IV (Smart Engine, Transmission Technologies and Brake Dynamics)	0	10	100	0	0	30	10
24	18FP2043	Processing of Food Commodities	0	20	0	0	0	0	0

25	18FP2044	Technology of Packaging	0	20	0	0	0	0	0
26	20FP2002	Food Chemistry	0	20	0	0	0	0	0
27	20FT3001	Food Chemistry	0	20	0	0	0	0	0
28	20FT3017	Food Additives and Ingredients	0	20	0	0	0	0	0
29	20FT3019	Nutraceuticals and Health Foods	0	20	0	0	0	0	0
30	20FP3005	Design of Food Processing Equipments	0	20	80	0	0	0	0
31	20ME3011	Materials and Characterization Techniques	0	20	100	0	0	0	0
32	18ME2047	Power Plant Engineering	0	20	100	0	10	10	10
33	20ME3008	Non-Destructive Testing and Inspection	0	30	100	0	0	0	20
34	18ME2014	Solid Mechanics	0	30	100	0	0	5	5
35	20ME1007	3D Printing Technology	0	30	100	0	10	0	0
36	20ME3001	Additive Manufacturing Technologies	0	30	100	0	10	0	0
37	18ME2057	Welding Technology	0	30	100	0	10	10	10
38	18ME2073	Modern Manufacturing Techniques	0	30	100	0	10	20	10
39	20FT3020	Food Packaging Technology	0	40	0	0	0	0	0
40	21ME3015	Ergonomics in Bio-Medical Instrumentation	0	40	100	0	0	0	0
41	20FP3001	Mass Transfer and Separation Techniques in Food Processing	0	40	100	0	0	20	0
42	18ME2060	Industrial Safety Engineering	0	40	100	0	10	30	10
43	20FP3006	Advances in Food Process Engineering	0	50	0	0	0	0	0
44	18FP2031	Plantation and Spices Product Technology	0	50	100	0	0	0	0

45	20FT3002	Food Microbiology	0	60	0	0	0	0	0
46	20FT3003	Principles of Food Processing and Preservation	0	60	0	0	0	0	0
47	20FP2006	Applied Food Microbiology	0	100	0	0	0	0	0
48	18CE2009	Instrumentation and Sensor Technologies for Civil Engineering Applications	0		20		0		20
49	18AT2020	Process Engineering for Spices and Plantation Crops	20%	50%					
50	18AT2008	Post-Harvest Engineering of Horticultural Crops	50%	50%					
51	18AT2011	Extension Methodology and Transfer of Technology	60%		90%				
52	20AG2008	Fundamentals of Plant Breeding	90%	60%	75%		50%		60%
53	21AG3027	Principles of Plant Breeding	90%	60%	75%		50%		60%
54	18AG2019	Crop Improvement I (Kharif crops)	95%	70%	70%		70%		80%
55	18AG2025	Entrepreneurship Development and Business Management	95%			5			
56	18AG2003	Agricultural Finance and Cooperation	100%	100%	100%	100%	100%		100%
57	21AG3001	Modern Concepts in Crop Production	100%	100%	100%				100%
58	21AG3006	Cropping Systems and Sustainable Agriculture	100%	100%	100%				100%
59	21AG3008	Agronomy of Major Cereals and Pulses	100%	100%	100%				100%

60	21AG3009	Agronomy of Oilseed, Fiber and Sugar crops	100%	100%	100%				100%
61	17MC3020	Development Communication	10	10	10	10	10	10	20
62	18CE2025	Hydrology and Water Resources Engineering	10	10	10		50		
63	19EE2031	Electronics in Agricultural Automation	10						80
64	18CE3052	Groundwater Hydrology	20	20			30		20
65	18CE3057	Forest, Urban and Agricultural Watershed Management	20	20			40		20
66	18FP2021	Food Safety Regulations	20	50	0	0	0	0	0
67	20BT3056	Research Methodology and Applied Statistics	25	25	50				
68	20BT2011	Microbiology	25	75	25				
69	18AT2027	Ergonomics, Human Engineering and Safety in Agricultural Machinery	25	100	20%	25		25	25
70	18AT2034	Farm Machinery and Power	25		30%			25	25
71	18CE3058	Wetland Hydrology	30				30		30
72	18AT2049	Applications of Solar and Wind Energy in Agriculture	50	25	100			100	
73	21AG1301	Fundamentals of Soil Science-2021 B.Sc Agri A	50	50	100		50		
74	20HO2019	Rural Horticultural Work Experience (RHWE)	50	50	100				
75	18HO2019	Economics and Marketing	50	75	100				
76	18AG2015	Environmental Studies and Disaster Management	50	100	100	10	100	100	100

77	18AT2007	Field Operation and Maintenance of Tractors and Farm Machinery	50		100				20%
78	21AG3025	Principles of Genetics	50		100				
79	21AG3026	Principles of Cytogenetics	50		100				
80	21AG3028	Principles of Quantitative Genetics	50		100				
81	21AG3214	Plant Biochemistry	50		100				
82	21AG3215	Principles of Plant Physiology	50		100				
83	18AT2006	Farm Machinery and Equipment-II	50		50 %				
84	20EE3001	IoT for Food Industries	50						50
85	18AG2022	Principles of Integrated Pest and Disease Management	60	60	100				
86	18AG2020	Manures, Fertilizers and Soil Fertility Management	70	50	100	-	25		
87	21AG1002	Agricultural Heritage-2021 B.Sc Agri A	75	75	100%				
88	21AG1501	Fundamentals of Plant Biochemistry and Biotechnology-2021 B.Sc Agri A	75		100				
89	21AG3224	Intellectual Property and its Management in Agriculture	75		100				
90	20BT3010	Agricultural and Food Biotechnology	80	20					
91	18AG2023	Pests of Crops, Stored Grains and their Management	80	50	100	-	60	70	70

92	18AG2021	Diseases of Field and Horticultural Crops and their Management -I	80	80	100				
93	18HO2017	Insect Pests of Vegetable, Ornamental and Spice Crops	80	80	100				
94	20AG2009	Production Technology of Vegetables and Spices	90	25	100				
95	18AG2018	Practical Crop Production (Kharif crops)	100	25	100				
96	21AG3216	Soil Fertility and Fertilizer Use	100	50	100		25		
97	18AG2024	Precision Farming	100	50	100		50	50	75
98	18AG2002	Crop Production Technology - I (Kharif Crops)	100	50	100				
99	18HO1003	Propagation and Nursery Management for Horticultural Crops	100	50	100				
100	18HO2013	Principles of Ornamental Horticulture and Landscape Architecture	100	50	100				
101	18HO2015	Breeding of Fruits, Spices and Plantation Crops	100	50	100				
102	18HO2018	Introduction to Major Field Crops	100	50	100				
103	21HO1251	Fundamentals of Horticulture-2021 B.Sc Agri A	100	50	100				
104	21HO3127	Growth and Development of Horticultural Crops	100	50	100				
105	21HO3130	Propagation and Nursery Management of Fruit Crops	100	50	100				

106	18AG2005	Livestock and Poultry management	100	70	100%				
107	21AG1001	Fundamentals of Agronomy-2021 B.Sc Agri A	100	75	100%				
108	18AG2029	Principles of Organic Farming	100	80	100		50	50	25
109	21AG3005	Agro-Meteorology and Crop Weather Forecasting	100		100%				
110	18HO2016	Seed production of Vegetable, Tuber and Spice Crops	100		100				
111	21AG3002	Principles and Practices of Soil Fertility and Nutrient Management	100		100				
112	20PH3010	Spectroscopy-II	-	5	-	-	5	5	5
113	17PH3021	Material Characterization	-	10	25	-	20	20	20
114	18BM2014	Real Time Embedded systems	-	30					
115	18BM2010	Biosignal Processing	-	80					
116	18BM2018	Bioelectronics	-	80					
117	18BM2013	Modeling of Physiological systems	-	90					
118	18BM3008	Hospital Training	-	90					
119	20PH3011	Nuclear and Particle Physics	-	-	-	-	5	20	5
120	20PH1018	Applied Physics for Food Process operations-2021 B.Tech FPE A	-	-	-	-	10	10	20
121	20PH3002	Statistical Mechanics and Thermodynamics	-	-	-	-	-	10	-
122	20PH3015	Solid State Batteries	-	-	-	-	-	50	50

123	19EE2049	Industrial Practice V (FPGA Implementation for real-time applications)	--	--	--	--	--	--	20
124	18AG2026	Intellectual Property Rights		40%	100%				
125	17NT2002	Synthesis of Nanomaterials		5	85		5	5	
126	20NT3018	Commercialization of Nanotechnology Products		10	30		10	10	40
127	20PH3001	Classical Mechanics		10	40		10	20	20
128	17MC2003	Media Law and Ethics		10	60	10			20
129	17MC2023	Film Studies		10	70	10			10
130	17MC2027	Television Program Production		10	70	10			10
131	17MC3006	Virtual Reality		10	80			10	
132	18CS3023	Computer Vision		10	80				70
133	17MC2022	Visual Effects		10	90				
134	17PH3017	Renewable Energy Sources		10			5	50	30
135	19RO2010	Machine Learning for Robotics		10					40
136	17CE3026	Energy Efficient Buildings		15	15	10	30	10	20
137	18CH2001	Environmental Studies		15	15	10	30	10	20
138	17CR2023	Human Rights and Criminal Justice Administration		20	20	60			
139	18MS2003	Entrepreneurship and IPR		20	20				30
140	17MC3004	ICT for Development		20	40	10		10	20
141	17MC3024	Media Psychology		20	60	20			
142	17MC3019	Visual Merchandising		20	60				20
143	20CS3001	Blockchain Architecture and Design		20	60				40
144	21CS3003	Artificial Intelligence and Machine Learning		20	60				40

145	19EC1001	Fundamentals of Electrical and Electronics Engineering -2021 B.Tech ECE (AI)		20	70				10
146	17CS3032	Applied Medical Image Processing		20	70				20
147	20CS2044	Reinforcement Learning		20	70				40
148	18CS3055	IoT and Smart Cities		20	80				80
149	17MC2016	Audio Production		20	80				
150	17NT3012	Luminescent Nanomaterials		20	80				
151	18BT2027	Basics of Bioinformatics		20	80				
152	18EC3005	Antennas and Radiation Systems		20	80				
153	18CS3106	Deep Learning		20	90				80
154	20RO3017	Image Processing and Machine Vision		20			10		40
155	20PH1011	Physical Electronics-2021 B.Tech ECE (AI)		20				100	
156	17EC3018	Advanced Digital Image Processing		20					20
157	18EC3011	Computational Intelligence and Optimization Techniques		20					20
158	18EC3014	Pattern Recognition and Machine Learning		20					20
159	18AT2036	Skill Development Training-I		25	100%				
160	20BT3015	Computational Biology		25	75				
161	20BT3022	Introductory AI in Biotechnology		25	75				
162	20BT3027	Nanobiotechnology		25	75				

163	20BT3064	Bioinformatics and Basics of R Programming		25	75				
164	20AG2001	Rural Agricultural Work Experience (RAWEX)		25	100		25	25	
165	21AG3222	Library and Information Services		25	100				
166	17VE2001	Value Education		25		25			25
167	17VE2002	Value Education		25		25			25
168	17VE3002	Value Education		25		25			25
169	18VE3001	Value Education		25		25			25
170	18CE2053	Air and Noise Pollution Control		30	10			20	20
171	19CH3002	Waste to Energy		30	30		20	10	10
172	17MC3015	Social Media		30	50	20			
173	17MC2005	Media Culture and Communication		30	60	10			
174	18CS2089	Introduction to Data Analytics		30	60				40
175	17CH2006	Surface chemistry and Chemical Kinetics		30	70				
176	20CS2006	Cognitive Computing		30	90				40
177	20RO3021	Deep Learning for Computer Vision		30			10	10	20
178	18CE3037	Environmental Chemistry and Microbiology		30			30		30
179	19EE2003	Renewable Energy Sources for Health Care		30				20	
180	18BT2052	Industrial Pollution Control		30					

181	20CE1003	Green Design and Life Cycle Assessment-2021 B.Tech Civil A		40	20				40
182	17EC3074	Medical Image Processing		40	40				
183	17NT3014	Molecular Machines and Sensors		40	60				
184	19CS2013	Internet of Things for Food Technology		40	80				20
185	20MS2003	Concept of Entrepreneurship		40			0	0	20
186	20MS2004	Entrepreneurship and Product Development		40					40
187	18AT2037	10-Weeks Industrial Attachment/Internship(Student READY)		50	100%				
188	18AT2039	Skill Development Training-II		50	100%				
189	20CE1001	Building Science and Engineering-2021 B.Tech Civil A		50	20				30
190	17CR2022	Fire and Industry Safety		50	50				
191	20AG1010	Human Values and Ethics - 2021 B.Sc Agri A		50	100	50			
192	18AT2040	Educational Tour		50	100				
193	18HO2014	Dry Land Horticulture		50	100				
194	20EE1003	Sensors and Measurement Techniques in Biotechnology-(Combined Class)		50					
195	17NT3003	Nano-lithography		60	40				
196	20BT2001	Chemistry of Biomolecules-(Combined Class)		60	40				

197	18CE3035	Atmospheric Environmental Pollution And Control		60			20		20
198	20BT3055	Animal Biotechnology and Immunology		70	30				
199	18BT2038	Clinical Database Management		75	25				
200	19BT2014	Molecular Biology		75	25				
201	19BT2041	Stem Cell Technology		75	25				
202	19BT2042	Biopharmaceutical Technology		75	25				
203	19BT3015	Immunotechnology		75	25				
204	20BT3001	Advances in Biopolymer and Applications		75	25				
205	20BT3002	Genetic Engineering and Recombinant Products		75	25				
206	20BT3009	Microbial Biotechnology		75	25				
207	20BT3029	Cancer Management Techniques		75	25				
208	20BT3053	Molecular Biology and Cell Signaling		75	25				
209	20BT3054	Microbiology and Molecular Genetics		75	25				
210	20BT3058	Molecular Medicine and Diagnostics		75	25				
211	15BT3008	Virology		80	20				
212	17BT2001	Basics of Biochemistry		80	20				
213	17CR2031	Abnormal Psychology		80	20				
214	17NT3004	Magnetic Nanoparticles and Nano Fluids		80	20				
215	18BT2042	Biopharmaceutical Technology		80	20				
216	19BT2022	Immunology		80	20				

217	19BT2037	Cancer Biology		80	20				
218	20BT2009	Biochemistry		80	20				
219	20BT3030	Genomics and Proteomics		80	20				
220	20BT3051	Biochemistry		80	20				
221	20BT3052	Plant secondary metabolites and pharmaceuticals		80	20				
222	20NT3017	Luminescent Nanomaterials		80	20				
223	17NT3006	Nano Safety and Environmental Issues		90	10				
224	20NT3019	Cancer Nanomedicine		90	10				
225	17NT3009	Nanotechnology for Cancer Diagnosis and Treatment		95	5				
226	20AG1012	Physical Education		100	100				
227	17EC3078	Medical Signal Processing		100					
228	19RO2009	Medical Robotics		100					
229	21BT1001	Fundamentals of Biology- (Combined Class)		100					
230	18AT2005	Tractor Systems and Controls			50%				
231	21AG1003	Introduction to Forestry-2021 B.Sc Agri A			100%				
232	20NT3020	Nanomaterial-Based Energy Devices			10		80		
233	18EC3029	Analysis and Design of Analog Integrated Circuits			10			90	
234	18CE2027	Transportation Engineering			10				30
235	18CE2012	Computer-Aided Civil Engineering Drawing			10				
236	18CE2020	Reinforced Concrete Elements			10				
237	18CE2021	Design of Steel Structures			10				

238	18CE2023	Foundation Engineering			10				
239	18CE2041	Prestressed Concrete			10				
240	18CE2042	Design of Precast Concrete Structures			10				
241	20CE2002	Mechanics of Solids			10				
242	20CE2003	Fluid Mechanics and Machinery			10				
243	20CE3001	Advanced Structural Analysis			10				
244	20CE3007	Structural Art Principles and Practice			10				
245	20CE3009	Design of Industrial Structures			10				
246	20CE3012	Design of High Rise Structures			10				
247	20CE3016	Conditional Assessment of Existing Structures			10				
248	20CE3018	Design of Pre-stressed Concrete Structures			10				
249	20CE3022	Cement and Concrete Chemistry			10				
250	18CE2059	Green Buildings			20			20	40
251	17NT3011	Photovoltaics Advanced materials and devices			20			80	
252	20CE2010	Engineering Sustainability: Analysis and Design			20				40
253	18CE2034	Design Project			20				
254	18CE2036	Construction Equipment and Automation			20				
255	20CE1006	Design Studio - 2D Drafting- 2021 B.Tech Civil A			20				
256	20CE2005	Water Supply and Sanitary Engineering			20				

257	20CE3003	Structural Dynamics and Earthquake Engineering			20				
258	20CE3011	Structural Health Monitoring			20				
259	18CE2061	Smart Buildings			30			20	40
260	20CE3024	Sustainable Construction			30				40
261	20CE3002	Design of Concrete Structural Systems			30				
262	21CE3001	Foundations of Building Information Modelling			30				
263	21CE3002	Digital Age Construction with BIM			40				20
264	21MS3004	Business Venture Analytics			40				20
265	21MS3005	Business Intelligence			40				20
266	21MS3036	International Human Resource Management			40				20
267	21MS3039	Industrial Relations and Labour Legislations			40				20
268	21MS3076	Digital Marketing			40				20
269	21MS3078	Digital and Social Media Marketing			40				20
270	21MS3080	Affiliate Marketing			40				20
271	20MS3016	Modeling for Business Plan			40				40
272	21MS3041	Organizational Development and Change Management			40				40
273	18CE3061	Remote Sensing and Geographical Information System			40				
274	20CE2001	Surveying and Geomatics Engineering			40				

275	21MS3001	Business Intelligence Using Tableau			40				
276	21MS3002	Python For Managers			40				
277	21MS3006	Internet of Things			40				
278	21MS3007	Personalization Techniques and Recommender System			40				
279	21MS3010	Predictive Modeling			40				
280	21MS3012	Machine Learning			40				
281	21MS3016	Financial Modeling			40				
282	21MS3017	Financial Data Analytics			40				
283	21MS3018	Big Data, Artificial Intelligence and Machine Learning in Financial Services			40				
284	21MS3019	Block Chain and Crypto Currency			40				
285	21MS3020	Applications in Micro Finance			40				
286	21MS3021	Financial Institutions, Markets and Services			40				
287	21MS3022	Strategic Cost Management			40				
288	21MS3023	Security Analysis and Portfolio Management			40				
289	21MS3024	Financial Derivatives			40				
290	21MS3027	Income and Corporate Taxation			40				
291	21MS3031	Payroll and Legal Compliance			40				
292	21MS3032	Human Resource Analytics			40				
293	21MS3033	Strategic Reward Management			40				
294	21MS3034	Learning and Development			40				
295	21MS3038	Talent Acquisition			40				
296	21MS3061	Spatial Data Analytics			40				

297	21MS3062	Ascend TMS			40				
298	21MS3064	Port Management in Logistics			40				
299	21MS3065	Containerisation Management			40				
300	21MS3066	Supply Chain Risk Modeling and Management			40				
301	21MS3067	Introduction to Logistics Management			40				
302	21MS3068	Warehousing and Facilities Management			40				
303	21MS3070	International Logistics			40				
304	21MS3071	Reverse Logistics			40				
305	21MS3077	Marketing Applications of Artificial Intelligence and Augmented Reality			40				
306	21MS3081	Search Engine Marketing			40				
307	21MS3082	Product and Brand Strategies			40				
308	21MS3084	Marketing Analytics			40				
309	21MS3085	Sales and Channel Management			40				
310	17MC2037	Corporate Communication			50	10	10		30
311	20MA2019	Optimization Techniques			50			20	
312	20EC3008	ASIC Design			50			50	
313	19CE2007	Field Practices V (Green Technology In Construction)			50				20
314	19CS2007	Optimization Methodologies			50				20
315	20CS2026	Foundations of Blockchain			50				20
316	18CS3007	Advanced Database Management Systems			50				40
317	16EC3005	Machine Learning Methods			50				50

318	20EC2015	Electrical and Electronics in Civil Engineering-2021 B.Tech Civil A			50				50
319	18CS3026	Cyber Forensics			50				90
320	20EC3001	Digital System Design using HDL			60			20	20
321	19CS2004	Blockchain Technology			60				20
322	20CS2024	Ethics in Information Technology-2021 B.Tech Computer Engineering			60				20
323	20CS2029	Information Retrieval and Text Analysis			60				20
324	20MS3004	Organizational Behaviour and Management			60				20
325	20MS3006	Economics for Managers			60				20
326	20MS3007	Artificial Intelligence for Business			60				20
327	20CA3022	Security in the Cloud			60				50
328	20MS2006	Professional Ethics			60				
329	20MS3001	Accounting for Managers			60				
330	20MS3002	Applied Law in Business			60				
331	20MS3003	Marketing for Business			60				
332	20MS3005	Statistics for Business			60				
333	20CS2001	Agile Software Development			70				10
334	18CS2084	Essentials of Information Technology			70				20
335	18CS2086	Fundamentals of Java Programming			70				20
336	20CS2050	Software Engineering			70				20
337	18EC3010	Global Positioning System			70				30

338	19EC2012	Wireless Sensor Networks			70				30
339	17CA2006	Database Management Systems			70				40
340	18CS2008	Database Management Systems			70				40
341	18CS2094	Artificial Intelligence			70				40
342	18CS3056	IoT Application and Communication Protocol			70				40
343	21CS3011	Network and System Security			70				40
344	21CS3012	Principles of Cyber Security			70				40
345	20CS2003	Augmented Reality and Virtual Reality			70				50
346	17CA2063	Mobile Computing			70				60
347	17CA2068	Cloud Security			70				60
348	20CS2047	Robotics			70				60
349	17CA2067	Cyber Security Governance			70				70
350	17CA2069	Security Threat Management			70				70
351	20CA3003	Network Security			70				70
352	20CA3024	Social Media Crimes			70				70
353	17CR2021	Private Detection and Investigation			70				
354	18BT2020	Downstream Processing			70				
355	18CS2021	Theory of Computation			70				
356	18EC2032	Electron Devices and Circuits			70				
357	19BT2012	Bioprocess Principles			70				
358	19BT2019	Heat and Mass Transfer			70				
359	20BT2005	Basics of Industrial Biotechnology			70				
360	20BT2015	Bioprocess Principles			70				

361	20BT3008	Enzyme Technology and Industrial Applications			70				
362	18CS3005	Advanced Data Structures			75				30
363	20CS2039	Principles of Industry 4.0-2021 B.Tech AI and DS			75				50
364	20CA3001	Cyber Criminology and Criminal Justice Administration			75				60
365	20CA3002	Information Security Management			75				60
366	20CA3005	Cyber Law			75				65
367	20CA2031	Cyber Crimes and Cyber Security			75				70
368	20CA2032	Information Security			75				70
369	20CA2033	Cyber Forensics			75				70
370	20CA2016	Operating System and Networking			75				80
371	18CS3085	Soft computing			75				
372	20CR2003	Fundamentals of Constitution of India-2021 BA Criminology A			80	20			
373	19EC2038	IoT based data acquisition systems and protocols			80			10	10
374	21MA3004	Combinatorics of Tiling			80				0
375	21CS2007	Artificial Intelligence : Principles and Techniques			80				10
376	17AE3020	Unmanned Aerial Systems			80				20
377	18AE2025	Navigation, Guidance and Control of Aerospace Vehicles			80				20

378	18CS2087	Fundamentals of Python Programming			80				20
379	18CS3070	Optimization Techniques			80				20
380	18EC2023	Electromagnetic Waves and Wave guides			80				20
381	18EC3028	Solid State Device Modeling and Simulation			80				20
382	19EC2014	Basics of Satellite Communication			80				20
383	19EC2030	Cloud Computing			80				20
384	20CS1004	Applications of Python Programming-2021 B.Tech Mech A			80				20
385	21BB2003	Principles of Marketing-2021 BA Criminology A			80				20
386	20CS2007	Computer Communication Networks			80				30
387	20CS2013	Data Structures and Algorithms			80				30
388	20CS2033	Natural Language Processing			80				30
389	20EC2002	Electronic Devices			80				40
390	18CS2016	Operating Systems			80				50
391	18CS2002	Computer Networks			80				60
392	18CS3016	Cloud Computing and IoT			80				60
393	18CS3079	Security and Privacy for Big Data			80				60
394	17CA2062	Information Security Management System Standards			80				70
395	17CA2065	Advanced Computer Forensics			80				70

396	20CA2004	Fundamentals of Information Technology-2021 BSc ISDF A			80				70
397	20CS2046	Robotic Process Automation			80				70
398	20CA2030	Operating Systems Security			80				75
399	20CA2035	Computer Networks and Network Security			80				75
400	20CA3025	Digital Security			80				75
401	18EC2010	Microcontrollers			80				80
402	18EC2028	Microprocessor and Microcontroller			80				80
403	20CA2002	Problem Solving using Programming-2021 BSc ISDF A			80				80
404	20CA2012	Data Structures			80				80
405	20CA2014	Database Management System			80				80
406	20CA3006	Digital Forensics			80				80
407	20CA3008	Web Application Security			80				80
408	20EC3002	Low Power VLSI Design			80				80
409	20CA3020	Python for Cyber Security			80				85
410	18MA2002	Design and Analysis of Experiments			80				
411	18MA3002	Mathematical Foundation for Computer Science			80				
412	18MA3004	Operations Research Techniques			80				
413	18MA3005	Foundations of Mathematics and Statistics			80				
414	20CS2015	Data Visualization and Presentation			80				
415	20MS2005	Soft Skills			80				

416	21BB2001	Principles of Management- 2021 BA Criminology A			80				
417	21BB2002	Business Organization-2021 BA Criminology A			80				
418	20CH3061	Entrepreneurship and Business Plan			85	15			
419	20CR2009	Psychology of Crime			85	15			
420	20CH3022	Applied Electrochemistry			85			15	
421	20CA2010	Python for Data Science and Analytics			85				90
422	17CH3020	Supramolecular Chemistry and Green Chemistry			85				✓
423	09CH359	Advanced Electro Chemistry			85				
424	17CH1004	Environmental Studies			85				
425	17CH2011	Chemistry In Everyday Life			85				
426	17CH3003	Organic Reaction Mechanism and Stereochemistry			85				
427	17CH3019	Spectroscopic Methods for Structural Elucidation			85				
428	17CH3024	Analytical Chemistry			85				
429	17CH3025	Medicinal Chemistry			85				
430	20CH1001	Essentials of Chemistry for Aerospace Engineers-2021 B.Tech Aero A			85				
431	20CH2001	Complementary Chemistry- 2021 BSc Forensic Science A			85				
432	20CH2005	Analytical Chemistry for Forensic Science			85				

433	20CH2006	Organic Chemistry for Forensic Science			85				
434	20CH3001	Chemical Kinetics and Chemical Thermodynamics			85				
435	20CH3002	Theories of Chemical Bonding			85				
436	20CH3003	Organic Reaction Mechanism and Stereochemistry			85				
437	20CH3008	Group Theory and Applied Physical Chemistry			85				
438	20CH3009	Organometallic and Bioinorganic Chemistry			85				
439	20CH3010	Pericyclic Reactions and Biomolecules			85				
440	20CH3017	Instrumental Methods of Chemical Analysis			85				
441	20CH3018	Chemistry of non-Transition Elements			85				
442	20CH3020	Organic Spectroscopy			85				
443	20CH3021	Supramolecular Chemistry and Green Chemistry			85				
444	20CH3031	Nanomaterials Synthesis and Characterization			85				
445	20CH3037	Metal-Organic Framework Materials			85				
446	20CH3044	Essentials of Forensic Chemistry			85				
447	20CH3045	Forensic Tools and Techniques			85				
448	20CH3048	Instrumental Methods of Analysis - II			85				

449	20CH3059	Analytical Forensic Toxicology			85				
450	17NT3013	Nanoscale Transistors			90			10	
451	18EC3049	System on Chip Design			90				5
452	18EC2022	Object Oriented concepts using C++			90				10
453	20EC1003	Programming for Problem Solving with C-2021 B.Tech ECM (AI & DS)			90				10
454	18CS2027	C# and NET Programming			90				20
455	18EC3016	Modern Digital Communication Techniques			90				20
456	18CS2014	Object Oriented Programming			90				30
457	20CS2035	Object Oriented Programming			90				30
458	18CS1004	Programming for Problem Solving-2021 B.Tech BME A			90				40
459	18CS2068	Python Programming			90				40
460	20CS1001	Programming for Problem Solving-2021 B.Tech Computer Engineering			90				40
461	20CS2051	Spring Framework			90				40
462	18CS2057	Mobile Application Development Using Android			90				70
463	18CS3009	Advanced Machine Learning			90				70
464	18CS3031	Data Science			90				70
465	18CS3059	Machine Learning			90				70
466	19CS2002	Introduction to Data Science			90				70
467	18EC2003	Digital System Design			90				75
468	18CS3053	Internet of Things Security			90				80

469	18CS3082	Sensor Networks and Internet of Things			90				80
470	18EC3047	Hardware Design Verification Techniques			90				80
471	20CA3018	Ethical Hacking			90				80
472	20CA3026	Machine Learning and Data Analytics			90				85
473	12MA302	Discrete Mathematics			90				
474	12MA314	Computational Mathematics			90				
475	12MA316	Linear Algebra			90				
476	12MA336	Discrete Mathematics			90				
477	12MA347	Graph Theory and Networks			90				
478	17MA2005	Mathematical Foundation			90				
479	17MA3033	Control Theory			90				
480	17MA3041	Mathematical Theory of Elasticity			90				
481	17MA3042	Semigroups of Linear Operators and Applications			90				
482	18EC2012	Linear Integrated Circuits			90				
483	18EC2015	Digital Signal Processing			90				
484	18EC2019	Digital IC Design			90				
485	18EC3001	Advanced Digital Signal Processing			90				
486	18EC3027	CMOS VLSI Design			90				
487	19MA2011	Probability, Random Variables and Statistics			90				
488	19MA3017	Graph Theory and Algorithms			90				
489	19MA3021	Mathematics for Competitive Examinations			90				

490	19MA3026	Formal Languages and Automata Theory			90				
491	19MA3027	Fuzzy Set Theory and its Applications			90				
492	19MA3029	Computational Tools			90				
493	19MA3030	Mathematical Modeling			90				
494	20MA1001	Analytic Geometry, Calculus and Linear Algebra-2021 B.Tech Aero A			90				
495	20MA1003	Mathematics for Data Science and Machine Learning-2021 B.Tech Mech A			90				
496	20MA1005	Mathematical Foundations of Computing-2021 B.Tech Computer Engineering			90				
497	20MA1007	Elementary Mathematics-2021 B.Sc Agri A			90				
498	20MA1009	Calculus and Differential Equations-2021 B.Tech ECE (AI)			90				
499	20MA1013	Calculus and Differential Equations for Robotic Engineering-2021 B.Tech Robotics & Automation (AI)			90				
500	20MA1015	Basic Mathematics for Biotechnology-(Combined Class)			90				
501	20MA1017	Basics of Calculus and Linear Algebra-2021 B.Tech FPE A			90				

502	20MA1019	Mathematics for Data Science and Machine Learning in Civil Engineering -2021 B.Tech Civil A			90				
503	20MA1021	Multivariable Calculus and Differential Equations-2021 B.Tech BME A			90				
504	20MA1023	Statistical Methods			90				
505	20MA2001	Numerical Mathematics and Statistics			90				
506	20MA2002	Applied Computational Mathematics			90				
507	20MA2004	Partial Differential Equations, Probability and Statistics			90				
508	20MA2008	Probability, Statistics and Random Process for Robotic Engineering			90				
509	20MA2009	Probability and Statistics Using R Programming			90				
510	20MA2012	Business Statistics with R			90				
511	20MA2014	Mathematics for Digital Sciences-(Combined Class)			90				
512	20MA2018	Fuzzy sets and Logic			90				
513	20MA2023	Probability, Random Variables and Statistics			90				
514	20MA2024	Basics of Probability and Statistics			90				
515	20MA2026	Numerical Mathematics and Computing			90				
516	20MA3001	Probability and Biostatistics			90				

517	20MA3002	Operations Research Techniques			90				
518	20MA3003	Statistical Methods for Food Science			90				
519	17NT3008	MEMS and NEMS			95			5	
520	18AT2009	Soil and Water Conservation Engineering			100		50		
521	18AT2010	Fundamentals of Renewable Energy Sources			100			100%	50
522	18EI2002	Control Systems			100				30
523	18EC3026	Internet of Things			100				100
524	17AE3022	Elements of Aerospace Engineering			100				
525	17BC2017	E-Commerce			100				
526	17MC2011	Basics of Multimedia			100				
527	17MC2034	Media Agencies			100				
528	17MC2036	Radio Programming			100				
529	17MC3001	Research Methodology			100				
530	17MC3016	Media Analysis			100				
531	17MC3025	Lab Journal			100				
532	17PH2007	Semiconductor Logic Devices			100				
533	18AE2014	Gas dynamics			100				
534	18AE2016	Aerospace Structures-II			100				
535	18AE2018	Propulsion-II			100				
536	18AE2019	Aircraft Stability and Control			100				
537	18AE2036	Introduction to Non Destructive Testing			100				
538	18AE2041	Advanced Space Dynamics			100				

539	18AE2045	Basics of Aerospace Engineering			100				
540	18AG2006	Agri Informatics			100				
541	18EC2021	Microwave and Optical Communication			100				
542	18EC3003	Wireless and Mobile Communication			100				
543	18PA2015	Indirect Tax			100				
544	19BC2002	Indian Financial System			100				
545	19EC2029	Data Science and Data analytics			100				
546	19EC2050	Sensors for IoT Applications			100				
547	20AE2001	Introduction to Aerospace Engineering-2021 B.Tech Aero A			100				
548	20AE2004	Computer Aided Aircraft Drawing			100				
549	20AE2005	Strength of Materials			100				
550	20AE2007	Engineering Thermodynamics			100				
551	20AE2009	Aerodynamics			100				
552	20AE2055	Space Systems Engineering			100				
553	20BC2001	Financial Accounting -I - (Combined Class)			100				
554	20BC2002	Business Organization and Management -(Combined Class) Batch 2			100				
555	20BC2003	Business Economics - (Combined Class)			100				
556	20BC2004	Marketing Management- (Combined Class) Batch 2			100				

557	20BC2008	Corporate Laws			100				
558	20BC2009	Advanced Accounting			100				
559	20BC2010	Income Tax			100				
560	20BC2013	Business Research Methods			100				
561	20BC2034	Data Analytics Fundamentals			100				
562	20BC2037	Introduction to Financial Markets -2021 B.Com (Banking)			100				
563	20BC2038	NSE Learn To Trade -2021 B.Com (Banking)			100				
564	20BC2041	Derivatives Market			100				
565	20BC2042	Mutual Fund Management			100				
566	20BC2043	Smart Trading Fundamental Analysis			100				
567	20CR2001	Introduction to Criminology-2021 BA Criminology A			100				
568	20CR2002	Contemporary Forms of Crime-2021 BA Criminology A			100				
569	20CR2010	Victimology			100				
570	20CR2011	Indian Penal Code and Indian Evidence Act			100				
571	20CR2012	Child Protection			100				
572	20CR2013	Practical			100				
573	21AE3001	Advanced Aerodynamics			100				
574	21AE3002	Advanced Structural Analysis			100				
575	21AE3005	Elements of Data Analytics			100				
576	21AE3011	Simulation and Model based Systems Engineering			100				

577	21AE3012	Aviation 4.0			100				
578	21AE3019	Gas Turbine Technology			100				
579	21AE3020	Rotor Dynamics			100				
580	21AG3217	Experimental Designs			100				
581	21AG3223	Technical Writing and Communications Skills			100				
582	21CR3001	Theoretical Criminology-2021 M.Sc Applied Criminology			100				
583	21CR3002	Contemporary Crimes-2021 M.Sc Applied Criminology			100				
584	21CR3003	Forensic Analysis in Crime Scene Investigation-2021 M.Sc Applied Criminology			100				
585	21CR3004	Criminal Law -2021 M.Sc Applied Criminology			100				
586	21CR3005	Research Methodology and Statistics in Criminology-2021 M.Sc Applied Criminology			100				
587	21CR3006	Outdoor Training-2021 M.Sc Applied Criminology			100				
588	18AT2018	Irrigation and Drainage Water Engineering					50%		
589	18RO2010	Programmable Logic Controllers					10	10	30
590	20RO1001	Engineering Practices -2021 B.Tech Robotics & Automation (AI)					10	20	20
591	20RO2007	Smart Sensors for IoT Applications					10	30	60

592	18RO2011	Automation System Design					20	20	20
593	18CE3036	Surface Flow Hydrology					50		30
594	20BT3031	Advanced Environmental Biotechnology					75		25
595	17EE3015	Power Electronic Circuits						0.2	0.2
596	19EE2025	Electrical Estimation and Costing						0.8	
597	20RO3013	Advanced Embedded Processors						10	20
598	20RO3015	Optimization Techniques						10	50
599	20PH3004	Semiconductor Physics						10	
600	20PH3014	Fabrication and Testing of Thin Film Devices						10	
601	20PH3009	Quantum Mechanics II						20	20
602	20EE1001	Basic Electrical and Computer Engineering-2021 B.Tech FPE A						20	
603	20PH3013	Physics of Nanomaterials						25	
604	19RO2013	Industrial Energy Management System						70	30
605	18EE2012	Power Systems I						80	
606	18EE2019	Electric Machines and Drives						80	
607	18EE3018	Power Quality Issues and Mitigation						80	
608	18EE3020	Cyber Physical Systems Approach to Smart Grid						80	
609	19EE2011	Automotive Electronics						80	
610	19EE2019	Testing and installation of Power System Apparatus						80	

611	19EE2023	Substation Design						80	
612	18EE3003	Energy Management and Audit						100	
613	18EE3012	Grid Converters for Solar and Wind Power Systems						100	
614	18EE3016	Data Mining for Renewable Energy Systems						100	
615	18EE3022	Electric and Hybrid Vehicles						100	
616	19EE2002	Smart Grid						100	
617	19EE2021	Energy Storage in Power Systems						100	
618	19EE2032	Basics of Electric and Hybrid Vehicle						100	
619	20EC3009	Modern Radar Systems							10
620	18EE1005	Electrical Workshop Practices							20
621	19EE2006	Computer Simulation of Electrical Systems							20
622	19EE2008	Digital Signal Processing							20
623	19RO2001	Theory and Programming of CNC Machines							20
624	18EC3019	Wireless Sensor Networks							30
625	19RO2016	Microcontrollers for Robotics							30
626	19RO2019	Python Programming for Robotics							30
627	20RO2001	Digital Electronics and Microprocessors							30
628	19RO2005	Industrial Robotics and Material Handling Systems							40
629	20RO3005	Embedded Systems for Automation							40

630	21RO3003	System Identification and Adaptive Control							40
631	18MS2014	Constitution of India							50
632	19EC2024	Machine Learning Techniques							50
633	20RO3001	Robotics System and Analysis							50
634	20RO3018	Artificial Intelligence in Robotics and Automation							50
635	21RO3002	Mobile Robotics							60
636	21RO3006	Autonomous Mobile Robots							60
637	21RO3001	Industrial Automation							80
638	20RO3014	Industrial Internet of Things and its Applications							100
2021-22 Even Semester									
S. No	Course Code	Name of the Course	% of SDG in syllabus content						
			Zero Hunger	Good Health and Well-Being	Quality Education	Gender Equality	Clean Water and Sanitation	Affordable and Clean Energy	Sustainable Cities and Communities
1	20FP2001	Food Process Calculations	0	0	20	0	0	0	0
2	18FP2030	Food Additives	0	0	100	0	0	0	0
3	18ME2034	Operations Research	0	0	100	0	0	0	0
4	18ME2035	Technical Aptitude	0	0	100	0	0	0	0
5	18ME2071	Robotic Engineering	0	0	100	0	0	0	0
6	18ME3031	Two Phase Flow and Heat Transfer	0	0	100	0	0	0	0
7	18ME3032	Computational Fluid Dynamics	0	0	100	0	0	0	0
8	20FP2010	Process Engineering Thermodynamics	0	0	100	0	0	0	0

9	20ME3005	Advanced Product Life Cycle Management and Automation	0	0	100	0	0	0	0
10	20ME3006	Computer Integrated Manufacturing and FMS	0	0	100	0	0	0	0
11	20ME3010	Process Safety Management in Industry	0	0	100	0	0	0	0
12	20ME3999	Dissertation Phase - II	0	0	100	0	0	0	0
13	18ME3024	Energy Conservation and Management	0	0	100	0	0	80	10
14	18ME3025	Solar Energy Utilization	0	0	100	0	0	80	10
15	21ME3004	Manufacturing System and Simulation	0	0	100	0	10	0	0
16	17ME3036	Two Phase Flow and Heat Transfer	0	0	100	0	30	5	10
17	18ME3043	Industrial Automation and Mechatronics	0	10	100	0	0	0	0
18	20ME3007	Automated Inspection Systems	0	10	100	0	0	0	0
19	21ME3017	Digital Manufacturing	0	10	100	0	0	0	0
20	18ME2020	Manufacturing Processes	0	10	100	0	10	0	0
21	18ME2058	Mechatronics systems	0	10	100	0	10	0	0
22	18ME2073	Modern Manufacturing Techniques	0	10	100	0	10	0	0
23	20ME2010	Kinematics and Dynamics of Machinery	0	10	100	0	10	0	0
24	18ME2067	Automobile Engineering	0	10	100	0	10	0	10
25	19ME1001	Industrial Practice - I (Fundamentals of Chassis Design and Fabrication of Go-Kart)	0	10	100	0	10	10	10

26	19ME1002	Industrial Practice - II (Suspension and Steering Dynamics)	0	10	100	0	10	10	10
27	19ME2003	Industrial Practice - V (Testing and Tuning of Engine and Transmission Systems)	0	10	100	0	10	10	10
28	19ME2004	Industrial Practice - VI (Fundamentals of Design for Electric and Hybrid Vehicles)	0	10	100	0	10	10	10
29	20FP2002	Food Chemistry	0	20	0	0	0	0	0
30	20FP2011	Dairy Process Engineering	0	20	0	0	0	0	0
31	20FP2012	Unit Operations in Food Processing - I	0	20	0	0	0	0	0
32	20FP2014	Fruit and Vegetable Processing Technology	0	20	0	0	0	0	0
33	20FP2015	Food Additives	0	20	0	0	0	0	0
34	20FP3002	Technology of Food Flavourants and Colourants	0	20	0	0	0	0	0
35	20FP3013	Advances in Processing of Horticulture, Spices and Plantation Products	0	20	0	0	0	0	0
36	20FP3017	Advances in Food Packaging Technology	0	20	0	0	0	0	0
37	20FP3004	Instrumental Techniques for Food Analysis	0	20	60	0	0	20	0
38	20FP3005	Advanced Food Process Equipment Design	0	20	80	0	0	0	0
39	18ME2027	Fundamentals of Thermal Sciences and Fluid Mechanics	0	20	100	0	10	0	0

40	20ME2014	Industrial Safety and Quality Standards	0	30	100	0	20	0	0
41	20FP3003	Food Safety Regulations and Control	0	40	0	0	40	20	20
42	20FP1001	Basics of Microbiology- (Combined Class)	0	60	0	0	0	0	0
43	20FP2006	Applied Food Microbiology	0	60	0	0	0	0	0
44	18MS2001	Professional Ethics	0		70			10	60
45	18AT2019	Micro Irrigation	20%		-		20%		
46	18AT2043	Protected Cultivation and Secondary Agriculture	40%		-				
47	18AG2031	Post-harvest Management and Value Addition of Fruits and Vegetables	50%	50%	-				
48	18AT2012	Dairy and Food Engineering	50%	50%	-				
49	18AT2013	Storage Structures and Packaging Technology	50%	50%	-				
50	21AG1201	Fundamentals of Genetics- 2021 B.Sc Agri A	50%	65%	70%		20%		40%
51	18AG2012	Problematic Soils and their Management	50%	100%	100%		25%		
52	20AG2013	Principles of Seed Technology	80%	70%	60%		60%		60%
53	18AG2030	Diseases of Field and Horticultural Crops and their Management II	80%	80%	100%				
54	18HO2011	Insect Pests of Fruit, Plantation, Medicinal & Aromatic Crops	80%	80%	100%				
55	18AG2032	Crop Improvement - II (Rabi crops)	95%	65%	70%		70%		80%

56	18AG2034	Farm Management, Production and Resource Economics	100%	100%	100%		100%		100%
57	18AG2007	Farming Systems and Sustainable Agriculture	100%	100%	100%				100%
58	18AG2008	Crop Production Technology II (Rabi Crops)	100%	100%	100%				100%
59	18AG2013	Agricultural Marketing, Trade and Prices	100%	100%	100%				100%
60	18AG2027	Rainfed Agriculture and Watershed Management	100%	100%	100%				100%
61	18AG2028	Practical Crop Production (Rabi crops)	100%	100%	100%				100%
62	18AG2029	Principles of Organic Farming	100%	100%	100%				100%
63	21AG1051	Fundamentals of Agricultural Economics-2021 B.Sc Agri A	100%	100%	100%				100%
64	20CE2014	Water Resources Systems	20	10	20		20		30
65	20BC2019	Disaster Management	20	20	20		20		20
66	18CE3039	Water and Wastewater Treatment Technology	20		10		40		20
67	18CE3038	Water Resources Planning and Systems Engineering	20		10		40		30
68	18AG1014	Fundamentals of Agricultural Extension Education	25	50	100				
69	18AG2025	Entrepreneurship Development and Business Management	25	50	100				
70	18HO2013	Principles of Ornamental Horticulture and Landscape Architecture	25	50	100				

71	18HO2022	Breeding and Seed Production of Flower and Ornamental Plants	25	50	100				
72	19BT2063	Biology in Everyday Life	25	75	-				
73	21AG1303	Agricultural Microbiology-2021 B.Sc Agri A	25	100	100		20		
74	21AG1351	Fundamentals of Plant Pathology-2021 B.Sc Agri A	25	100	100				
75	21AG1451	Introductory Soil and Water Conservation Engineering-2021 B.Sc Agri A	25		100		50%		
76	20FP2008	Metabolism and Nutrition	40	80	0	0	0	0	0
77	20BT2042	Plant and Animal Biotechnology	50	25	25				
78	21AG3004	Principles and Practices of Water Management	50	25	100		100		
79	21AG3003	Principles and Practices of Weed Management	50	25	100				
80	18AG2033	Management of Beneficial Insects	50	50	100				
81	21AG3031	Heterosis Breeding	50	50	100				
82	21AG3032	Cell Biology and Molecular Genetics	50	50	100				
83	21AG3033	Biotechnology for Crop Improvement	50	50	100				
84	21AG3034	Breeding for Quality Traits	50	50	100				
85	21AG3029	Mutagenesis and Mutation Breeding	50	100	100				

86	21AG3218	Remote Sensing and GIS Techniques for Soil, Water and Crop Studies	50		100		75		
87	20AG2002	Experiential Learning Programme (ELP) (Module I and II)	50		100				
88	21AG1503	Fundamentals of Crop Physiology-2021 B.Sc Agri A	50		100				
89	18FP2036	Storage Engineering	60	60	100	0	0	20	0
90	18HO2023	Nematode Pests of Horticultural Crops and their Management	75	25	100				
91	20BT3010	Agricultural and Food Biotechnology	75	25	-				
92	18HO2020	Horti-Business Management	75	50	100				
93	21HO3132	Canopy Management in Fruit Crops	75	50	100				
94	21AG3226	Agricultural Research, Research Ethics and Rural Development Programs	75	75	100	25	25		50
95	18FP2020	Bakery, Beverages and Confectionery Technology	80	100	100	0	20	0	0
96	18HO2003	Precision Farming and Protected Cultivation	100	25	100				
97	21HO3133	Breeding of Fruit Crops	100	25	100				
98	21AG3007	Dryland Farming and Watershed Management	100	50	100		50		25
99	18AG2010	Production Technology for Fruits and Plantation Crops	100	50	100				
100	18AG2011	Principles of Seed Technology	100	50	100				

101	18HO2021	Post-harvest Management and Processing of Horticultural Crops	100	50	100				
102	18HO2024	Apiculture, Sericulture and Lac Culture	100	50	100				
103	20AG1002	Introductory Agro-Meteorology & Climate Change	100	50	100				
104	20AG2010	Production Technology for Ornamental Crops, Map and Landscaping	100	50	100				
105	21AG3010	Agronomy of Fodder and Forage Crops	100	50	100				
106	21HO1270	Production Technology for Fruit and Plantation Crops-2021 B.Sc Agri A	100	50	100				
107	21HO3128	Tropical and Dry Land Fruit Production	100	50	100				
108	21HO3129	Biodiversity and Conservation of Fruit Crops	100	50	100				
109	18FP2019	Cereals and Pulses Processing Technology	100	100	0	0	0	0	0
110	18FP2037	Process Economics and Plant Layout Design	100	100	100	0	40	20	20
111	18AG2035	Principles of Food Sciences and Nutrition	100	100	100		100		
112	20PH3017	Astronomy and Astrophysics	-	10	-	-	-	5	10
113	20PH3006	Mathematical Physics II	-	-	-	-	-	10	10
114	19EE2050	Industrial Practice VI (Targetlink)	--	--	--	--	--	--	20
115	18EC2017	Computer Network			70				30

116	20NT3005	Synthesis and Functionalization of Nanomaterials		5	95				
117	20NT3006	Biomolecules in Nanoscience		5	95				
118	20PH3007	Spectroscopy-I		5	-		5	5	5
119	21EC1004	Python Programming-2021 B.Tech ECM A		10	50				40
120	17MC2033	Marketing Communication- 2019-MA(Int)-Media and commun		10	60	10			20
121	17MC3018	Documentary Production-2018 MA(Media&Comm)-Int		10	60	20			10
122	17MC2036	Radio Programming		10	70	10			10
123	19BT2018	Enzyme Engineering and Technology		10	70				
124	17MC2027	Television Program Production		10	80	10			
125	17NT3005	Functionalization of Nanostructures		10	80			10	
126	17MC2032	Screenplay-2020-MA (Media and Communication)		10	80				10
127	18CS3023	Computer Vision		10	80				70
128	17CH1004	Environmental Studies-2021 BBA		15	15	10	30	10	20
129	18CH2001	Environmental Studies		15	15	10	30	10	20
130	18CE2005	Disaster Preparedness and Planning		20	20				20
131	17MC3023	International Communication- 2018 MA(Media&Comm)-Int		20	40	10			30
132	17MC3013	Direction-2018 MA(Media&Comm)-Int		20	60	20			

133	17NT3001	Nanomaterials Characterization Methods		20	60			20	
134	17MC2031	Media Management		20	60				20
135	20BC2014	Corporate Accounting-I		20	60				20
136	21CS3003	Artificial Intelligence and Machine Learning		20	60				40
137	20EC2018	Fundamentals of Printed Circuit and Arduino Board Design-(Combined Class)		20	70				10
138	18EC3005	Antennas and Radiation Systems		20	80				
139	20CS2030	Internet of Things-(Combined Class)		20	90		10	10	40
140	18CS3106	Deep Learning		20	90				80
141	17MC2029	Broadcast Journalism-2020-MA (Media and Communication)		20		20			
142	20RO3017	Image Processing and Machine Vision		20	-		10		40
143	18EC3013	Advanced Digital Image Processing		20	-				20
144	18EC3014	Pattern Recognition and Machine Learning		20	-				20
145	19RO1001	Material Science-2021 B.Tech Robotics &Automation A		20	-				30
146	19EE2028	Building Automation		20	-				80
147	18EC3012	Data Compression Techniques		20	-				
148	18EI2011	Virtual Instrumentation Theory and Applications		20	-				
149	20BT3066	Algae Biotechnology		25	50		25		

150	20BT2003	Cell Biology		25	75				
151	18HO2025	Study tour - II		25	100				
152	17VE1001	Value Education		25	-				25
153	17VE2002	Value Education		25	-				25
154	17VE3002	Value Education		25	-				25
155	18VE3001	Value Education		25	-				25
156	18CE3050	Noise Pollution and Control Techniques		30	10		20		20
157	18SS2002	Soft Skills-II		30	30	10			30
158	19CH3002	Waste to Energy		30	30			20	20
159	18CS2089	Introduction to Data Analytics		30	60				40
160	19CS2012	Artificial Intelligence for Biotechnology		30	80				40
161	18EI2005	Measurement and Instrumentation		30	-		30	30	
162	19EE2003	Renewable Energy Sources for Health Care		30	-			20	
163	19BM2022	Control System for Biomedical Engineers		30	-				
164	19BM2020	Signal Conditioning Circuits		40	30				
165	19BM2006	Graphical System Design for Biomedical Engineers		40	-				
166	18AT2041	Project Planning and Report Writing		50	50%				
167	18AT2038	Weeks Experiential Learning On campus (Student READY)		50	100%				
168	17CH2011	Chemistry In Everyday Life		50	50				
169	18AG1006	Rural Sociology and Educational Psychology		50	100	50			

170	18AT2042	Renewable Energy and Green Technology		50	100			100%	
171	18AG2014	Introduction to Biotechnology		50	100				
172	18AG2026	Intellectual Property Rights		50	100				
173	18AG2036	Study Tour II		50	100				
174	19BT2046	Molecular Forensics		60	40				
175	19BT2058	Human Anatomy and Physiology		60	40				
176	19BM2016	Signals and Systems for Biomedical Engineers		60	-				
177	19BM2025	Embedded systems for Biomedical Applications		60	-				
178	19BM2031	Medical Internet of Things		60	-				
179	20OP2018	Optometric Optics II		60	-				
180	20BT2007	Bio-Analytical Techniques		75	25				
181	20BT3002	Genetic Engineering and Recombinant Products		75	25				
182	20BT3026	Stem Cell Therapeutics		75	25				
183	20BT3067	Tissue Engineering and Stem Cell Technology		75	25				
184	17BT2058	Microbiology and Immunology		80	20				
185	17NT3007	Biomedical Nanostructures and Nanomedicine		80	20				
186	19BT2015	Genetic Engineering and Bioethics		80	20				
187	20BT3021	Drug Design and Discovery		80	20				
188	20BT3024	Pharmaceutical Biotechnology		80	20				
189	19BM2023	Image Processing for Medical Applications		80	-				
190	19BM2028	Medical Imaging Techniques		100	-				

191	20OP2002	General Anatomy and General Physiology-2021 B.Sc (Optometry)		100	-				
192	17PH2013	Condensed Matter Physics			10				
193	18CE2014	Design and Drawing			10				
194	20CE1002	Engineering Mechanics-(Combined Class)			10				
195	20CE2004	Soil Mechanics and Foundation Engineering			10				
196	20CE2006	Solid Waste Management			10				
197	20CE2007	Transportation Engineering			10				
198	20CE2011	Analysis of Structures			10				
199	20CE3004	Finite Element Methods in Civil Engineering			10				
200	20CE3005	Advanced Design of Steel Structures			10				
201	20CE3006	Design of Substructures			10				
202	20CE3015	Bridge Engineering			10				
203	20CE3016	Conditional Assessment of Existing Structures			10				
204	20CE3019	Experimental Techniques and Instrumentation			10				
205	20CE3020	Fire Resistant Design of Structures			10				
206	20CE1004	Sustainable Building Materials -(Combined Class)			20				40
207	18CE2028	Quantity Surveying and Estimation			20				
208	20CE1007	Design Studio - 3D Modelling-(Combined Class)			20				

209	18CE2006	Construction Engineering and Management			30				
210	18CE2034	Design Project			30				
211	18CE2009	Instrumentation and Sensor Technologies for Civil Engineering Applications			40				20
212	19MS2001	Basic Course In Entrepreneurship			40				20
213	20MS2002	Modeling for Business Plan			40				20
214	20MS2003	Concept of Entrepreneurship- (Combined Class)			40				20
215	20MS3010	Corporate Strategy			40				20
216	20MS3015	Corporate Synthesis			40				20
217	19MS2002	Advanced Course In Entrepreneurship			40				40
218	20MS2004	Entrepreneurship and Product Development			40				40
219	20MS2007	Business Plan			40				40
220	21MS3008	Data Science for Fraud Detection			40				40
221	18CE2051	Basics of Remote Sensing and Geographical Information System			40				
222	20BT2032	Industrial safety and Hazard analysis			40				
223	20MS2005	Soft Skills			40				
224	20MS2006	Professional Ethics			40				
225	20MS3008	Business Research Methods			40				
226	20MS3009	Business Decision Model			40				
227	20MS3011	Financial Management			40				

228	20MS3012	Human Resource Management			40				
229	20MS3013	Management Information System			40				
230	20MS3014	Operations Management			40				
231	21MS3010	Predictive Modeling			40				
232	21MS3012	Machine Learning			40				
233	21MS3014	R for Business			40				
234	21MS3021	Financial Institutions, Markets and Services			40				
235	21MS3024	Financial Derivatives			40				
236	21MS3025	Digital Transformation in Banking and Insurance			40				
237	21MS3026	Financial Analysis and Reporting			40				
238	21MS3028	Personal Finance and Wealth Management			40				
239	21MS3029	Financial Risk Management			40				
240	21MS3038	Talent Acquisition			40				
241	21MS3039	Industrial Relations and Labour Legislations			40				
242	21MS3040	Competency Frameworks, Assessment and Development Centre			40				
243	21MS3041	Organizational Development and Change Management			40				
244	21MS3042	Cross Culture Management			40				
245	21MS3043	Collective Bargaining and Negotiation			40				
246	21MS3044	Corporate Social Responsibility			40				

247	21MS3045	Emotional Intelligence and Stress Management			40				
248	21MS3052	Global Resources			40				
249	21MS3053	International Logistics Management			40				
250	21MS3056	International Strategic Management			40				
251	21MS3057	International Marketing Management			40				
252	21MS3060	International Project Management			40				
253	21MS3069	Freight Transport Operations Management			40				
254	21MS3072	Supply Chain Management			40				
255	21MS3073	Materials and Inventory Management			40				
256	21MS3074	Purchasing and Strategic Sourcing			40				
257	21MS3078	Digital and Social Media Marketing			40				
258	21MS3082	Product and Brand Strategies			40				
259	21MS3083	Consumer Behaviour Insights			40				
260	21MS3085	Sales and Channel Management			40				
261	21MS3087	Research for Marketing Decisions			40				
262	21MS3088	Marketing Communications Management			40				
263	21MS3089	Advanced Marketing of Services			40				
264	18EC3042	CAD for VLSI Circuits			50			50	

265	20CS2042	Real Time Operating Systems			50				10
266	20CA2017	Fundamentals of Business Analytics			50				30
267	20CA3011	Business Continuity and Disaster Recovery Management			50				40
268	19CE2008	Field Practices VI (Building Information Modeling)			50				50
269	19EC2001	Electronics for Intelligent Machines			50				50
270	20BC2027	Strategic Business Reporting			50				50
271	20EC1001	Python Programming-2021 B.Tech ECE A			50				50
272	18CS3033	Data Visualization			50				
273	20CS2036	Operating Systems			50				
274	20CS2018	Design and Analysis of Algorithm			60				20
275	21CS3009	Information Security Management System			60				20
276	18CS2018	Software Engineering			60				40
277	20CA2004	Fundamentals of Information Technology-(Combined Class)			60				40
278	20CA2040	General Forensic Science			60				40
279	20CA3012	Database Security Management			60				40
280	20CA3014	Information Security Governance, Risk and Compliance			60				50
281	20CA3015	Internet of Things Security			60				50
282	19CS1001	Programming in Python-(Combined Class)			60				
283	20BT2013	Fluid Mechanics			60				

284	20BT2029	Biochemical Thermodynamics			60				
285	20CH3040	Water Treatment Technologies			70		10	10	10
286	20CS1003	Fundamentals of Programming for Problem Solving- (Combined Class)			70				10
287	18CS2084	Essentials of Information Technology			70				20
288	18CS2086	Fundamentals of Java Programming			70				20
289	18EC2006	Analog and Digital Communication			70				20
290	20CA2012	Data Structures-2021 BSc ISDF A			70				20
291	20CS2027	Geometric Modelling			70				20
292	20CS2050	Software Engineering			70				20
293	21CS3010	Natural Language Processing and its Applications			70				20
294	18EC2008	Analog Circuits			70				30
295	18CS2072	Social Network Analysis			70				40
296	18CS3052	Internet of Things			70				40
297	18CS3100	Wireless Sensor Networks			70				40
298	20CA3017	Economic Offences			70				40
299	20CS3006	Applications of Cyber Physical Systems			70				40
300	20CA2037	Database Security			70				50
301	20CA2041	Malware Analysis and its Security			70				50
302	20CS2003	Augmented Reality and Virtual Reality			70				50

303	20CA2002	Problem Solving using Programming-(Combined Class)			70				60
304	20CS2047	Robotics-2021 B.Tech AI and DS			70				60
305	20CA2039	Biometric Security			70				70
306	20CA2042	Security Assessment of Information Systems through Ethical Hacking			70				70
307	18CS3093	Web Search and Information Retrieval			70				
308	20BT3003	Bioprocess Modelling and Simulation			70				
309	20BT3057	Bioprocess and Downstream processing			70				
310	20BT3062	Industrial Biotechnology			70				
311	20CA3026	Machine Learning and Data Analytics			70				
312	18CS3030	Data Preparation and Analysis			75				50
313	20CS2039	Principles of Industry 4.0			75				50
314	18CS3015	Cloud computing			75				60
315	19BT2024	Chemical Reaction Engineering			75				
316	20CR2016	Special and Local Laws			80	20			
317	20CR2022	Media and Crime			80	20			
318	21CR3007	Employment Oriented Training			80	20			
319	21CR3010	Local and Special Law			80	20			
320	17NT3002	Nanoelectronics			80			20	
321	21CS2007	Artificial Intelligence : Principles and Techniques			80				10

322	18AE2024	Aircraft Design Project			80				20
323	18AE2042	Air Traffic Control and Aerodrome Details			80				20
324	18AE3027	Unmanned Aircraft Systems			80				20
325	18CS2087	Fundamentals of Python Programming			80				20
326	18CS3070	Optimization Techniques			80				20
327	20AE2016	Introduction to Aerospace Materials			80				20
328	20BC2017	Cost Accounting I			80				20
329	20CS1004	Applications of Python Programming-2021 B.Tech Aero A			80				20
330	20CS2008	Computer Networks			80				20
331	21AE3007	Modeling and Simulation of Aerospace Vehicles			80				20
332	21BB2004	Managerial Economics-2021 BBA			80				20
333	20CS2007	Computer Communication Networks			80				30
334	20CS2013	Data Structures and Algorithms-2021 B.Tech AI and DS			80				30
335	18CS3001	Advanced Algorithms			80				40
336	20CA2008	Essentials of Python Programming-2021 BSc ISDF A			80				40
337	20CA2020	Data Mining and Data Warehousing			80				40
338	20CA2021	Data Analysis and Visualization			80				40

339	20CA2044	Cyber Security Governance			80				40
340	20CA2018	Big Data Analytics			80				60
341	20CA3009	Advanced Digital Forensics			80				60
342	20CA3016	Artificial Intelligence Security			80				70
343	21CS3006	Cyber Forensics			80				70
344	18EC2028	Microprocessor and Microcontroller			80				80
345	19EC2041	Cellular Mobile Computing			80				80
346	11MA346	Statistical Quality Control			80				
347	11MA347	Advanced Acceptance Control			80				
348	12MA337	Graph Theory			80				
349	12MA358	Commutative Algebra			80				
350	16MA4001	Research Methodology			80				
351	17MA3033	Control Theory			80				
352	17MA3042	Semigroups of Linear Operators and Applications			80				
353	19BT2017	Bioprocess Engineering			80				
354	19MA3021	Mathematics for Competitive Examinations			80				
355	19MA3022	Applied Statistics			80				
356	19MA3029	Computational Tools			80				
357	19MA3030	Mathematical Modeling			80				
358	20CS2016	Database Management Systems			80				
359	20MA1002	Differential Equations and Complex Variables-2021 B.Tech Aero A			80				
360	20MA1004	Mathematical Modelling for Engineering Problems- (Combined Class)			80				

361	20MA1006	Calculus, Vector Spaces and Laplace Transform-(Combined Class)			80				
362	20MA1010	Linear Algebra, Transforms and Numerical Methods-2021 B.Tech ECE A			80				
363	20MA1014	Linear Algebra, Transforms and Numerical Methods for Robot Control-2021 B.Tech Robotics &Automation A			80				
364	20MA1016	Numerical Computing Using MATLAB-(Combined Class)			80				
365	20MA1018	Transforms and Differential Equations-(Combined Class)			80				
366	20MA1020	Mathematical Modelling for Civil Engineering Problems-(Combined Class)			80				
367	20MA1022	Matrices, Transforms and Numerical Methods-2021 B.Tech BME A			80				
368	20MA2001	Numerical Mathematics and Statistics			80				
369	20MA2003	Simulation of Numerical Mathematics			80				
370	20MA2005	Discrete Structures			80				
371	20MA2010	Business Mathematics-2021 B.Com A			80				
372	20MA2015	Fundamentals of Statistics and Probability-(Combined Class)			80				
373	20MA2020	Calculus for Data Science			80				

374	20MA2024	Basics of Probability and Statistics			80				
375	20MA2025	Statistical Data Analysis and Reliability Engineering			80				
376	21CS3931	Research Paper Writing Skills			80				
377	21MA4001	Research Methodology			80				
378	21MA4002	Research and Publication Ethics			80				
379	17CR2030	Cyber Crimes			85	15			
380	20CR2005	Police Administration -2021 BA Criminology A			85	15			
381	20CR2008	Field Visit to Criminal Justice Institutions -2021 BA Criminology A			85	15			
382	19CA3002	Machine Learning for Image Processing			85				60
383	18CA2019	E mail Forensics			85				70
384	18CA2020	Document Examination and Fingerprint Analysis			85				70
385	18CA2017	Network Security Applications			85				75
386	18CA2014	Forensic Digital Image processing			85				80
387	17CH2005	Reaction Mechanism and Heterocyclic Chemistry			85				
388	17CH3022	Molecular and Material Self Assembly			85				
389	17CH3024	Analytical Chemistry			85				
390	17CH3026	Supramolecular Chemistry			85				
391	20CH2003	Inorganic Chemistry for Forensic Science-2021 BSc Forensic Science A			85				

392	20CH2007	Instrumentation Techniques for Forensic Science			85				
393	20CH2009	Forensic Chemistry			85				
394	20CH3004	Statistical Thermodynamics and Quantum Chemistry			85				
395	20CH3005	Coordination Chemistry of Transition Elements			85				
396	20CH3006	Principles of Molecular Spectroscopy			85				
397	20CH3007	Synthetic Reagents and Methodology			85				
398	20CH3017	Instrumental Methods of Chemical Analysis			85				
399	20CH3019	Nuclear Chemistry and Solid State Chemistry			85				
400	20CH3021	Supramolecular Chemistry and Green Chemistry			85				
401	20CH3022	Applied Electrochemistry			85				
402	20CH3023	Research Methodology and IPR			85				
403	20CH3024	Applied Polymer Chemistry			85				
404	20CH3028	Medicinal Chemistry			85				
405	20CH3030	Bioanalytical Chemistry and Biosensors			85				
406	20CH3043	Analytical Chemistry			85				
407	20CH3046	Instrumental Methods of Analysis - I			85				
408	20CH3047	Advanced Forensic Toxicology and Pharmacology			85				
409	20CH3048	Instrumental Methods of Analysis - II			85				

410	20CH3054	Biochemistry and Biochemical Applications			85				
411	20CH3057	Forensic Analysis of Drugs			85				
412	20CH3061	Entrepreneurship and Business Plan			85				
413	20FS2005	Indian Constitution, Fundamental Laws and Procedure-2021 BSc Forensic Science A			85				
414	20FS2006	Forensic Dermatoglyphics-2021 BSc Forensic Science A			85				
415	20FS2014	Forensic Biology and Serology -I			85				
416	20FS2021	Crime Scene Investigation			85				
417	20FS2022	DNA Typing			85				
418	20FS3002	Forensic Physics and Advanced Ballistics			85				
419	20FS3003	Forensic Biology			85				
420	20FS3005	Finger Prints and other Impressions			85				
421	20FS3013	Microscopy in Forensic Science			85				
422	20FS3015	Statistics and Forensic Applications			85				
423	20FS3017	Medical Jurisprudence			85				
424	17PH2009	Physics of Semiconductor Memories & Microprocessors			90			10	
425	17PH2010	Physics of linear integrated circuits and VLSI design			90			10	
426	17PH2012	Vacuum and Thin film Technology			90			10	

427	18EC3001	Advanced Digital Signal Processing			90				10
428	18MS2002	Industrial Management			90				10
429	20EC1003	Programming for Problem Solving with C-2021 B.Tech ECE A			90				10
430	20EC2003	Signals and Systems			90				10
431	21EC1003	Problem Solving and Algorithmic Thinking-2021 B.Tech ECM A			90				10
432	18CS2019	System Software and Compiler Design			90				20
433	18CS2014	Object Oriented Programming			90				30
434	18EI2002	Control Systems			90				30
435	18CS1004	Programming for Problem Solving			90				40
436	20CS1001	Programming for Problem Solving			90				40
437	20CS1002	Python Programming-(Combined Class)			90				40
438	20CS2031	Introduction to Data Science			90				40
439	18CS3002	Advanced Computer Networks			90				60
440	18CS3042	Ethical Hacking			90				60
441	20CS2056	Web Technology			90				60
442	18CS2013	Machine Learning Techniques			90				70
443	18CS3009	Advanced Machine Learning			90				70
444	18CS3059	Machine Learning			90				70
445	18CS2022	Web Technology			90				75
446	18CA2016	Preserving and Recovering Digital evidence			90				80

447	18CS2005	Cryptography and Network Security			90				80
448	18CS3053	Internet of Things Security			90				80
449	18CS3082	Sensor Networks and Internet of Things			90				80
450	18EC2020	Antenna Theory and Wave Propagation			90				80
451	18EC3039	Testing and Testability			90				80
452	18CS3102	Principles of Cyber Security			90				90
453	18EC2012	Linear Integrated Circuits			90				
454	18EC2030	Digital Electronics			90				
455	18EC3049	System on Chip Design			90				
456	21EC2007	Data Structures and Algorithms			90				
457	20NT3011	Nanoelectronics and Micro-Nanofabrications			95			5	
458	17BB2023	Management Information System			100				
459	17BB2025	Internet and E-Commerce			100				
460	17BC2014	Company Law and Secretarial Practice			100				
461	17CR2035	NGO Management			100				
462	17MC2012	Visualization-2020-MA (Media and Communication)			100				
463	17MC2019	Web Designing-2020-MA (Media and Communication)			100				
464	17MC2021	Post Production Techniques-2020-MA (Media and Communication)			100				
465	17MC2034	Media Agencies			100				
466	17MC3002	D Animation-2018 MA(Media&Comm)-Int			100				

467	17MC3005	Report Writing and Publication -2018 MA(Media&Comm)-Int			100				
468	17MC3010	Advanced Animation			100				
469	18AE2001	Introduction to Aerospace Engineering			100				
470	18AE2027	Heat and Mass Transfer			100				
471	18AE2030	Wind tunnel Techniques			100				
472	18AE2039	Cryogenic Propulsion			100				
473	18AE2041	Advanced Space Dynamics			100				
474	18AE2043	Aircraft Systems			100				
475	18AE2045	Basics of Aerospace Engineering			100				
476	18AE3014	Computational Heat Transfer			100				
477	18AE3023	Boundary Layer Theory			100				
478	18EC3004	Optical Networks and Photonic Switching			100				
479	19EC2028	Fundamentals of Wireless Communication			100				
480	19EC2029	Data Science and Data analytics			100				
481	20AE2002	Basics of Fluid Mechanics- 2021 B.Tech Aero A			100				
482	20AE2004	Computer Aided Aircraft Drawing-2021 B.Tech Aero A			100				
483	20AE2005	Strength of Materials			100				
484	20AE2011	Aerospace Structures-I			100				
485	20AE2012	Propulsion-I			100				
486	20AE2014	Airplane Performance			100				
487	20AE2017	Gas Dynamics			100				

488	20AE2018	Aircraft Instrumentation and Avionics			100				
489	20BC2005	Financial Accounting- II -2021 B.Com A			100				
490	20BC2006	Banking Theory Law and Practice-(Combined Class) Batch 2			100				
491	20BC2007	Company Law and Secretarial Practice -2021 B.Com A			100				
492	20BC2015	Investment Management			100				
493	20BC2016	Principles of Auditing			100				
494	20BC2018	Indirect Tax			100				
495	20BC2033	Fundamentals of Management Accounting -2021 B.Com (Fintech)			100				
496	20BC2035	Business Intelligence and Data Visualization			100				
497	20BC2039	Commercial Banking -2021 B.Com (Banking)			100				
498	20BC2040	Capital Market Operation - 2021 B.Com (Banking)			100				
499	20BC2044	Currency and Commodities market			100				
500	20BC2045	Clearing, Settlement and Risk Management			100				
501	20BC2046	Back office and Depository operation			100				
502	20BT1002	Basics of Python Programming -(Combined Class)			100				

503	20BT2004	Workshop Practices in Biotechnology-(Combined Class)			100				
504	20BT3064	Bioinformatics and Basics of R Programming			100				
505	20CR2004	Forensic Science-2021 BA Criminology A			100				
506	20CR2006	Criminal Procedure Code - 2021 BA Criminology A			100				
507	20CR2007	Research Methodology -2021 BA Criminology A			100				
508	20CR2014	Forensic Medicine			100				
509	20CR2015	Penology and correctional Administration			100				
510	20CR2017	Outdoor Training			100				
511	21AE3006	Advanced Propulsion Technology			100				
512	21AE3014	Artificial Intelligence and Machine Learning in Aerospace Applications			100				
513	21AG3219	Data Analysis using Statistical Packages			100				
514	21BB2005	Organizational Behaviour - 2021 BBA			100				
515	21BB2006	Financial Accounting-2021 BBA			100				
516	21CR3001	Theoretical Criminology			100				
517	21CR3008	Forensic Medicine and Criminal Jurisprudence			100				
518	21CR3009	Victimology and Victim Assistance			100				

519	21CR3011	Safety and Security Management			100				
520	21CR3012	Police Sciences			100				
521	21CR3013	Field visits to Criminal Justice Institutions			100				
522	21CR3015	Penal and Correctional Science			100				
523	21CR3018	Restorative Justice			100				
524	21CR3019	Therapeutic Jurisprudence			100				
525	20CH1003	Applied Chemistry for Food Processing Technology- (Combined Class)			✓				
526	21CH2068	Recent Trends in Forensic Science			✓				
527	18MS2014	Constitution of India			-	20			50
528	17CR2033	Crimes Against Women and Children			-	100			
529	18AT2016	Water Harvesting and Soil Conservation Structures			-		50%	20%	30%
530	18AT2015	Groundwater, wells and Pumps			-		50%		20%
531	19RO1002	Engineering Practices			-		10	20	20
532	20RO2007	Smart Sensors for IoT Applications			-		10	30	60
533	18RO2011	Automation System Design			-		20	20	20
534	20RO2003	Sensors and Protocols for Instrumentation			-		30	20	50
535	18BT2051	Role of Biotechnology in Environment			-		75		25
536	18AT2017	Bio Energy Systems Design and Applications			-			100%	

537	20RO1004	Introduction to Robotics and Automation-2021 B.Tech Robotics &Automation A			-			10	20
538	18RO2003	Automatic Control Systems			-			10	30
539	18RO2013	Totally Integrated Automation			-			10	40
540	20RO3004	Drives and Control Systems for Automation			-			10	40
541	19EE2051	IoT and its Applications in Electrical Engineering			-			10	
542	20PH3013	Physics of Nanomaterials			-			10	
543	20PH3014	Fabrication and Testing of Thin Film Devices			-			10	
544	21RO2001	Introduction to Mechanical Systems -2021 B.Tech Robotics &Automation A						20	10
545	20PH3005	Quantum Mechanics I			-			20	20
546	19EE2024	Testing and Commissioning of Electrical Equipment			-			30	
547	20EE2001	Electric Vehicle Design			-			80	20
548	18EE2014	Power Systems II			-			80	
549	18EE3017	Power Conversion and Control of Wind Energy Systems			-			80	
550	19EE2010	Special Electrical Machines			-			80	
551	20EE3002	Energy Conservation and Auditing			-			80	
552	18EE2016	Wind and Solar Energy Systems			-			100	
553	18EE3012	Grid Converters for Solar and Wind Power Systems			-			100	
554	18EE3016	Data Mining for Renewable Energy Systems			-			100	

555	18EE3018	Power Quality Issues and Mitigation			-			100	
556	18EE3019	Distributed Generation and Micro Grid			-			100	
557	18EE3021	Smart Power Grid Renewable Energy Systems			-			100	
558	18EE3022	Electric and Hybrid Vehicles			-			100	
559	19EE2020	Power Electronics for Renewable Energy			-			100	
560	19EE2044	Modern Forecasting Techniques			-			100	
561	20RO2002	Mechanics of Solids			-				20
562	18EC3019	Wireless Sensor Networks			-				30
563	19RO2015	Neural Networks and Fuzzy Systems			-				30
564	20RO3003	Computer Aided Modelling and Design			-				30
565	20RO3025	Entrepreneurship Development for Robotics and Automation			-				30
566	17CA2007	Object Oriented Principles using C++							40
567	18RO2009	Vision Systems			-				40
568	20RO1003	Fundamentals of Python Programming for Robotics-2021 B.Tech Robotics &Automation A			-				40
569	18RO2005	Sensor Signal Conditioning Circuits			-				50
570	19EC2031	IoT Edge Computing			-				50
571	19RO2011	Robot Operating Systems			-				50
572	20RO3024	Real Time Operating System			-				50

573	19RO2007	Cognitive Robotics			-				60
574	21RO2006	Additive Manufacturing							60
575	19EC2020	Analysis and Design of Digital IC			-				70
576	19RO2021	Augmented Reality and Virtual Reality for Robotics			-				70
577	18RO2015	Field and Service Robotics			-				80
578	19EE2027	Fundamentals of Electrical Safety			-				80
579	19EE2029	Embedded Systems			-				80
580	19RO2002	Autonomous Vehicles			-				90
581	20RO3014	Industrial Internet of Things and its Applications			-				100