

APJ ABDUL KALAM
TECHNOLOGICAL
UNIVERSITY

CURRICULUM
B.TECH PART TIME
(2020 SCHEME)

2014

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APJ Abdul Kalam Kerala Technological University

BTech – Curriculum (Evening Courses) 2020 SCHEME

CIVIL ENGINEERING

SEMESTER 1

Exam Slot	Course Number	Name	L-T-P	Hours	Credits
A	MAT201	Partial Differential Equation and Complex Analysis	3 -1 - 0	4	4
B	CET201	Mechanics of Solids	3 -1 - 0	4	4
C	CET203	Fluid Mechanics & Hydraulics	3 -1 - 0	4	4
D	CET205	Surveying & Geomatics	4 -0 - 0	4	4
S	CEL201	Civil Engineering Planning & Drafting Lab	0 -0 - 3	3	2
T	CEL203	Survey Lab	0 -0 - 3	3	2
		Total		22	20

SEMESTER 2

Exam Slot	Course Number	Name	L-T-P	Hours	Credits
A	MAT202	Probability, Statistics and Numerical Methods	3 -1 - 0	4	4
B	CET202	Engineering Geology	3 - 0 - 1	4	4
D	CET206	Transportation Engineering	4 - 0 - 0	4	4
E	HUT200	Professional Ethics	2 - 0 - 0	2	2
F	MCN202	Constitution of India	2 - 0 - 0	2	-
S	CEL202	Material Testing Lab - I	0 -0 - 3	3	2
T	CEL204	Fluid Mechanics Lab	0 -0 - 3	3	2
		Total		22	18

SEMESTER 3

Exam Slot	Course Number	Name	L-T-P	Hours	Credits
A	CET301	Structural Analysis - I	3 - 1 - 0	4	4
B	CET303	Design of Concrete Structures	3 - 1 - 0	4	4
D	CET307	Hydrology & Water Resources Engineering	4 - 0 - 0	4	4
E	EST200	Design & Engineering	2 - 0 - 0	2	2
F	MCN201	Sustainable Engineering	2 - 0 - 0	2	-
S	CEL331	Material Testing Lab - II	0 - 0 - 3	3	2
		Total		19	16

SEMESTER 4

Exam Slot	Course Number	Name	L-T-P	Hours	Credits
A	CET302	Structural Analysis - II	3 - 1 - 0	4	4
B	CET304	Environmental Engineering	4 - 0 - 0	4	4
C	CET204	Geotechnical Engineering - I	4 - 0 - 0	4	4
D	CETXXX	Programme Elective I	3 - 0 - 0	3	3
S	CEL332	Transportation Engineering Lab	0 - 0 - 3	3	2
T	CEL334	Civil Engineering Software Lab	0 - 0 - 3	3	2
		Total		21	19

Programme Elective I

D	CET312	ADVANCED COMPUTATIONAL METHODS	3 - 0 - 0	3	3
	CET322	GEOTECHNICAL INVESTIGATION	3 - 0 - 0		
	CET332	TRAFFIC ENGINEERING & MANAGEMENT	3 - 0 - 0		
	CET342	MECHANICS OF FLUID FLOW	3 - 0 - 0		
	CET352	ADVANCED CONCRETE TECHNOLOGY	3 - 0 - 0		
	CET362	ENVIRONMENTAL IMPACT ASSESSMENT	3 - 0 - 0		
	CET372	FUNCTIONAL DESIGN OF BUILDINGS	3 - 0 - 0		

SEMESTER 5

Exam Slot	Course Number	Name	L-T-P	Hours	Credits
B	CETXXX	Program Elective II	3 - 0 - 0	3	3
C	CETXXX	Open Elective	3 - 0 - 0	3	3
E	CET309	Construction Technology & Management	3 - 0 - 0	3	3
F	MCN301	Disaster Management	2 - 0 - 0	2	-
T	CEL333	Geotechnical Engineering lab	0 - 0 - 3	3	2
		Total		14	11

Programme Elective II					
D	CET413	PRESTRESSED CONCRETE	3 - 0 - 0	3	3
	CET423	GROUND IMPROVEMENT TECHNIQUES	3 - 0 - 0		
	CET433	HIGHWAY MATERIALS AND DESIGN	3 - 0 - 0		
	CET443	APPLIED HYDROLOGY	3 - 0 - 0		
	CET453	CONSTRUCTION PLANNING & MANAGEMENT	3 - 0 - 0		
	CET463	ADVANCED ENVIRONMENTAL ENGINEERING	3 - 0 - 0		
	CET473	OPTIMISATION TECHNIQUES IN CIVIL ENGINEERING	3 - 0 - 0		

Open Elective					
C	CET415	ENVIRONMENTAL IMPACT ASSESSMENT	2 - 1 - 0	3	3
	CET425	APPLIED EARTH SYSTEMS	2 - 1 - 0		
	CET435	INFORMATICS FOR INFRASTRUCTURE MANAGEMENT	2 - 1 - 0		
	CET445	DISASTER MANAGEMENT	2 - 1 - 0		
	CET455	ENVIRONMENTAL HEALTH AND SAFETY	2 - 1 - 0		
	CET465	GEOINFORMATICS	2 - 1 - 0		

SEMESTER 6

Exam Slot	Course Number	Name	L-T-P	Hours	Credits
A	CET402	Quantity Surveying & Valuation	3 - 1 - 0	3	3
B	CETXXX	Programme Elective III	3 - 0 - 0	3	3
C	CET306	Design of Hydraulic Structures	4 - 0 - 0	4	4
E	HUT300	Industrial Economics & Foreign Trade	3 - 0 - 0	3	3
F	CET308	Comprehensive Course Work	1 - 0 - 0	1	1
		Total		14	14

Programme Elective III					
B	CET414	ADVANCED STRUCTURAL DESIGN	3 - 0 - 0	3	3
	CET424	GEOENVIRONMENTAL ENGINEERING	3 - 0 - 0		
	CET434	RAILWAY AND TUNNEL ENGINEERING	3 - 0 - 0		
	CET444	IRRIGATION & DRAINAGE ENGINEERING	3 - 0 - 0		
	CET454	CONSTRUCTION METHODS & EQUIPMENT	3 - 0 - 0		
	CET464	AIRQUALITY MANAGEMENT	3 - 0 - 0		
	CET474	URBAN PLANNING & ARCHITECTURE	3 - 0 - 0		

SEMESTER 7

Exam Slot	Course Number	Name	L-T-P	Hours	Credits
A	CET401	Design of Steel Structures	3 - 0 - 0	3	3
C	CET305	Geotechnical Engineering II	4 - 0 - 0	4	4
D	MCN401	Industrial Safety Engineering	2 - 1 - 0	3	-
S	CEL411	Environmental Engg Lab	0 - 0 - 3	3	2
T	CEQ413	Seminar	0 - 0 - 3	3	2
U	CED415	Project Phase I	0 - 0 - 6	6	2
		Total		22	13

SEMESTER 8

Exam Slot	Course Number	Name	L-T-P	Hours	Credits
C	CETXXX	Programme Elective IV	3 - 0 - 0	3	3
D	CETXXX	Programme Elective V	3 - 0 - 0	3	3
E	CET404	Comprehensive Viva Voce	1 - 0 - 0	1	1
U	CED416	Project Phase II	0 - 0 - 12	12	4
		Total		19	11

Programme Elective IV					
C	CET416	BRIDGE ENGINEERING	3 -0 - 0	3	3
	CET426	ADVANCED FOUNDATION DESIGN	3 -0 - 0		
	CET436	TRANSPORTATION PLANNING	3 -0 - 0		
	CET446	INFORMATICS FOR INFRASTRUCTURE MANAGEMENT	3 -0 - 0		
	CET456	REPAIR AND REHABILITATION OF BUILDINGS	3 -0 - 0		
	CET466	ENVIRONMENTAL REMOTESENSING	3 -0 - 0		
	CET476	BULDING SERVICES	3 -0 - 0		

Programme Elective V					
D	CET418	EARTHQUAKERESISTANT DESIGN	3 -0 - 0	3	3
	CET428	SOIL STRUCTURE INTERACTION	3 -0 - 0		
	CET438	AIRPORT, SEAPORT AND HARBOUR ENGINEERING	3 -0 - 0		
	CET448	HYDROCLIMATOLOGY	3 -0 - 0		
	CET458	SUSTAINABLE CONSTRUCTION	3 -0 - 0		
	CET468	CLIMATE CHANGE & SUSTAINABILITY	3 -0 - 0		
	CET478	BUILDING INFORMATION MODELLING	3 -0 - 0		

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BTech – Curriculum (Evening Courses) 2020 SCHEME

COMPUTER SCIENCE ENGINEERING

SEMESTER 1

Exam Slot	Course Number	Name	L-T-P	Hours	Credits
A	MAT203	Discrete Mathematical Structures	3 -1 - 0	4	4
B	CST201	Data Structures	3 -1 - 0	4	4
C	CST203	Logic System Design	3 -1 - 0	4	4
D	CST205	Object Oriented Programming Using Java	3 -1 - 0	4	4
S	CSL201	Data Structures lab	0 -0 - 3	3	2
T	CSL203	Object Oriented Programming Lab (in Java)	0 -0 - 3	3	2
		Total		22	20

SEMESTER 2

Exam Slot	Course Number	Name	L-T-P	Hours	Credits
A	MAT206	Graph Theory	3 -1 - 0	4	4
B	CST202	Computer Organisation and Architecture	3 - 1 - 0	4	4
D	CST206	Operating Systems	3 - 1 - 0	4	4
E	HUT200	Professional Ethics	2 - 0 - 0	2	2
F	MCN202	Constitution of India	2 - 0 - 0	2	-
S	CSL202	Digital Lab	0 -0 - 3	3	2
		Total		19	16

SEMESTER 3

Exam Slot	Course Number	Name	L-T-P	Hours	Credits
B	CST303	Computer Networks	3 -1 - 0	4	4
C	CST305	System Software	3 -1 - 0	4	4
D	CST307	MicroProcessors and Microcontrollers	3 -1 - 0	4	4
E	EST200	Design & Engineering	2 - 0 - 0	2	2
F	MCN201	Sustainable Engineering	2 - 0 - 0	2	-
S	CSL331	System Software and Microprocessors Lab	0 -0 - 4	4	2
		Total		20	16

SEMESTER 4

Exam Slot	Course Number	Name	L-T-P	Hours	Credits
B	CST304	Computer Graphics and Image Processing	3 -1 - 0	4	4
C	CST204	Database Management Systems	3 -1 - 0	4	4
D	CSTXXX	Programme Elective I	2 -1 - 0	3	3
S	CSL332	Networking Lab	0 -0 - 3	3	2
T	CSL204	Operating Systems Lab	0 -0 - 3	3	2
		Total		17	15

Programme Elective I					
D	CST 312	Foundations of Machine Learning	2 -1 - 0	3	3
	CST 322	Data Analytics	2 -1 - 0		
	CST 332	Foundations of Security in Computing	2 -1 - 0		
	CST 342	Automated Verification	2 -1 - 0		
	CST 362	Programming in Python	2 -1 - 0		
	CST 372	Data and Computer Communication	2 -1 - 0		

SEMESTER 5

Exam Slot	Course Number	Name	L-T-P	Hours	Credits
A	CST301	Formal Languages and Automata Theory	3 - 1 - 0	4	4
B	CSTXXX	Program Elective II	2 - 1 - 0	3	3
C	CSTXXX	Open Elective	2 - 1 - 0	3	3
E	CST309	Management of Software Systems	3 - 0 - 0	3	3
F	MCN301	Disaster Management	2 - 0 - 0	2	-
T	CSL333	Database Management Systems Lab	0 - 0 - 4	3	2
		Total		18	15

Program Elective II					
B	CST413	Machine Learning	2 - 1 - 0	3	3
	CST423	Cloud Computing	2 - 1 - 0		
	CST433	Security in Computing	2 - 1 - 0		
	CST443	Model based Software Development	2 - 1 - 0		
	CST463	Web Programming	2 - 1 - 0		
	CST473	Natural Language Processing	2 - 1 - 0		

Open Elective					
C	CST415	Introduction to Mobile Computing	2 - 1 - 0	3	3
	CST425	Introduction to Deep Learning	2 - 1 - 0		
	CST435	Computer Graphics	2 - 1 - 0		
	CST445	Python for Engineers	2 - 1 - 0		
	CST455	Object Oriented Concepts	2 - 1 - 0		

SEMESTER 6

Exam Slot	Course Number	Name	L-T-P	Hours	Credits
A	CST302	Compiler Design	3 - 1 - 0	4	4
B	CSTXXX	Program Elective III	2 - 1 - 0	3	3
C	CST306	Algorithm Analysis and Design	3 - 1 - 0	4	4
E	HUT300	Industrial Economics & Foreign Trade	3 - 0 - 0	3	3
F	CST308	Comprehensive Course Work	1 - 0 - 0	1	1
T	CSD334	Mini Project	0 - 0 - 3	3	2
		Total		18	17

Programme Elective III					
B	CST414	Deep Learning	2 - 1 - 0	3	3
	CST424	Programming Paradigms	2 - 1 - 0		
	CST434	Cryptography	2 - 1 - 0		
	CST444	Soft Computing	2 - 1 - 0		
	CST454	Fuzzy Set Theory and Applications	2 - 1 - 0		
	CST464	Embedded Systems	2 - 1 - 0		
	CST474	Computer Vision	2 - 1 - 0		

SEMESTER 7

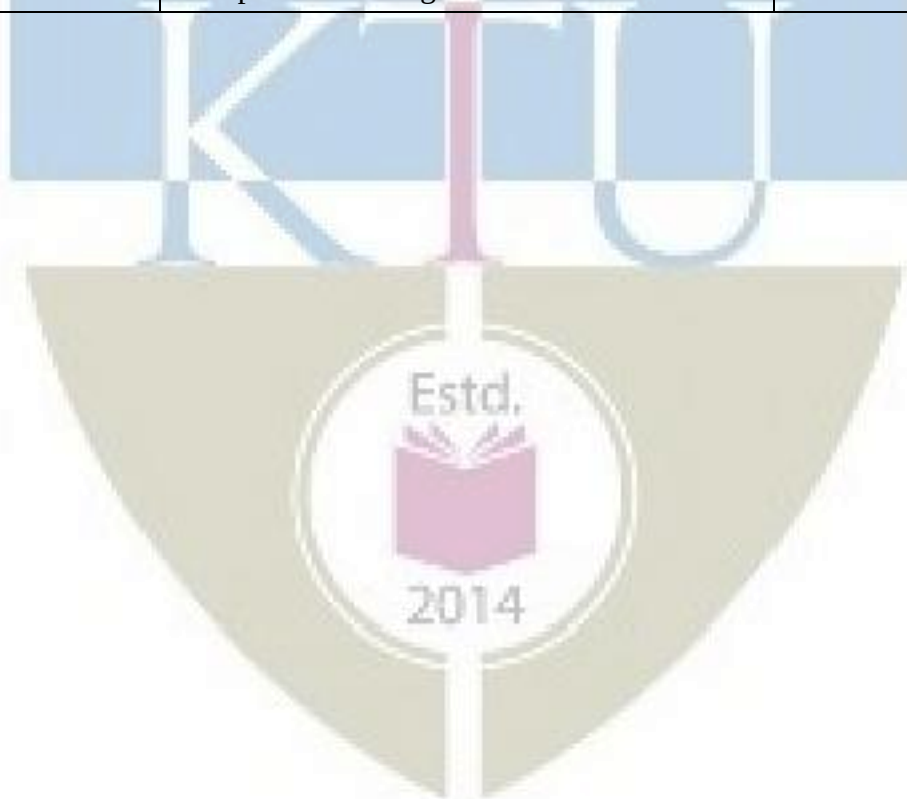
Exam Slot	Course Number	Name	L-T-P	Hours	Credits
A	CST401	Artificial Intelligence	2 - 1 - 0	3	3
D	MCN401	Industrial Safety Engineering	2 - 1 - 0	3	-
S	CSL411	Compiler Lab	0 - 0 - 3	3	2
T	CSQ413	Seminar	0 - 0 - 3	3	2
U	CSD415	Project Phase I	0 - 0 - 6	6	2
		Total		18	9

SEMESTER 8

Exam Slot	Course Number	Name	L-T-P	Hours	Credits
A	CST402	Distributed Computing	2 - 1 - 0	3	3
C	CSTXXX	Programme Elective IV	2 - 1 - 0	3	3
D	CSTXXX	Programme Elective V	2 - 1 - 0	3	3
T	CST404	Comprehensive Course Viva	1 - 0 - 0	1	1
U	CSD416	Project Phase II	0 - 0 - 12	12	4
		Total		22	14

Programme Elective IV					
C	CST416	Formal Methods and Tools in Software Engineering	2 - 1 - 0	3	3
	CST426	Client Server Architecture	2 - 1 - 0		
	CST436	Parallel Computing	2 - 1 - 0		
	CST446	Data Compression Techniques	2 - 1 - 0		
	CST466	Data Mining	2 - 1 - 0		
	CST476	Mobile Computing	2 - 1 - 0		

Programme Elective V					
D	CST418	High Performance Computing	2 - 1 - 0	3	3
	CST428	Block Chain Technologies	2 - 1 - 0		
	CST438	Image Processing Technique	2 - 1 - 0		
	CST448	Internet of Things	2 - 1 - 0		
	CST458	Software Testing	2 - 1 - 0		
	CST468	Bioinformatics	2 - 1 - 0		
	CST478	Computational Linguistics	2 - 1 - 0		



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BTech – Curriculum (Evening Courses) 2020 SCHEME

ELECTRONICS & COMMUNICATION ENGINEERING

SEMESTER 1

Exam Slot	Course Number	Name	L-T-P	Hours	Credits
A	MAT201	Partial Differential Equation and Complex Analysis	3 -1 - 0	4	4
B	ECT201	Solid State Devices	3 -1 - 0	4	4
C	ECT203	Logic Circuit Design	3 -1 - 0	4	4
D	ECT205	Network Theory	3 -1 - 0	4	4
S	ECL201	Scientific Computing Lab	0 -0 - 3	3	2
T	ECL203	Logic Design lab	0 -0 - 3	3	2
		Total		22	20

SEMESTER 2

Exam Slot	Course Number	Name	L-T-P	Hours	Credits
A	MAT204	Probability, Random Process and Numerical Methods	3 -1 - 0	4	4
B	ECT202	Analog Circuits	3 -1 - 0	4	4
D	ECT206	Computer Architecture and Microcontrollers	3 -1 - 0	4	4
E	HUT200	Professional Ethics	2 - 0 - 0	2	2
F	MCN202	Constitution of India	2 - 0 - 0	2	-
S	ECL202	Analog Circuits and Simulation Lab	0 -0 - 3	3	2
		Total		19	16

SEMESTER 3

Exam Slot	Course Number	Name	L-T-P	Hours	Credits
A	ECT301	Linear Integrated Circuits	3 - 1 - 0	4	4
B	ECT305	Analog and Digital Communication	3 - 1 - 0	4	4
D	ECT307	Control Systems	3 - 1 - 0	4	4
E	EST200	Design & Engineering	2 - 0 - 0	2	2
F	MCN201	Sustainable Engineering	2 - 0 - 0	2	-
T	ECL331	Analog Integrated Circuits and Simulation Lab	0 - 0 - 3	3	2
		Total		19	16

SEMESTER 4

Exam Slot	Course Number	Name	L-T-P	Hours	Credits
A	ECT302	Electromagnetics	3 - 1 - 0	4	4
B	ECT304	VLSI Circuit Design	3 - 1 - 0	4	4
C	ECT204	Signals and Systems	3 - 1 - 0	4	4
D	ECTXXX	Programe Elective I	2 - 1 - 0	3	3
S	ECL332	Communication Lab	0 - 0 - 3	3	2
T	ECL204	Microcontroller Lab	0 - 0 - 3	3	2
		Total		21	19

Programe Elective I

D	ECT312	Digital System Design	2 - 1 - 0	3	3
	ECT322	Power Electronics	2 - 1 - 0		
	ECT332	Data Analysis	2 - 1 - 0		
	ECT342	Embedded Systems	2 - 1 - 0		
	ECT352	Digital Image Processing	2 - 1 - 0		
	ECT362	Introduction to MEMS	2 - 1 - 0		
	ECT372	Quantum Computing	2 - 1 - 0		

SEMESTER 5

Exam Slot	Course Number	Name	L-T-P	Hours	Credits
B	ECTXXX	Program Elective II	2 - 1 - 0	3	3
C	ECT303	Digital Signal Processing	3 - 1 - 0	4	4
E	HUT310	Management for Engineers	3 - 0 - 0	3	3
F	MCN301	Disaster Management	2 - 0 - 0	2	-
S	ECL333	Digital Signal Processing Lab	0 - 0 - 3	3	2
-	-	-	-	-	-
		Total		15	12

Program Elective II					
B	ECT413	Optical Fiber Communication	2 - 1 - 0	3	3
	ECT423	Computer Networks	2 - 1 - 0		
	ECT433	Opto Electronic Devices	2 - 1 - 0		
	ECT443	Instrumentation	2 - 1 - 0		
	ECT453	Error Control codes	2 - 1 - 0		
	ECT463	Machine Learning	2 - 1 - 0		
	ECT473	DSP Architecture	2 - 1 - 0		

SEMESTER 6

Exam Slot	Course Number	Name	L-T-P	Hours	Credits
A	ECT402	Wireless Communication	2 - 1 - 0	3	3
B	ECTXXX	Program Elective III	2 - 1 - 0	3	3
C	ECT306	Information Theory and Coding	3 - 1 - 0	4	4
E	HUT300	Industrial Economics & Foreign Trade	3 - 0 - 0	3	3
F	ECT308	Comprehensive Course Work	1 - 0 - 0	1	1
T	ECD334	Mini Project	0 - 0 - 3	3	2
		Total		17	16

Programme Elective III					
B	ECT414	Biomedical Engineering	2 - 1 - 0	3	3
	ECT424	Satellite Communication	2 - 1 - 0		
	ECT434	Secure Communication	2 - 1 - 0		
	ECT444	Pattern Recognition	2 - 1 - 0		
	ECT454	RF Circuit Design	2 - 1 - 0		
	ECT464	Mixed Signal Circuit Design	2 - 1 - 0		
	ECT474	Entrepreneurship	2 - 1 - 0		

SEMESTER 7

Exam Slot	Course Number	Name	L-T-P	Hours	Credits
A	ECT401	Microwaves and Antennas	2 - 1 - 0	3	3
C	ECTXXX	Open Elective	2 - 1 - 0	3	3
D	MCN401	Industrial Safety Engineering	2 - 1 - 0	3	-
S	ECL411	Electromagnetics Lab	0 - 0 - 3	3	2
T	ECQ413	Seminar	0 - 0 - 3	3	2
U	ECD415	Project Phase I	0 - 0 - 6	6	2
		Total		21	12

Open Elective					
C	ECT415	Mechatronics	2 - 1 - 0	3	3
	ECT425	Biomedical Instrumentation	2 - 1 - 0		
	ECT435	Electronic Hardware for Engineers	2 - 1 - 0		
	ECT445	IoT Applications	2 - 1 - 0		
	ECT455	Entertainment Electronics	2 - 1 - 0		

SEMESTER 8

Exam Slot	Course Number	Name	L-T-P	Hours	Credits
C	ECTXXX	Programme Elective IV	2 - 1 - 0	3	3
D	ECTXXX	Programme Elective V	2 - 1 - 0	3	3
E	ECT404	Comprehensive Viva Voce	1 - 0 - 0	1	1
U	ECD416	Project Phase II	0 - 0 - 12	12	4
		Total		19	11

Programme Elective IV					
C	ECT416	Modern Communication Systems	2 - 1 - 0	3	3
	ECT426	Real Time Operating Systems	2 - 1 - 0		
	ECT436	Adaptive Signal Processing	2 - 1 - 0		
	ECT446	Microwave Devices & Circuits	2 - 1 - 0		
	ECT456	Speech and Audio Processing	2 - 1 - 0		
	ECT466	Analog CMOS Design	2 - 1 - 0		
	ECT476	Robotics	2 - 1 - 0		

Programme Elective V					
D	ECT418	Mechatronics	2 - 1 - 0	3	3
	ECT428	Optimisation Techniques	2 - 1 - 0		
	ECT438	Computer Vision	2 - 1 - 0		
	ECT448	Low Power VLSI	2 - 1 - 0		
	ECT458	Internet of Things	2 - 1 - 0		
	ECT468	Renewable Energy Systems	2 - 1 - 0		
	ECT478	Organic Electronics	2 - 1 - 0		

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BTech – Curriculum (Evening Courses) 2020 SCHEME

ELECTRICAL & ELECTRONICS ENGINEERING

SEMESTER 1

Exam Slot	Course Number	Name	L-T-P	Hours	Credits
A	MAT201	Partial Differential Equation and Complex Analysis	3 - 1 - 0	4	4
B	EET201	Circuits and Networks	2 - 2 - 0	4	4
C	EET203	Measurements and Instrumentation	3 - 1 - 0	4	4
D	EET205	Analog Electronics	3 - 1 - 0	4	4
S	EEL201	Circuits and Measurements Lab	0 - 0 - 3	3	2
T	EEL203	Analog Electronics Lab	0 - 0 - 3	3	2
		Total		22	20

SEMESTER 2

Exam Slot	Course Number	Name	L-T-P	Hours	Credits
B	EET202	DC Machines and Transformers	2 - 2 - 0	4	4
C	EET204	Electromagnetic Theory	3 - 1 - 0	4	
D	EET206	Digital Electronics	3 - 1 - 0	4	4
E	HUT200	Professional Ethics	2 - 0 - 0	2	2
S	EEL202	Electrical Machines Lab I	0 - 0 - 3	3	2
T	EEL204	Digital Electronics Lab	0 - 0 - 3	3	2
		Total		20	18

SEMESTER 3

Exam Slot	Course Number	Name	L-T-P	Hours	Credits
A	EET301	Power Systems I	3 - 1 - 0	4	4
B	EET303	Microprocessors and Microcontrollers	3 - 1 - 0	4	4
D	EET307	Synchronous and Induction Machines	3 - 1 - 0	4	4
E	EST200	Design & Engineering	2 - 0 - 0	2	2
F	MCN201	Sustainable Engineering	2 - 0 - 0	2	-
T	EEL333	Electrical Machines Lab II	0 - 0 - 3	3	2
		Total		19	16

SEMESTER 4

Exam Slot	Course Number	Name	L-T-P	Hours	Credits
A	MAT204	Probability Random Process and Numerical Methods	3 - 1 - 0	4	4
B	EET304	Power Systems II	3 - 1 - 0	4	4
C	EET306	Power Electronics	3 - 1 - 0	4	4
D	EETXXX	Programme Elective I	2 - 1 - 0	3	3
F	MCN202	Constitution of India	2 - 0 - 0	2	-
S	EEL332	Power Systems Lab	0 - 0 - 3	3	2
		Total		20	17

Programme Elective I					
D	EET312	BIOMEDICAL INSTRUMENTATION	2 - 1 - 0	3	3
	EET322	RENEWABLE ENERGY SYSTEMS	2 - 1 - 0		
	EET332	COMPUTER ORGANIZATION	2 - 1 - 0		
	EET342	HIGH VOLTAGE ENGINEERING	2 - 1 - 0		
	EET352	OBJECT ORIENTED PROGRAMMING	2 - 1 - 0		
	EET362	MATERIAL SCIENCE	2 - 1 - 0		
	EET372	SOFT COMPUTING	2 - 1 - 0		

SEMESTER 5

Exam Slot	Course Number	Name	L-T-P	Hours	Credits
B	EETXXX	Program Elective II	2 - 1 - 0	3	3
C	EET305	Signals and Systems	3 - 1 - 0	4	4
E	HUT310	Management for Engineers	3 - 0 - 0	3	3
F	MCN301	Disaster Management	2 - 0 - 0	2	-
S	EEL331	Microprocessors and Microcontrollers Lab	0 - 0 - 3	3	2
		Total		15	12

Program Elective II					
B	EET413	SPECIAL ELECTRICAL MACHINES	2 - 1 - 0	3	3
	EET423	DIGITAL CONTROL SYSTEMS	2 - 1 - 0		
	EET433	MODERN OPERATING SYSTEMS	2 - 1 - 0		
	EET443	DATA STRUCTURES	2 - 1 - 0		
	EET453	DIGITAL SIGNAL PROCESSING	2 - 1 - 0		
	EET463	ILLUMINATION TECHNOLOGY	2 - 1 - 0		
	EET473	DIGITAL PROTECTION OF POWER SYSTEMS	2 - 1 - 0		

SEMESTER 6

Exam Slot	Course Number	Name	L-T-P	Hours	Credits
A	EET302	Linear Control Systems	2 - 2 - 0	4	4
B	EETXXX	Program Elective III	2 - 1 - 0	3	3
E	HUT300	Industrial Economics & Foreign Trade	3 - 0 - 0	3	3
F	EET308	Comprehensive Course Work	1 - 0 - 0	1	1
T	EEL334	Power Electronics Lab	0 - 0 - 3	3	2
		Total		14	13

Programme Elective III					
B	EET414	ROBOTICS	2 - 1 - 0	3	3
	EET424	ENERGY MANAGEMENT	2 - 1 - 0		
	EET434	SMART GRID TECHNOLOGIES	2 - 1 - 0		
	EET444	ELECTRICAL MACHINE DESIGN	2 - 1 - 0		
	EET454	SWITCHED MODE POWER CONVERTERS	2 - 1 - 0		
	EET464	COMPUTER AIDED POWER SYSTEM ANALYSIS	2 - 1 - 0		
	EET474	MACHINE LEARNING	2 - 1 - 0		

SEMESTER 7

Exam Slot	Course Number	Name	L-T-P	Hours	Credits
A	EET401	Advanced Control Systems	2 - 1 - 0	3	3
C	EETXXX	Open Elective	2 - 1 - 0	3	3
D	MCN401	Industrial Safety Engineering	2 - 1 - 0	3	-
S	EEL411	Control Systems Lab	0 - 0 - 3	3	2
T	EEQ413	Seminar	0 - 0 - 3	3	2
U	EED415	Project Phase I	0 - 0 - 6	6	2
		Total		21	12

Open Elective					
C	EET415	CONTROL SYSTEMS ENGINEERING	2 - 1 - 0	3	3
	EET425	INTRODUCTION TO POWER PROCESSING	2 - 1 - 0		
	EET435	RENEWABLE ENERGY SYSTEMS	2 - 1 - 0		
	EET445	ELECTRIC VEHICLES	2 - 1 - 0		
	EET455	ENERGY MANAGEMENT	2 - 1 - 0		

SEMESTER 8

Exam Slot	Course Number	Name	L-T-P	Hours	Credits
A	EET402	Electrical System Design and Estimation	2 - 1 - 0	3	3
C	EETXXX	Programme Elective IV	2 - 1 - 0	3	3
D	EETXXX	Programme Elective V	2 - 1 - 0	3	3
T	EET404	Comprehensive Viva Voce	1 - 0 - 0	1	1
U	EED416	Project Phase II	0 - 0 - 12	12	4
-	-	-	-	-	-
		Total		22	14

Programme Elective IV					
C	EET416	NONLINEAR SYSTEMS	2 - 1 - 0	3	3
	EET426	ELECTRIC DRIVES	2 - 1 - 0		
	EET436	POWER QUALITY	2 - 1 - 0		
	EET446	COMPUTER NETWORKS	2 - 1 - 0		
	EET456	DESIGN OF POWER ELECTRONIC SYSTEMS	2 - 1 - 0		
	EET466	HVDC & FACTS	2 - 1 - 0		
	EET476	ADVANCED ELECTRONIC DESIGN	2 - 1 - 0		

Programme Elective V					
D	EET418	ELECTRIC AND HYBRID VEHICLES	2 - 1 - 0	3	3
	EET428	INTERNET OF THINGS	2 - 1 - 0		
	EET438	ENERGY STORAGE SYSTEMS	2 - 1 - 0		
	EET448	ROBUST AND ADAPTIVE CONTROL	2 - 1 - 0		
	EET458	SOLAR PV SYSTEMS	2 - 1 - 0		
	EET468	INDUSTRIAL INSTRUMENTATION & AUTOMATION	2 - 1 - 0		
	EET478	BIG DATA ANALYTICS	2 - 1 - 0		

APJ Abdul Kalam Kerala Technological University

BTech – Curriculum (Evening Courses) 2020 SCHEME

MECHANICAL ENGINEERING

SEMESTER 1

Exam Slot	Course Number	Name	L-T-P	Hours	Credits
A	MAT201	Partial Differential Equation and Complex Analysis	3 - 1 - 0	4	4
B	MET201	Mechanics of Solids	3 - 1 - 0	4	4
C	MET203	Mechanics of Fluids	3 - 1 - 0	4	4
E	EST200	Design & Engineering	2 - 0 - 0	2	2
S	MEL201	Computer Aided Machine Drawing	0 - 0 - 3	3	2
T	MEL203	Material Testing Lab	0 - 0 - 3	3	2
		Total		20	18

SEMESTER 2

Exam Slot	Course Number	Name	L-T-P	Hours	Credits
A	MAT202	Probability, Statistics and Numerical Methods	3 - 1 - 0	4	4
B	MET202	Engineering Thermodynamics	3 - 1 - 0	4	4
D	MET206	Fluid Machinery	3 - 1 - 0	4	4
E	HUT200	Professional Ethics	2 - 0 - 0	2	2
F	MCN202	Constitution of India	2 - 0 - 0	2	-
S	MEL202	FM & HM Lab	0 - 0 - 3	3	2
		Total		19	16

SEMESTER 3

Exam Slot	Course Number	Name	L-T-P	Hours	Credits
A	MET301	Mechanics of Machinery	3 - 1 - 0	4	4
B	MET303	Thermal Engineering	3 - 1 - 0	4	4
D	MET307	Machine Tools and Metrology	3 - 1 - 0	4	4
E	HUT310	Management for Engineers	3 - 0 - 0	3	3
F	MCN201	Sustainable Engineering	2 - 0 - 0	2	-
T	MEL333	Thermal Engineering Lab-I	0 - 0 - 3	3	2
		Total		20	17

SEMESTER 4

Exam Slot	Course Number	Name	L-T-P	Hours	Credits
A	MET302	Heat & Mass Transfer	3 - 1 - 0	4	4
B	MET304	Dynamics and Design of Machinery	4 - 0 - 0	4	4
C	MET204	Manufacturing Process	4 - 0 - 0	4	4
D	METXXX	Programme Elective I	3 - 0 - 0	3	3
S	MEL332	Computer Aided Design & Analysis Lab	0 - 0 - 3	3	2
T	MEL204	Machine Tools Lab-I	0 - 0 - 3	3	2
		Total		21	19

Programme Elective I

D	MET312	NONDESTRUCTIVE TESTING	2 - 1 - 0	3	3
	MET322	COMPUTATIONAL FLUID DYNAMICS	2 - 1 - 0		
	MET332	ADVANCED MECHANICS OF SOLIDS	2 - 1 - 0		
	MET342	IC ENGINE COMBUSTION AND POLLUTION	2 - 1 - 0		
	MET352	AUTOMOBILE ENGINEERING	2 - 1 - 0		
	MET362	PRODUCT DESIGN AND DEVELOPMENT	2 - 1 - 0		
	MET372	ADVANCED METAL JOINING TECHNIQUES	2 - 1 - 0		

SEMESTER 5

Exam Slot	Course Number	Name	L-T-P	Hours	Credits
B	METXXX	Program Elective II	3 - 0 - 0	3	3
C	METXXX	Open Elective	3 - 0 - 0	3	3
D	MET205	Metallurgy & Material Science	3 - 1 - 0	4	4
F	MCN301	Disaster Management	2 - 0 - 0	2	-
S	MEL331	Machine Tools Lab-II	0 - 0 - 3	3	2
		Total		15	12

Program Elective II

B	MET413	ADVANCED METHODS IN NONDESTRUCTIVE TESTING	2 - 1 - 0	3	3
	MET423	OPTIMIZATION TECHNIQUES AND APPLICATIONS	2 - 1 - 0		
	MET433	FINITE ELEMENT METHOD	2 - 1 - 0		
	MET443	AEROSPACE ENGINEERING	2 - 1 - 0		
	MET453	HYBRID AND ELECTRIC VEHICLES	2 - 1 - 0		
	MET463	OPERATIONS MANAGEMENT	2 - 1 - 0		
	MET473	AIR CONDITIONING AND REFRIGERATION	2 - 1 - 0		

Open Elective

C	MET415	INTRODUCTION TO BUSINESS ANALYTICS	2 - 1 - 0	3	3
	MET425	QUANTITATIVE TECHNIQUES FOR ENGINEERS	2 - 1 - 0		
	MET435	AUTOMOTIVE TECHNOLOGY	2 - 1 - 0		
	MET445	RENEWABLE ENERGY ENGINEERING	2 - 1 - 0		
	MET455	QUALITY ENGINEERING AND MANAGEMENT	2 - 1 - 0		

SEMESTER 6

Exam Slot	Course Number	Name	L-T-P	Hours	Credits
A	MET402	Mechatronics	3 - 1 - 0	3	3
B	METXXX	Program Elective III	3 - 0 - 0	3	3
C	MET306	Advanced Manufacturing Engineering	4 - 0 - 0	4	4
E	HUT300	Industrial Economics & Foreign Trade	3 - 0 - 0	3	3
F	MET308	Comprehensive Course Work	1 - 0 - 0	1	1
T	MEL334	Thermal Engineering Lab-II	0 - 0 - 3	3	2
		Total		17	16

Program Elective III					
B	MET414	QUALITY MANAGEMENT	2 - 1 - 0	3	3
	MET424	DECISIONS WITH METAHEURISTICS	2 - 1 - 0		
	MET434	PRESSURE VESSEL AND PIPING DESIGN	2 - 1 - 0		
	MET444	DATA ANALYTICS FOR ENGINEERS	2 - 1 - 0		
	MET454	INDUSTRIAL TRIBOLOGY	2 - 1 - 0		
	MET464	MICRO AND NANO MANUFACTURING	2 - 1 - 0		
	MET474	HEATING AND VENTILATION SYSTEMS	2 - 1 - 0		

SEMESTER 7

Exam Slot	Course Number	Name	L-T-P	Hours	Credits
A	MET401	Design of Machine Elements	3 - 0 - 0	3	3
C	MET305	Industrial & Systems Engineering	4 - 0 - 0	4	4
D	MCN401	Industrial Safety Engineering	2 - 1 - 0	3	-
S	MEL411	Mechanical Engg Lab	0 - 0 - 3	3	2
T	MEQ413	Seminar	0 - 0 - 3	3	2
U	MED415	Project Phase I	0 - 0 - 6	6	2
		Total		22	13

SEMESTER 8

Exam Slot	Course Number	Name	L-T-P	Hours	Credits
C	METXXX	Program Elective IV	3 - 0 - 0	3	3
D	METXXX	Program Elective V	3 - 0 - 0	3	3
E	MET404	Comprehensive Viva Voce	1 - 0 - 0	1	1
U	MED416	Project Phase II	0 - 0 - 12	12	4
		Total		19	11

Program Elective IV

C	MET416	COMPOSITE MATERIALS	2 - 1 - 0	3	3
	MET426	ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING	2 - 1 - 0		
	MET436	ACOUSTICS AND NOISE CONTROL	2 - 1 - 0		
	MET446	HEAT TRANSFER EQUIPMENT DESIGN	2 - 1 - 0		
	MET456	ROBOTICS AND AUTOMATION	2 - 1 - 0		
	MET466	TECHNOLOGY MANAGEMENT	2 - 1 - 0		
	MET476	CRYOGENIC ENGINEERING	2 - 1 - 0		

Program Elective V

D	MET418	RELIABILITY ENGINEERING	2 - 1 - 0	3	3
	MET428	INDUSTRIAL INTERNET OF THINGS	2 - 1 - 0		
	MET438	FRACTURE MECHANICS	2 - 1 - 0		
	MET448	GAS TURBINES AND JET PROPULSION	2 - 1 - 0		
	MET458	ADVANCED ENERGY ENGINEERING	2 - 1 - 0		
	MET468	ADDITIVE MANUFACTURING	2 - 1 - 0		
	MET478	POWER PLANT ENGINEERING	2 - 1 - 0		