Subject Teaching & Examination Scheme

Course : BTech | **Curriculum :** ENGG & TECH - BTech - RA - 2019-20

Semester - 1

						Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
203106101	Basic Electrical Engineering	5	4	2	0	20	20	20	60	30	40	25	150
203108101	Information and Communication Technology	3	3	0	0	20	-	20	60	-	40	-	100
203109101	Engineering Graphics	4	2	4	0	20	20	20	60	30	40	25	150
203191101	Mathematics – I	5	3	0	2	20	-	20	60	-	40	-	100
203192101	Engineering Physics	4	3	2	0	20	20	20	60	30	40	25	150
203193101	Communication Skills - 1	2	0	0	2	-	-	100	0	-	40	-	100
	Total	**23**	**15**	**8**	**4**								**750**

Lect - Lecture, **Tut** - Tutorial, **Lab** - Lab, **T** - Theory, **P** - Practical, **CE** - CE, **T** - Theory, **P** - Practical
Theory Passing % : 40 **Practical Passing % :** 50

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Course : BTech | **Curriculum :** ENGG & TECH - BTech - RA - 2019-20

Semester - 2

Code	Subject	Credit	Lect	Lab	Tut	Internal Marks T	Internal Marks P	Internal Marks CE	External Marks T	External Marks P	Passing Marks (Theory + CE) Int. + Ext.	Passing Marks (Practical) Int. + Ext.	Total Marks
203100101	Workshop	2	0	4	0	-	40	-	-	60	-	50	100
203104102	Elements of Civil Engineering	4	3	2	0	20	20	20	60	30	40	25	150
203105101	Fundamentals of Programming	4	2	4	0	20	20	20	60	30	40	25	150
203107151	Basic Electronics	4	3	2	0	20	20	20	60	30	40	25	150
203109102	Elements of Mechanical Engineering	4	3	2	0	20	20	20	60	30	40	25	150
203191151	Mathematics-II	5	3	0	2	20	-	20	60	-	40	-	100
203193151	Communication Skills - 2	2	0	0	2	-	-	100	-	-	40	-	100
	Total	**25**	**14**	**14**	**4**								**900**

Lect - Lecture, **Tut** - Tutorial, **Lab** - Lab, **T** - Theory, **P** - Practical, **CE** - CE, **T** - Theory, **P** - Practical
Theory Passing % : 40 **Practical Passing % :** 50

Semester - 3

Code	Subject	Credit	Lect	Lab	Tut	Internal Marks T	Internal Marks P	Internal Marks CE	External Marks T	External Marks P	Passing Marks (Theory + CE) Int. + Ext.	Passing Marks (Practical) Int. + Ext.	Total Marks
203106209	Electrical Machines	3	3	0	0	20	-	20	60	-	40	-	100
203106210	Electrical Machines Lab	1	0	2	0	-	20	-	-	30	-	25	50
203107203	Digital System Design	3	3	0	0	20	-	20	60	-	40	-	100
203107204	Digital System Design Lab	1	0	2	0	-	20	-	-	30	-	25	50
203107205	Network Theory	3	3	0	0	20	-	20	60	-	40	-	100
203107206	Network Theory Lab	1	0	2	0	-	20	-	-	30	-	25	50
203109203	Materials Engineering	3	3	0	0	20	-	20	60	-	40	-	100
203109204	Materials Engineering Lab	1	0	2	0	-	20	-	-	30	-	25	50
203111205	Control Theory	3	3	0	0	20	-	20	60	-	40	-	100
203111206	Control Theory Lab	1	0	2	0	-	20	-	-	30	-	25	50
203122201	Manufacturing Technology	3	3	0	0	20	-	20	60	-	40	-	100
203122202	Manufacturing Technology Lab	1	0	2	0	-	20	-	-	30	-	25	50
203193201	Professional Communication Skills-1	2	1	0	1	-	-	100	0	-	40	-	100
	Total	**26**	**19**	**12**	**1**								**1000**

Lect - Lecture, **Tut** - Tutorial, **Lab** - Lab, **T** - Theory, **P** - Practical, **CE** - CE, **T** - Theory, **P** - Practical
Theory Passing % : 40 **Practical Passing % :** 50

Subject Teaching & Examination Scheme

Course : BTech | Curriculum : ENGG & TECH - BTech - RA - 2019-20

Semester - 4

Code	Subject	Credit	Lect	Lab	Tut	Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
						T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
203111259	Electronic Devices & Circuits	3	3	0	0	20	-	20	60	-	40	-	100
203111260	Electronic Devices & Circuits Lab	1	0	2	0	-	20	-	-	30	-	25	50
203113259	Basics of Signal & Systems	3	3	0	0	20	-	20	60	-	40	-	100
203113260	Basics of Signal & Systems Lab	1	0	2	0	-	20	-	-	30	-	25	50
203122251	Robot Kinematics	3	3	0	0	20	-	20	60	-	40	-	100
203122252	Robot Kinematics Lab	1	0	2	0	-	20	-	-	30	-	25	50
203122253	Communication Engineering	3	3	0	0	20	-	20	60	-	40	-	100
203122254	Communication Engineering Lab	1	0	2	0	-	20	-	-	30	-	25	50
203122255	Fundamentals of Robotics	3	3	0	0	20	-	20	60	-	40	-	100
203122256	Fundamentals of Robotics Lab	1	0	2	0	-	20	-	-	30	-	25	50
203122258	Sensors and Transducers Laboratory	1	0	2	0	-	20	-	-	30	-	25	50
203193251	Professional Communication Skills-2	2	1	0	1	-	-	100	0	-	40	-	100
	Total	**23**	**16**	**12**	**1**								**900**

Lect - Lecture, **Tut** - Tutorial, **Lab** - Lab, **T** - Theory, **P** - Practical, **CE** - CE, **T** - Theory, **P** - Practical
Theory Passing % : 40 **Practical Passing % :** 50

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Subject Teaching & Examination Scheme

Course : BTech | **Curriculum :** ENGG & TECH - BTech - RA - 2019-20

Semester - 5 Open Elective 01

Code	Subject	Credit	Lect	Lab	Tut	Internal Marks T	P	CE	External Marks T	P	Passing Marks (Theory + CE) Int. + Ext.	Passing Marks (Practical) Int. + Ext.	Total Marks
203101346	Basic Aircraft Science	2	2	0	0	20	-	20	60	-	40	-	100
203104346	Disaster Preparedness and Planning	2	2	0	0	20	-	20	60	-	40	-	100
203105346	Cyber Security	2	2	0	0	20	-	20	60	-	40	-	100
203106346	Energy Science and Engineering	2	2	0	0	20	-	20	60	-	40	-	100
203107346	Fundamentals of Communication Engineering	2	2	0	0	20	-	20	60	-	40	-	100
203108346	Internet of Things	2	2	0	0	20	-	20	60	-	40	-	100
203109346	Renewable Energy Sources	2	2	0	0	20	-	20	60	-	40	-	100

Semester - 5

Code	Subject	Credit	Lect	Lab	Tut	Internal Marks T	P	CE	External Marks T	P	Passing Marks (Theory + CE) Int. + Ext.	Passing Marks (Practical) Int. + Ext.	Total Marks
203113257	Microprocessor & Microcontroller with it's Interfacing	3	3	0	0	20	-	20	60	-	40	-	100
203113258	Microprocessor & Microcontroller with it's Interfacing Lab	1	0	2	0	-	20	-	-	30	-	25	50
203122301	Python Programming	3	3	0	0	20	-	20	60	-	40	-	100
203122302	Python Programming Lab	1	0	2	0	-	20	-	-	30	-	25	50
203122303	CAD - CAM	3	3	0	0	20	-	20	60	-	40	-	100
203122304	CAD - CAM Lab	1	0	2	0	-	20	-	-	30	-	25	50
203122305	Integrated Circuit and Application	3	3	0	0	20	-	20	60	-	40	-	100

Semester - 5

						Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
203122306	Integrated Circuit and Application Lab	1	0	2	0	-	20	-	-	30	-	25	50
203193301	Programming Skills and Placement Essentials (All Branches Except CSE/IT/ICT)	2	1	0	1	-	-	100	0	-	40	-	100
	Open Elective 01 (Complsory Subjects :1) -	2	2	0	0	-	-	-	-	-	-	-	100
	PEC 01-LAB (Complsory Subjects :1) -	1	0	2	0	-	-	-	-	-	-	-	50
	PEC 01 (Complsory Subjects :1) -	3	3	0	0	-	-	-	-	-	-	-	100
	Total	**24**	**18**	**10**	**1**								**950**

Semester - 5 PEC 01

						Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
203122331	Finite Element Methods	3	3	0	0	20	-	20	60	-	40	-	100
203122333	Operational Research	3	3	0	0	20	-	20	60	-	40	-	100
203122335	Non Conventional Manufacturing Techinques	3	3	0	0	20	-	20	60	-	40	-	100

Semester - 5 PEC 01-LAB

Code	Subject	Credit	Lect	Lab	Tut	Internal Marks T	Internal Marks P	Internal Marks CE	External Marks T	External Marks P	Passing Marks (Theory + CE) Int. + Ext.	Passing Marks (Practical) Int. + Ext.	Total Marks
203122332	Finite Element Methods Lab	1	0	2	0	-	20	-	-	30	-	25	50
203122334	Operational Research Lab	1	0	2	0	-	20	-	-	30	-	25	50
203122336	Non Conventional Manufacturing Techinques Lab	1	0	2	0	-	20	-	-	30	-	25	50

Lect - Lecture, **Tut** - Tutorial, **Lab** - Lab, **T** - Theory, **P** - Practical, **CE** - CE, **T** - Theory, **P** - Practical
Theory Passing % : 40 **Practical Passing % :** 50

Semester - 6 Open Elective 02

						Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
203100351	Life Science	2	2	0	0	60	-	40	0	0	40	0	100
203100352	Biology for Engineers	2	2	0	0	60	-	40	0	0	40	0	100
203100353	Engineering Geology	2	2	0	0	60	-	40	0	0	40	0	100
203100354	Landscape Planning and Design	2	2	0	0	60	-	40	0	0	40	0	100
203100355	Fundamentals of Management	2	2	0	0	60	-	40	0	0	40	0	100
203100356	Corporate Social Responsibility	2	2	0	0	60	-	40	0	0	40	0	100
203100357	Innovation and Entrepreneurship	2	2	0	0	60	-	40	0	0	40	0	100
203100358	Constitution of India	2	2	0	0	60	-	40	0	0	40	0	100
203100359	Cyber Law & Ethics	2	2	0	0	60	-	40	0	0	40	0	100

Semester - 6

						Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
203122351	Hydraulic and Pneumatic System	3	3	0	0	20	-	20	60	-	40	-	100
203122352	Hydraulic and Pneumatic System Lab	1	0	2	0	-	20	-	-	30	-	25	50
203122353	Intelligent Systems	3	3	0	0	20	-	20	60	-	40	-	100
203122354	Intelligent Systems Lab	1	0	2	0	-	20	-	-	30	-	25	50
203122355	Robot Dynamics & Manipulator Design	3	3	0	0	20	-	20	60	-	40	-	100

Semester - 6

Code	Subject	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.	Total Marks
						Internal Marks			**External Marks**		**Passing Marks (Theory + CE)**	**Passing Marks (Practical)**	**Total Marks**
203122356	Robot Dynamics & Manipulator Design Lab	1	0	2	0	-	20	-	-	30	-	25	50
203122357	Power Electronics	3	3	0	0	20	-	20	60	-	40	-	100
203122358	Power Electronics Lab	1	0	2	0	-	20	-	-	30	-	25	50
203193351	Advanced Programming and Placement Essentials	2	1	0	1	-	-	100	0	-	40	-	100
	Open Elective 02 (Complsory Subjects :1) -	2	2	0	0	-	-	-	-	-	-	-	100
	PEC 02 (Complsory Subjects :1) -	3	3	0	0	-	-	-	-	-	-	-	100
	PEC 02-LAB (Complsory Subjects :1) -	1	0	2	0	-	-	-	-	-	-	-	50
	Total	**24**	**18**	**10**	**1**								**950**

Semester - 6 PEC 02

Code	Subject	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.	Total Marks
						Internal Marks			**External Marks**		**Passing Marks (Theory + CE)**	**Passing Marks (Practical)**	**Total Marks**
203122381	VLSI Design	3	3	0	0	20	-	20	60	-	40	-	100
203122383	Real Time Embedded Systems	3	3	0	0	20	-	20	60	-	40	-	100
203122385	Wirless Communication	3	3	0	0	20	-	20	60	-	40	-	100

Semester - 6 PEC 02-LAB

						Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
203122382	VLSI Design Lab	1	0	2	0	-	20	-	-	30	-	25	50
203122384	Real Time Embedded Systems Lab	1	0	2	0	-	20	-	-	30	-	25	50
203122386	Wirless Communication Lab	1	0	2	0	-	20	-	-	30	-	25	50

Lect - Lecture, **Tut** - Tutorial, **Lab** - Lab, **T** - Theory, **P** - Practical, **CE** - CE, **T** - Theory, **P** - Practical
Theory Passing % : 40 **Practical Passing % :** 50

Semester - 7

Code	Subject	Credit	Lect	Lab	Tut	Internal Marks T	Internal Marks P	Internal Marks CE	External Marks T	External Marks P	Passing Marks (Theory + CE) Int. + Ext.	Passing Marks (Practical) Int. + Ext.	Total Marks
203122401	Field and Service Robots	3	3	0	0	20	-	20	60	-	40	-	100
203122402	Field and service Robots Lab	1	0	2	0	-	20	-	-	30	-	25	50
203122403	Industrial Automation	3	3	0	0	20	-	20	60	-	40	-	100
203122404	Industrial Automation Lab	1	0	2	0	-	20	-	-	30	-	25	50
203122405	Project-I	7	0	14	0	-	100	-	-	100	-	100	200
203122406	Summer Internship	1	0	0	0	-	50	-	-	0	-	25	50
	PEC 03 (Complsory Subjects :1) -	3	3	0	0	-	-	-	-	-	-	-	100
	PEC 03-LAB (Complsory Subjects :1) -	1	0	2	0	-	-	-	-	-	-	-	50
	Total	**20**	**9**	**20**	**0**								**700**

Semester - 7 PEC 03

Code	Subject	Credit	Lect	Lab	Tut	Internal Marks T	Internal Marks P	Internal Marks CE	External Marks T	External Marks P	Passing Marks (Theory + CE) Int. + Ext.	Passing Marks (Practical) Int. + Ext.	Total Marks
203122431	Digital Signal Processor and Applications	3	3	0	0	20	-	20	60	-	40	-	100
203122433	Internet of Things	3	3	0	0	20	-	20	60	-	40	-	100
203122435	Industrial Networking	3	3	0	0	20	-	20	60	-	40	-	100

Semester - 7 PEC 03-LAB

						Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	Subject	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
203122432	Digital Signal Processor and Applications Lab	1	0	2	0	-	20	-	-	30	-	25	50
203122434	Internet of Things Lab	1	0	2	0	-	20	-	-	30	-	25	50
203122436	Industrial Networking Lab	1	0	2	0	-	20	-	-	30	-	25	50

Lect - Lecture, **Tut** - Tutorial, **Lab** - Lab, **T** - Theory, **P** - Practical, **CE** - CE, **T** - Theory, **P** - Practical

Theory Passing % : 40 **Practical Passing % :** 50

Semester - 8

Code	Subject	Credit	Lect	Lab	Tut	Internal Marks T	Internal Marks P	Internal Marks CE	External Marks T	External Marks P	Passing Marks (Theory + CE) Int. + Ext.	Passing Marks (Practical) Int. + Ext.	Total Marks
203122451	Artificial Intelligence For Robotics	3	3	0	0	20	-	20	60	-	40	-	100
203122452	Artificial Intelligence For Robotics Lab	1	0	2	0	-	20	-	-	30	-	25	50
203122453	Project- II	7	0	14	0	-	100	-	-	100	-	100	200
	PEC 04 (Complsory Subjects :1) -	3	3	0	0	-	-	-	-	-	-	-	100
	PEC 04-LAB (Complsory Subjects :1) -	1	0	2	0	-	-	-	-	-	-	-	50
	Total	**15**	**6**	**18**	**0**								**500**

Semester - 8 PEC 04

Code	Subject	Credit	Lect	Lab	Tut	Internal Marks T	Internal Marks P	Internal Marks CE	External Marks T	External Marks P	Passing Marks (Theory + CE) Int. + Ext.	Passing Marks (Practical) Int. + Ext.	Total Marks
203122481	Advanced Control Systems	3	3	0	0	20	-	20	60	-	40	-	100
203122483	Optimization in Engineering Design	3	3	0	0	20	-	20	60	-	40	-	100
203122485	Vision Systems and Image Processing	3	3	0	0	20	-	20	60	-	40	-	100

Semester - 8 PEC 04-LAB

Code	Subject	Credit	Lect	Lab	Tut	Internal Marks T	Internal Marks P	Internal Marks CE	External Marks T	External Marks P	Passing Marks (Theory + CE) Int. + Ext.	Passing Marks (Practical) Int. + Ext.	Total Marks
203122482	Advanced Control Systems Lab	1	0	2	0	-	20	-	-	30	-	25	50
203122484	Optimization in Engineering Design Lab	1	0	2	0	-	20	-	-	30	-	25	50
203122486	Vision Systems and Image Processing Lab	1	0	2	0	-	20	-	-	30	-	25	50

Lect - Lecture, **Tut** - Tutorial, **Lab** - Lab, **T** - Theory, **P** - Practical, **CE** - CE, **T** - Theory, **P** - Practical

Theory Passing % : 40 **Practical Passing % :** 50