Basaveshwar Engineering College (Autonomous), Bagalkot
DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

Scheme of Teaching and Evaluation for B.E Electrical and Electronics Engineering based on Joint Board Meeting held on 04-06-2018

2018-19 (admitted batch), 2019-20 (sem 3&4), 2020-21 (sem 5&6), 2021-22 (sem 7&8)

Total Credits for BE =175 (as per VTU/AICTE); Min Credits/sem= 16; Max Credits=28; Average=22

Breakdown of Credits suggested by the VTU Belagavi/ AICTE New Delhi

Sl.	Undergraduate Programme		Current Credits	% allotted by EE	% range as per VTU
1	HSS + Soft skills [6+3+1]		09	05.1	5-10
2	Basic Sciences		25	14.3	10-20
3	Engg. Sciences		21	12.0	10-20
4	Professional Core Courses Advanced C Programming Lab – 2 credits (Mandatory at VI sem, common for circuit branches)		71	40.6	30-40
5	Dept. Electives		21	12.0	10-15
6	Open Elective (VI to VII) 3+3		6	03.4	5-10
7	Mini project (VI) Internship (Min 6 weeks from IV-VI), Registration & Evaluation in VII sem) Project phase-I (VII) Seminar (VIII) Project phase-II (VIII)	2 2 5 1 12	22	12.6	10-15
Total			175	100	100

First Year Course

Subject	Credits	Contact hours
Basic Electrical Engineering	2 (L)+1 (T)	Lectures 2 Hours/week + Tutorial 2 Hours/week

Semester Wise Credit Distribution for Semester-III to VIII

Particulars	Semesters						Total		% of total credits	% range as per VTU
	III	IV	V	VI	VII	VIII				
Core + Lab	16+3	16+3	12+3	6+2+2	6+2	--	71		40.5	30-40
Dept. Elective	--	--	3+3	3	3	3+3+3	21		12.0	10-15
Open Elective	--	--	--	3	3	--	6		03.4	05-10
Mini Project	--	--	--	2	--	--	2	22	12.0	10-15
Internship	--	--	--	--	2	--	2			
Project phase-I	--	--	--	--	5	--	5			
Technical Seminar	--	--	--	--	--	1	1			
Project phase-II	--	--	--	--	--	12	12			
HSS + Soft Skills	--	1	1	3+1	3	--	9		05.1	5-10
Maths	3	3	--	--	--	--	6		--	--
Total	22	23	22	22	24	22	135		--	--

Semester-3 CAY 2019-20 [175 credits. 2018-19 admitted batch]

Sl.	Sub Code	Subject	C	Hrs/ Week			Exam Marks		
				L	T	P	CIE	SEE	Total
01	UMA335C	Computational Methods for Electrical Science	3	3	0	0	50	50	100
02	UEE351C	Analog and Digital Electronics	4	4	0	0	50	50	100
03	UEE352C	Network Analysis	4	3	2	0	50	50	100
04	UEE353C	Electrical and Electronic Measurements	4	4	0	0	50	50	100
05	UEE354C	Transformers and Induction Machines	4	4	0	0	50	50	100
06	UEE355L	Transformers and Induction Machines Laboratory	1	0	0	2	50	50	100
07	UEE356L	Electrical and Electronic Measurements Laboratory	1	0	0	2	50	50	100
08	UEE357L	Network Analysis Laboratory	1	0	0	2	50	50	100
09	UMA330M	Bridge Course Mathematics-I*	0	3	0	0	50	50	100
10	UBT133M	Environmental Studies**	0	2	0	0	50	50	100
Total			22	21	06	06	500	500	1000

*Bridge Course Mathematics-I : is a mandatory subject only for students admitted to 3rd Semester through lateral entry scheme (Diploma quota). Passing the subject is compulsory, however marks will not be considered for awarding grade /class. A PP/NP grade will be awarded for passing/not passing the subject.

**Environmental Studies : is a mandatory subject for lateral entry students. Question Paper will be of Objective type. Students have to pass the subject compulsorily, however marks will not be considered for awarding Grade / Class / Rank.

Semester-4 CAY 2019-20 [175 credits. 2018-19 admitted batch]

Sl.	Sub Code	Subject	C	Hrs/ Week			Exam Marks		
				L	T	P	CIE	SEE	Total
01	UMA435C	Statistical Methods for Electrical Science	3	3	0	0	50	50	100
02	UEE451C	Signals and Systems	4	3	2	0	50	50	100
03	UEE452C	Power Electronics	4	4	0	0	50	50	100
04	UEE453C	Operational Amplifiers and Linear IC's	4	4	0	0	50	50	100
05	UEE454C	DC Machines and Synchronous Machines	4	4	0	0	50	50	100
06	UEE456L	Power Electronics Laboratory	1	0	0	2	50	50	100
07	UEE457L	DC Machines and Synchronous Machines Laboratory	1	0	0	2	50	50	100
08	UEE458L	Linear IC's Laboratory	1	0	0	2	50	50	100
09	UHS001N	Fundamentals of Quantitative Aptitude & Soft Skills	1	2	0	0	50	50	100
10	UMA430M	Bridge Course Mathematics-II*	0	3	0	0	50	50	100
11	UHS226M	Constitution of India**	0	2	0	0	50	50	100
Total			23	25	02	06	550	550	1100

*Bridge Course Mathematics –II : is a mandatory subject only for students admitted to 4th Semester through lateral entry scheme (Diploma quota). Passing the subject is compulsory, however marks will not be considered for awarding grade /class. A PP/NP grade will be awarded for passing/not passing the subject.

**Constitution of India : is a mandatory subject for lateral entry students. Question Paper will be of Objective type. Students have to pass the subject compulsorily, however marks will not be considered for awarding Grade / Class /Rank.

Semester-5 CAY 2020-21 [175 credits. 2018-19 admitted batch]

Sl.	Sub Code	Subject	C	Hrs/ Week			Exam Marks		
				L	T	P	CIE	SEE	Total
01	UEE551C	Field Theory	3	2	2	0	50	50	100
02	UEE552C	Digital Signal Processing	3	2	2	0	50	50	100
03	UEE553C	Control Systems	3	2	2	0	50	50	100
04	UEE554C	Generation Transmission and Distribution	3	3	0	0	50	50	100
05	UEE556E	Dept. Elective – 1	3	3	0	0	50	50	100
06	UEE557E	Dept. Elective – 2	3	3	0	0	50	50	100
07	UEE561L	Digital Signal Processing Laboratory	1	0	0	2	50	50	100
08	UEE562L	Control System Laboratory	1	0	0	2	50	50	100
09	UEE563L	Analog and Digital Laboratory	1	0	0	2	50	50	100
10	UHS002N	Advanced Quantitative Aptitude and Soft Skills	1	2	0	0	50	50	100
Total			22	16	8	6	500	500	1000

List of Elective Subjects

Electrical Machine Design	Electrical Engineering Materials
Testing and Commissioning of Electrical Equipment	Micro Electro Mechanical Systems
Advanced Power Electronics	Reactive Power management
Fundamentals of Solar Thermal ECS	

Semester-6 CAY 2020-21 [175 credits. 2018-19 admitted batch]

Sl.	Sub Code	Subject	C	Hrs/ Week			Exam Marks		
				L	T	P	CIE	SEE	Total
01	UEE651C	Power System Analysis and Stability	3	2	2	0	50	50	100
02	UEE652C	Microcontrollers	3	3	0	0	50	50	100
03	UEE653H	Management and Entrepreneurship	3	3	0	0	50	50	100
04	UEE654E	Dept. Elective – 3	3	3	0	0	50	50	100
05	UEE655N	Open Elective – 1	3	3	0	0	50	50	100
06	UEE661L	Microcontrollers and IoT Laboratory	1	0	0	2	50	50	100
07	UEE662L	Electrical Auto CAD and MiPower Laboratory	1	0	0	2	50	50	100
08	UCS659L	Advanced C Programming Laboratory (mandatory)	2	0	2	2	50	50	100
09	UHS003N	Career Planning and Professional Skills	1	2	0	0	50	50	100
10	UEE665P	Mini Project	2	0	0	4	50	50	100
Total			22	16	4	10	500	500	1000

List of Elective Subjects

Modern Control Theory	VLSI Design and Applications
Electrical safety in Industrial plants	Battery Management
Electrical Power Utilization and Drives	Energy Efficient Motors
Fundamentals of Wind Energy Conversion Systems	Computer aided electrical drawing

List of Open Electives Subjects @ 6th Sem	
MATLAB for Engineers	Renewable Energy Resources

Semester-7 CAY 2021-22 [175 credits. 2018-19 admitted batch]

Sl.	Sub Code	Subject	C	Hrs/ Week			Exam Marks		
				L	T	P	CIE	SEE	Total
01	UEE751C	Computer Applications to Power System	3	3	0	0	50	50	100
02	UEE752C	High Voltage, Switchgear and Protection	3	3	0	0	50	50	100
03	UEE753C	Intellectual Property Rights	3	3	0	0	50	50	100
04	UEE754E	Dept. Elective – 4	3	3	0	0	50	50	100
05	UEE755N	Open. Elective – 2	3	3	0	0	50	50	100
06	UEE761L	Power System Simulation Laboratory	1	0	0	2	50	50	100
07	UEE762L	High Voltage and Relay Laboratory	1	0	0	2	50	50	100
08	UEE764I	Internship*	2	0	0	*	50	50	100
09	UEE765P	Project Work Phase – I	5	0	0	8	50	50	100
Total			24	15	0	12	450	450	900

* Working hours will be as per scheduled working hours prescribed by the industry.

List of Elective Subjects

Electrical Machine Drives	Operation Research
Solar Photovoltaic System Design	Standards and Indian Electricity Act
Professional Communication and Technical Writing	Autotronics (Automotive Electronics)
AI Applications to Power Systems	Embedded System and PLC

List of Open Electives Subjects @ 7th Sem	
Energy conservation in Industrial Systems	Electrical Safety for Engineers

Semester-8 CAY 2021-22 [175 credits. 2018-19 admitted batch]

Sl.	Sub Code	Subject	C	Hrs/ Week			Exam Marks		
				L	T	P	CIE	SEE	Total
01	UEE851E	Dept. Elective – 5	3	3	0	0	50	50	100
02	UEE852E	Dept. Elective – 6	3	3	0	0	50	50	100
03	UEE853E	Dept. Elective – 7	3	3	0	0	50	50	100
04	UEE860S	Technical Seminar	1	0	0	2	50	50	100
05	UEE865P	Project Work Phase – II	12	0	0	24	50	50	100
Total			22	9	0	26	250	250	500

List of Elective Subjects

Power System Operation and Control	Speech Signal processing
Power System Dynamics and Stability	Over Voltages in Power Systems
Data Base management Systems	HVDC Transmission
Energy Conservation, Audit and DSM	Advances in Instrumentation
Flexible AC Transmission Systems	Power System Planning
Digital Control Systems	Smart Grids