



Since 1993

PKM EDUCATIONAL TRUST®

R R Institute of Technology

RAJA REDDY LAYOUT, NEAR CHIKKABANAVARA RAILWAY STATION, CHIKKABANAVARA, BENGALURU - 560090

An Autonomous Institution under VTU

Approved by AICTE, New Delhi & Government of Karnataka



I Semester (Electrical & Electronics Engineering Stream)

(For Physics Group)

Sl. No	Course and Course Code		Course Title	TD/PSB	Teaching Hours/Week				Examination				Credits
					Theory Lecture	Tutorial	Practical/ Drawing	SDA	Duration in hours	CIE Marks	SEE Marks	Total Marks	
					L	T	P	S					
1	*ASC(IC)	BMATE101	Calculus, Differential equation & Linear Algebra	Maths	2	2	2	0	03	50	50	100	04
2	#ASC(IC)	BPHYE102	Applied Physics for EEE Stream	PHY	2	2	2	0	03	50	50	100	04
3	ESC	BEEE103	* Elements of Electrical Engineering	EEE/ECE/TCE	2	2	0	0	03	50	50	100	03
		OR			OR								
		BBEE103	** Basic Electronics		3	0	0	0					
4	ESC-I	BESCK104x	Engineering Science Course-I	Respective Engg Dept	3	0	0	0	03	50	50	100	03
5	ETC-I	BETCK105x	Emerging Technology Course-I	Any Dept	3	0	0	0	03	50	50	100	03
	OR												
	PLC-I	BPLCK105x	Programming Language Course-I		2	0	2	0					
6	AEC	BENGK106	English for Engineers	Humanities	1	0	0	0	01	50	50	100	01
		OR											
		BENGL106	English for Engineers (Practical)										
7	HSMC	BKSKK107/ BKBKK107	Sanskrutika Kannada/ Balake Kannada	Humanities	1	0	0	0	01	50	50	100	01
		OR											
		BICOK107	Indian Constitution										
8	AEC/SDC	BIDTK158	Innovation and Design Thinking	Any Dept	1	0	0	0	01	50	50	100	01
		OR											
		BSFHK158	Scientific Foundations of Health										
										400	400	800	20

***Electrical & Electronics Engineering Students have to study ** BEEE103- Element of Electrical Engineering compulsorily, Whereas Electronics and allied stream students have to study BBEE103 Basic Electronics compulsorily**

SDA-Skill Development Activities, **TD/PSB**- Teaching Department / Paper Setting Board, **ASC**-Applied Science Course, **ESC**- Engineering Science Courses, **ETC**-Emerging Technology Course, **AEC**- Ability Enhancement Course, **HSMS**-Humanity and Social Science and Management Course, **SDC**- Skill Development Course, **CIE**-Continuous Internal Evaluation, **SEE**- Semester End Examination, **IC** – Integrated Course (Theory Course Integrated with Practical Course)

Credit Definition:

1- hour Lecture (**L**) per week=**1Credit**

2- hours Tutorial(**T**) per week=**1Credit**

2- hours Practical / Drawing (**P**) per week=**1Credit**

2-hous Skill Development Actives (**SDA**) per week = **1 Credit**

04-Credits courses are to be designed for 50 hours of Teaching-Learning Session

04- Credits (IC) are to be designed for 40 hours' theory and 12-14 hours of practical sessions

03-Credits courses are to be designed for 40 hours of Teaching-Learning Session

02- Credits courses are to be designed for 25 hours of Teaching-Learning Session

01-Credit courses are to be designed for 12-15 hours of Teaching-Learning sessions

Student's Induction Program: Motivating (Inspiring) Activities under the Induction program – The main aim of the induction program is to provide newly admitted students a broad understanding of society, relationships, and values. Along with the knowledge and skill of his/her study, students' character needs to be nurtured as an essential quality by which he/she would understand and fulfill the responsibility as an engineer. The following activities are to be covered in 21 days. Physical Activity, Creative Arts, Universal Human Values, Literary, Proficiency Modules, Lectures by Eminent People, Visits to Local areas, Familiarization with Department/Branch and Innovation, etc. For details, refer the ANNEXURE-I of Induction Programs notification of the University published at the beginning of the 1st semester.

AICTE Activity Points to be earned by students admitted to BE/ B.Tech., / B. Plan day college program (For more details refer to Chapter 6, AICTE Activity Point Program, Model Internship Guidelines): Over and above the academic grades, every regular student admitted to the 4 years Degree program and every student entering 4 years Degree programs through lateral entry, shall earn 100 and 75 Activity Points respectively for the award of degree through AICTE Activity Point Program. Students transferred from other Universities to the fifth semester are required to earn 50 Activity Points from the year of entry to VTU. The Activity Points earned shall be reflected on the student's eighth semester Grade Card. The activities can be spread over the years, any time during the semester weekends, and holidays, as per the liking and convenience of the student from the year of entry to the program. However, the minimum hours requirement should be fulfilled. Activity Points (non-credit) do not affect SGPA/CGPA and shall not be considered for vertical progression. In case students fail to earn the prescribed activity Points, an Eighth Semester Grade Card shall be issued only after earning the required activity points. Students shall be admitted for the award of the degree only after the release of the Eighth semester Grade Card.

*- BMATE101 Shall have the 03 hours of theory examination (SEE), however, practical sessions question shall be included in the theory question papers. **** The mathematics subject should be taught by a single faculty member per division, with no sharing of the course(subject)module-wise by different faculty members.** #- BPHYE102 SEE shall have the 03 hours of theory examination and 02-03 hours of practical examination.

ESC or ETC of 03 credits Courses shall have only a theory component (L:T :P:S=3:0:0:0) or if the nature the of course required experimental learning syllabus

shall be designed as an Integrated course (L:T:P:S= 2:0:2:0), **All 01 Credit-** courses shall have the SEE of 01 hours duration and the pattern of the question paper shall be MCQ

(ESC-I) Engineering Science Courses-I					(ETC-I) Emerging Technology Courses-I					
Code	Title	L	T	P	Code	Title	L	T	P	S
BESCK104A	Introduction to Civil Engineering	3	0	0	BETCK105A	Smart Materials	3	0	0	0
BESCK104B	Introduction to Electrical Engineering	3	0	0	BETCK105B	Green Buildings	3	0	0	0
BESCK104C	Introduction to Electronics & Communication	3	0	0	BETCK105C	Introduction to Nano Science	3	0	0	0
BESCK104D	Introduction to Mechanical Engineering	3	0	0	BETCK105D	Introduction to Sustainable Engineering	3	0	0	0
BESCK104E	Introduction to C Programming	2	0	2	BETCK105E	Renewable Energy Sources	3	0	0	0
					BETCK105F	Additive manufacturing	3	0	0	0
					BETCK105G	Global climate Change	3	0	0	0
					BETCK105H	Introduction to Internet of Things (IOT)	3	0	0	0
					BETCK105I	Introduction to Cyber security	3	0	0	0
(PLC-I) Programming Language Courses-I					BETCK105J	Introduction To Embedded Systems	3	0	0	0
Code	Title	L	T	P	BETCK105K	Fundamentals of Sensors Technology	3	0	0	0
BPLCK105A	Principles of Web Programming	2	0	2	BETCK105L	Human Factors in Engineering	3	0	0	0
BPLCK105B	Python Programming ForBeginners	2	0	2	BETCK105M	Industry 4.0	3	0	0	0
BPLCK105C	Basics of JAVA programming	2	0	2	BETCK105N	Fundamentals of Semiconductor Devices	3	0	0	0
BPLCK105D	Introduction to C++ Programming	2	0	2	BETCK105O	Introduction to Smart Cities	3	0	0	0
					BETCK105P	Introduction to Drone Technology	3	0	0	0
					BETCK105Q	Introduction to Artificial Intelligence	3	0	0	0
					BETCK105R	Elements of Block Chain Technology	3	0	0	0
					BETCK105S	IDEA (Innovation Development, Evaluation & Application) Lab	0	0	0	3
The course BESC104E, Introduction to C Programming, and all courses under PLC and ETC groups can be taught by faculty of ANY DEPARTMENT										

- The student has to select one course from the ESC-I group.
- **EEE** Students shall opt for any one of the courses from the ESC-I group **except**, BESCK104B-**Introduction to Electrical Engineering** and **ECE/ETC/BM/ML** students shall opt any one of the courses from ESC-I **except** BESCK104C **Introduction toElectronics** Engineering
- The students have to opt for the courses from ESC group without repeating the course in either 1st or 2nd semester
- The students must select one course from either ETC-I or PLC-I group.
- If students study the subject from ETC-I in 1st semester he/she has to select the course from PLC-II in the 2nd semester and vice-versa



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II Semester (Electrical & Electronics Engineering Stream)

(For the students who attended 1st semester under Physics Group)

Sl. No	Course and Course Code		Course Title	TD/PSB	Teaching Hours/Week				Examination				
					Theory Lecture	Tutorial	Practical/ Drawing	SDA	Duration in hours	CIE Marks	SEE Marks	Total Marks	
					L	T	P	S					
1	*ASC(IC)	BMATE201	Vector calculus, Laplace Transforms & Numerical techniques	Maths	2	2	2	0	03	50	50	100	04
2	#ASC(IC)	BCHEE202	Chemistry for Electrical and Electronics Engineering stream	Chemistry	2	2	2	0	03	50	50	100	04
3	ESC	BCEDK203	Computer aided Engineering drawing for Electronics & Communication Engineering	Civil/Mech Engg dept	2	0	2	0	03	50	50	100	03
4	ESC-II	BESCK204x	Engineering Science Course-II	Respective Engg Dept	3	0	0	0	03	50	50	100	03
5	PLC-II	BPLCK205x	Programming Language Course-II	Any Dept	2	0	2	0	03	50	50	100	03
	OR												
	ETC-II	BETCK205x	Emerging Technology Course-II		03	0	0	0	03				
6	AEC	BENGK206	English for Engineers	Humanities	1	0	0	0	01	50	50	100	01
		OR											
		BENGL206	English for Engineers (Practical)										
7	HSMC	BICOK207	Indian Constitution	Humanities	1	0	0	0	01	50	50	100	01
		OR											
		BKSKK207 / BKBKK207	Sanskrutika Kannada/ Balake Kannada										
		BSFHK258	Scientific Foundations of Health		1	0	0	0	01				

8	AEC/SDC		OR	Any Dept.						50	50	100	01
		BIDTK258	Innovation and Design Thinking		1	0	0	0	01				
TOTAL										400	400	800	20

SDA-Skill Development Activities, **TD/PSB**- Teaching Department / Paper Setting Board, **ASC**-Applied Science Course, **ESC**- Engineering Science Courses, **ETC**- Emerging Technology Course, **AEC**- Ability Enhancement Course, **HSMS**-Humanity and Social Science and Management Course, **SDC**- Skill Development Course, **CIE** -Continuous Internal Evaluation, **SEE**- Semester End Examination, **IC** – Integrated Course (Theory Course Integrated with Practical Course)

*- BMATE201 Shall have the 03 hours of theory examination (SEE), however, practical sessions question shall be included in the theory question papers. **** The mathematics subject should be taught by a single faculty member per division, with no sharing of the course (subject) module-wise by different faculty members.** #- BCHEE202- SEE shall have the 03 hours of theory examination and 02-03 hours of practical examination
ESC or ETC of 03 credits Courses shall have only a theory component (L:T :P:S=3:0:0:0) or if the nature the of course required practical learning, syllabus shall be designed as an Integrated course (L:T:P:S= 2:0:2:0)
All 01 Credit- courses shall have the SEE of 01 hours duration and the pattern of the question paper shall be MCQ

(ESC-II) Engineering Science Courses-II					(ETC-II) Emerging Technology Courses-II					
Code	Title	L	T	P	Code	Title	L	T	P	S
BESCK204A	Introduction to Civil Engineering	3	0	0	BETCK205A	Smart Materials	3	0	0	0
BESCK204B	Introduction to Electrical Engineering	3	0	0	BETCK205B	Green Buildings	3	0	0	0
BESCK204C	Introduction to Electronics & Communication	3	0	0	BETCK205C	Introduction to Nano Science	3	0	0	0
BESCK204D	Introduction to Mechanical Engineering	3	0	0	BETCK205D	Introduction to Sustainable Engineering	3	0	0	0
BESCK204E	Introduction to C Programming	2	0	2	BETCK205E	Renewable Energy Sources	3	0	0	0
					BETCK205F	Additive manufacturing	3	0	0	0
					BETCK205G	Global climate Change	3	0	0	0
					BETCK205H	Introduction to Internet of Things (IOT)	3	0	0	0
					BETCK205I	Introduction to Cyber security	3	0	0	0
(PLC-I) Programming Language Courses-I					BETCK205J	Introduction To Embedded Systems	3	0	0	0
Code	Title	L	T	P	BETCK205K	Fundamentals of Sensors Technology	3	0	0	0
BPLCK205A	Principles of Web Programming	2	0	2	BETCK205L	Human Factors in Engineering	3	0	0	0
BPLCK205B	Python Programming For Beginners	2	0	2	BETCK205M	Industry 4.0	3	0	0	0
BPLCK205C	Basics of JAVA programming	2	0	2	BETCK205N	Fundamentals of Semiconductor Devices	3	0	0	0
BPLCK205D	Introduction to C++ Programming	2	0	2	BETCK205O	Introduction to Smart Cities	3	0	0	0
					BETCK205P	Introduction to Drone Technology	3	0	0	0
					BETCK205Q	Introduction to Artificial Intelligence	3	0	0	0
					BETCK205R	Elements of Block Chain Technology	3	0	0	0
					BETCK205S	IDEA (Innovation Development, Evaluation & Application) Lab	0	0	0	3

The course **BESCK204E**, Introduction to C Programming, and all courses under PLC and ETC groups can be taught by faculty of ANY DEPARTMENT

- The student has to select one course from the ESC-II group.
- EEE Students shall opt for any one of the courses from the ESC-I group except, BESCK202-Introduction to Electrical Engineering and ECE/ETC/BM/ML
- students shall opt any one of the courses from ESC-I except BESCK203 Introduction to Electronics Engineering
- The students have to opt for the courses from ESC group without repeating the course in either 1st or 2nd semester
- The students must select one course from either ETC-II or PLC-II group.
- If students study the subject from ETC-I in 1st semester he/she has to select the course from PLC-II in the 2nd semester and vice-versa



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ISemester (Electrical & Electronics Engineering Stream)

(For Chemistry Group)

Sl. No	Course and CourseCode		CourseTitle	TD/PSB	TeachingHours/Week				Examination				Credits
					Theory Lecture	Tutorial	Practical/ Drawing	SDA	Duration in hours	CIE Marks	SEE Marks	Total Marks	
					L	T	P	S					
1	*ASC(IC)	BMATE101	Calculus, Differential equation & Linear Algebra	Maths	2	2	2	0	03	50	50	100	04
2	#ASC(IC)	BCHEE102	Chemistry for Electrical and Electronics Engineering stream	Chemistry	2	2	2	0	03	50	50	100	04
3	ESC	BCEDK103	Computer aided Engineering drawing for Electronics & Communication Engineering	Mechanical	2	0	2	0	03	50	50	100	03
4	ESC-I	BESCK104x	Engineering Science Course-I	Respective Engg Dept	3	0	0	0	03	50	50	100	03
5	ETC-I	BETCK105x	Emerging Technology Course-I	Any Dept	3	0	0	0	03	50	50	100	03
	OR												
	PLC-I	BPLCK105 X	Programing Language Course-I		2	0	2	0	03				
6	AEC	BENGL106	English for Engineers	Humanities	1	0	0	0	01	50	50	100	01
		OR											
		BENGL106	English for Engineers (Practical)										
7	HSMC	BICOK107	Indian Constitution	Humanities	1	0	0	0	01	50	50	100	01
		OR											
		BKSKK107 / BKBKK107	Samskrutika Kannada/ Balake Kannada										
8	AEC/ SDC	BSFHK158	Scientific Foundations of Health	Any Dept.	1	0	0	0	01	50	50	100	01
		OR											
		BIDTK158	Innovation and Design Thinking		1	0	0	0	01				
TOTAL										400	400	800	20

SDA-Skill Development Activities, **TD/PSB**- Teaching Department / Paper Setting Board, **ASC**-Applied Science Course, **ESC**- Engineering Science Courses, **ETC**- Emerging Technology Course, **AEC**- Ability Enhancement Course, **HSMS**-Humanity and Social Science and Management Course, **SDC**- Skill Development Course, **CIE** -Continuous Internal Evaluation, **SEE**- Semester End Examination, **IC** – Integrated Course (Theory Course Integrated with Practical Course)

*- BMATE101 Shall have the 03 hours of theory examination (SEE), however, practical sessions question shall be included in the theory question papers. **** The mathematics subject should be taught by a single faculty member per division, with no sharing of the course(subject)module-wise by different faculty members.**

#- BCHEE102R- SEE shall have the 03 hours of theory examination and 02-03 hours of practical examination

ESC or ETC of 03 credits Courses shall have only a theory component (L:T :P:S=3:0:0:0) or if the nature the of course required practical learning syllabus shall be designed as an Integrated course (L:T:P:S= 2:0:2:0) **All 01 Credit-** courses shall have the SEE of 01 hours duration and the pattern of the question paper shall be MCQ

Credit Definition:

1- hour Lecture (**L**) per week=**1Credit** 2-

hours Tutorial (**T**) per week=**1Credit**

2- hours Practical / Drawing (**P**) per week=**1Credit**

2-hous Skill Development Actives (**SDA**) per week = **1 Credit**

04-Credits courses are to be designed for 50 hours of Teaching-Learning Session

04-Credits (IC) are to be designed for 40 hours' theory and 12-14 hours of practical sessions03-

Credits courses are to be designed for 40 hours of Teaching-Learning Session

02- Credits courses are to be designed for 25 hours of Teaching-Learning Session 01-

Credit courses are to be designed for 12-15 hours of Teaching-Learning sessions

Student's Induction Program: Motivating (Inspiring) Activities under the Induction program – The main aim of the induction program is to provide newly admitted students a broad understanding of society, relationships, and values. Along with the knowledge and skill of his/her study, students' character needs to be nurtured as an essential quality by which he/she would understand and fulfill the responsibility as an engineer. The following activities are to be covered in 21 days. Physical Activity, Creative Arts, Universal Human Values, Literary, Proficiency Modules, Lectures by Eminent People, Visits to Local areas, Familiarization with Department/Branch and Innovation, etc. For details, refer the ANNEXURE-I of Induction Programs notification of the University published at the beginning of the 1st semester.

AICTE Activity Points to be earned by students admitted to BE/ B.Tech., / B. Plan day college program (For more details refer to Chapter 6, AICTE Activity Point Program, Model Internship Guidelines): Over and above the academic grades, every regular student admitted to the 4 years Degree program and every student entering 4 years Degree programs through lateral entry, shall earn 100 and 75 Activity Points respectively for the award of degree through AICTE Activity Point Program. Students transferred from other Universities to the fifth semester are required to earn 50 Activity Points from the year of entry to VTU. The Activity Points earned shall be reflected on the student's eighth semester Grade Card. The activities can be spread over the years, any time during the semester weekends, and holidays, as per the liking and convenience of the student from the year of entry to the program. However, the minimum hours' requirement should be fulfilled. Activity Points (non-credit) do not affect SGPA/CGPA and shall not be considered for vertical progression. In case students fail to earn the prescribed activity Points, an Eighth Semester Grade Card shall be issued only after earning the required activity points. Students shall be admitted for the award of the degree only after the release of the Eighth semester Grade Card.

(ESC-I) Engineering Science Courses-I					(ETC-I) Emerging Technology Courses-I					
Code	Title	L	T	P	Code	Title	L	T	P	S
BESCK104A	Introduction to Civil Engineering	3	0	0	BETCK105A	Smart Materials	3	0	0	0
BESCK104B	Introduction to Electrical Engineering	3	0	0	BETCK105B	Green Buildings	3	0	0	0
BESCK104C	Introduction to Electronics & Communication	3	0	0	BETCK105C	Introduction to Nano Science	3	0	0	0
BESCK104D	Introduction to Mechanical Engineering	3	0	0	BETCK105D	Introduction to Sustainable Engineering	3	0	0	0
BESCK104E	Introduction to C Programming	2	0	2	BETCK105E	Renewable Energy Sources	3	0	0	0
					BETCK105F	Additive manufacturing	3	0	0	0
					BETCK105G	Global climate Change	3	0	0	0
					BETCK105H	Introduction to Internet of Things (IOT)	3	0	0	0
					BETCK105I	Introduction to Cyber security	3	0	0	0
(PLC-I) Programming Language Courses-I					BETCK105J	Introduction To Embedded Systems	3	0	0	0
Code	Title	L	T	P	BETCK105K	Fundamentals of Sensors Technology	3	0	0	0
BPLCK105A	Principles of Web Programming	2	0	2	BETCK105L	Human Factors in Engineering	3	0	0	0
BPLCK105B	Python Programming ForBeginners	2	0	2	BETCK105M	Industry 4.0	3	0	0	0
BPLCK105C	Basics of JAVA programming	2	0	2	BETCK105N	Fundamentals of Semiconductor Devices	3	0	0	0
BPLCK105D	Introduction to C++ Programming	2	0	2	BETCK105O	Introduction to Smart Cities	3	0	0	0
					BETCK105P	Introduction to Drone Technology	3	0	0	0
					BETCK105Q	Introduction to Artificial Intelligence	3	0	0	0
					BETCK105R	Elements of Block Chain Technology	3	0	0	0
					BETCK105S	IDEA (Innovation Development, Evaluation & Application) Lab	0	0	0	3
The course BESCK104E, Introduction to C Programming, and all courses under PLC and ETC groups can be taught by faculty of ANY DEPARTMENT										

- The student has to select one course from the ESC-I group.
- **EEE** Students shall opt for any one of the courses from the ESC-I group **except**, BESCK104B-**Introduction to Electrical Engineering and ECE/ETC/BM/ML** students shall opt any one of the courses from ESC-I **except** BESCK104C **Introduction to Electronics Engineering**
- The students have to opt for the courses from ESC group without repeating the course in either 1st or 2nd semester
- The students must select one course from either ETC-I or PLC-I group.
- If students study the subject from ETC-I in 1st semester he/she has to select the course from PLC-II in the 2nd semester and vice-versa



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II Semester (Electrical & Electronics Engineering Stream)

(For students who attended 1st semester under Chemistry Group)

Sl. No	Course and Course Code		Course Title	TD/PSB	Teaching Hours/Week				Examination			Credits	
					Theory Lecture	Tutorial	Practical/ Drawing	SDA	Duration in hours	CIE Marks	SEE Marks		Total Marks
					L	T	P	S					
1	*ASC(IC)	BMATE201	Vector calculus, Laplace Transforms & Numerical techniques	Maths	2	2	2	0	03	50	50	100	04
2	#ASC(IC)	BPHYE202	Applied Physics for EEE Stream	PHY	2	2	2	0	03	50	50	100	04
3	ESC	BEEEE203	# Elements of Electrical Engineering	EEE/ECE/TCE OR	2	2	0	0	03	50	50	100	03
		OR											
		BBEE203	## Basic Electronics		3	0	0	0					
4	ESC-II	BESCK204x	Engineering Science Course-II	Respective Engg Dept.	3	0	0	0	03	50	50	100	03
5	PLC-II	BPLCK205x	Programming language Course-II	Any Dept	2	0	2	0	03	50	50	100	03
	OR												
	ETC-II	BETCK205x	Emerging Technology Course-II		3	0	0	0	03				
6	A EC	BENGG206	English for Engineers	Humanities	1	0	0	0	01	50	50	100	01
		OR											
		BENGL206	English for Engineers (Practical)										
7	HSMC	BKSKK207 / BKBKK207	Sanskritika Kannada/ Balake Kannada	Humanities	1	0	0	0	01	50	50	100	01
		OR											
		BICOK207	Indian Constitution										
8	AEC/SDC	BIDTK258	Innovation and Design Thinking	Any Dept	1	0	0	0	01	50	50	100	01
		OR											
9		BSFHK258	Scientific Foundations of Health		1	0	0	0	01				

							TOTAL						400	400	800		20
# Electrical & Electronics Engineering Students have to study BEEE203 Elements of Electrical Engineering compulsorily ## Whereas Electronics and allied stream students have to study BBEE203 Basic Electronics compulsorily																	
SDA-Skill Development Activities, TD/PSB- Teaching Department / Paper Setting Board, ASC-Applied Science Course, ESC- Engineering Science Courses, ETC- Emerging Technology Course, AEC- Ability Enhancement Course, HSMS-Humanity and Social Science and Management Course, SDC- Skill Development Course, CIE-Continuous Internal Evaluation, SEE- Semester End Examination, IC – Integrated Course (Theory Course Integrated with Practical Course)																	
*- BMATE201 Shall have the 03 hours of theory examination (SEE), however, practical sessions question shall be included in the theory question papers. ** The mathematics subject should be taught by a single faculty member per division, with no sharing of the course (subject) module-wise by different faculty members. #- BPHYE202 SEE shall have the 03 hours of theory examination and 02-03 hours of practical examination. ESC or ETC of 03 credits Courses shall have only a theory component (L:T :P:S=3:0:0:0) or if the nature the of course required practical learning syllabus shall be designed as an Integrated course (L:T:P:S= 2:0:2:0),. All 01 Credit- courses shall have the SEE of 01 hours duration and the pattern of the question paper shall be MCQ																	
(ESC-II) Engineering Science Courses-II									(ETC-II) Emerging Technology Courses-II								
Code	Title	L	T	P	Code	Title	L	T	P	S							
BESCK204A	Introduction to Civil Engineering	3	0	0	BETCK205A	Smart Materials	3	0	0	0							
BESCK204B	Introduction to Electrical Engineering	3	0	0	BETCK205B	Green Buildings	3	0	0	0							
BESCK204C	Introduction to Electronics & Communication	3	0	0	BETCK205C	Introduction to Nano Science	3	0	0	0							
BESCK204D	Introduction to Mechanical Engineering	3	0	0	BETCK205D	Introduction to Sustainable Engineering	3	0	0	0							
BESCK204E	Introduction to C Programming	2	0	2	BETCK205E	Renewable Energy Sources	3	0	0	0							
					BETCK205F	Additive manufacturing	3	0	0	0							
					BETCK205G	Global climate Change	3	0	0	0							
					BETCK205H	Introduction to Internet of Things (IOT)	3	0	0	0							
					BETCK205I	Introduction to Cyber security	3	0	0	0							
(PLC-I) Programming Language Courses-I					BETCK205J	Introduction To Embedded Systems											
Code	Title	L	T	P	BETCK205K	Fundamentals of Sensors Technology	3	0	0	0							
BPLCK205A	Principles of Web Programming	2	0	2	BETCK205L	Human Factors in Engineering	3	0	0	0							
BPLCK205B	Python Programming for Beginners	2	0	2	BETCK205M	Industry 4.0	3	0	0	0							
BPLCK205C	Basics of JAVA programming	2	0	2	BETCK205N	Fundamentals of Semiconductor Devices	3	0	0	0							
BPLCK205D	Introduction to C++ Programming	2	0	2	BETCK205O	Introduction to Smart Cities	3	0	0	0							
					BETCK205P	Introduction to Drone Technology	3	0	0	0							
					BETCK205Q	Introduction to Artificial Intelligence	3	0	0	0							
					BETCK205R	Elements of Block Chain Technology	3	0	0	0							
					BETCK205S	IDEA (Innovation Development, Evaluation & Application) Lab	0	0	0	3							
The course BESCK204E, Introduction to C Programming, and all courses under PLC and ETC group can be taught by faculty of ANY DEPARTMENT																	

- The student has to select one course from the ESC-II group.
- **EEE** Students shall opt for any one of the courses from the ESC-I group **except**, BESCK204B-**Introduction to Electrical Engineering and ECE/ETC/BM/ML** students shall opt any one of the courses from ESC-I **except** BESCK204C **Introduction to Electronics** Engineering
- The students have to opt for the courses from ESC group without repeating the course in either 1st or 2nd semester
- The students must select one course from either ETC-II or PLC-II group.
- If students study the subject from ETC-I in 1st semester he/she has to select the course from PLC-II in the 2nd semester and vice-versa