

(Autonomous Institution Affiliated to VTU, Belagavi) Scheme of Teaching and Examinations-2022

Outcome-Based Education (OBE) and Choice Based Credit System (CBCS) (Effective from the academic year 2023 - 24)

I Sen	nester (CSE	ter (CSE Stream) Dept CSE Physics Cycle Teaching											
						Teac Hours/				Examir	nation		
Sl. No	Course a	nd Course Code	Course Title	TD/PSB	Theory Lecture	Tutorial	Practical/ Drawing	SDA	Duration in hours	CIE Marks	SEE Marks	Total Marks	Credits
					L	T	P	S	_				<u> </u>
1	*ASC(IC)	BMATS101	Mathematics- I for CSE Stream	Maths	2	2	2	0	03	50	50	100	04
2	#ASC(IC)	BPHYS102	Applied Physics for CSE stream	Physics	2	2	2	0	03	50	50	100	04
3	ESC	BPOPS103	Principles of Programming Using C	CSE	2	0	2	0	03	50	50	100	03
4	ESC-I	BESCK104D	Introduction to Mechanical Engineering	Respective Engg Dept	3	0	0	0	03	50	50	100	03
5	ETC-I	BETCK105H	Introduction to Internet of Things (IoT)	Any Dept	3	0	0	0	03	50	50	100	03
6	AEC	BENGK106	Communicative English	Humanities	1	0	0	0	01	50	50	100	01
7	HSMC	BKSKK107/ BKBKK107	Samskrutika Kannada/ BalakeKannada	Humanities	1	0	0	0	01	50	50	100	01
8	AEC/SDC	BIDTK158	Innovation and Design Thinking	Any Dept	0	2	0	0	02	50	50	100	01
9	MC	BSLK108	Skill Lab	Any Dept			3			100			00
	_			TOTAL	14	6	6	0	19	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)

Credit Definition:

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

- *- BMATS101 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.
- #- BPHYS102 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 then, 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

					(ETC-I) Emerging Technology Courses-I			
Title	L	T	P	Code	Title	L	T	P
Introduction to Civil Engineering	3	0	0	BETCK105A	Smart Materials and Systems	3	0	0
Introduction to Electrical Engineering	3	0	0	BETCK105B	Green Buildings	3	0	0
Introduction to Electronics Communication	3	0	0	BETCK105C	Introduction to Nano Technology	3	0	0
Introduction to Mechanical Engineering	3	0	0	BETCK105D	Introduction to Sustainable Engineering	3	0	0
Introduction to C Programming	2	0	2	BETCK105E	Renewable Energy Sources	3	0	0
				BETCK105F	Waste Management	3	0	0
				BETCK105G	Emerging Applications of Biosensors	3	0	0
				BETCK105H	Introduction to Internet of Things (IOT)	3	0	0
				BETCK105I	Introduction to Cyber Security	3	0	0
				BETCK105J	Introduction to Embedded System	3	0	0
amming Language Courses-I								
Title	L	T	P					
Introduction to Web Programming	2	0	2					
Introduction to Python Programming	2	0	2					
Basics of JAVA programming	2	0	2					
Introduction to C++ Programming	2	0	2					
	Title Introduction to Civil Engineering Introduction to Electrical Engineering Introduction to Electronics Communication Introduction to Mechanical Engineering Introduction to C Programming Introduction to C Programming amming Language Courses-I Title Introduction to Web Programming Introduction to Python Programming Basics of JAVA programming	Title L Introduction to Civil Engineering 3 Introduction to Electrical Engineering 3 Introduction to Electronics 3 Communication Introduction to Mechanical Engineering 3 Introduction to C Programming 2 Introduction to C Programming 2 Introduction to Web Programming 2 Introduction to Web Programming 2 Introduction to Python Programming 2 Basics of JAVA programming 2	Title L T Introduction to Civil Engineering 3 0 Introduction to Electrical Engineering 3 0 Introduction to Electronics 3 0 Introduction to Electronics 3 0 Introduction to Mechanical Engineering 3 0 Introduction to C Programming 2 0 Introduction to C Programming 2 0 Introduction to Web Programming 2 0 Introduction to Web Programming 2 0 Introduction to Python Programming 2 0 Basics of JAVA programming 2 0	Title Introduction to Civil Engineering Introduction to Electrical Engineering Introduction to Electronics Communication Introduction to Mechanical Engineering Introduction to C Programming Introduction to C Programming Introduction to C Programming Introduction to C Programming Introduction to C Programming Introduction to C Programming Introduction to C Programming Introduction to C Programming Introduction to Web Programming Introduction to Web Programming Introduction to Python Programming	Title Introduction to Civil Engineering Introduction to Electrical Engineering Introduction to Electronics Communication Introduction to Mechanical Engineering Introduction to C Programming Introduction to Web Programming Introduction to Python P	Title	TitleLTPCodeTitleLIntroduction to Civil Engineering300BETCK105ASmart Materials and Systems3Introduction to Electrical Engineering300BETCK105BGreen Buildings3Introduction to Electronics300BETCK105CIntroduction to Nano Technology3Communication300BETCK105DIntroduction to Sustainable Engineering3Introduction to C Programming202BETCK105ERenewable Energy Sources3Introduction to C Programming202BETCK105FWaste Management3Introduction to Electronics3BETCK105GEmerging Applications of Biosensors3Introduction to Internet of Things (IOT)3Introduction to Cyber Security3Introduction to Embedded System3Introduction to Web Programming202Introduction to Python Programming202Introduction to Python Programming202	TitleLTPCodeTitleLTIntroduction to Civil Engineering300BETCK105ASmart Materials and Systems30Introduction to Electrical Engineering300BETCK105BGreen Buildings30Introduction to Electronics300BETCK105CIntroduction to Nano Technology30Communication300BETCK105DIntroduction to Sustainable Engineering30Introduction to C Programming202BETCK105ERenewable Energy Sources30Introduction to C Programming202BETCK105FWaste Management30Introduction to C Programming30BETCK105HIntroduction to Internet of Things (IOT)30Introduction to Cyber Security30BETCK105JIntroduction to Embedded System30Introduction to Web Programming202Introduction to Embedded System30Introduction to Python Programming202Introduction to Python Programming1Introduction to Python Programming1<

The course 22ESC145/245, Introduction to C Programming, and all courses under PLC and ETC groups can be taught by ANY DEPARTMENT

- The student has to select one course from the ESC-I group.
- CSE/ISE and allied branches Students shall opt for any one of the courses from the ESC-I group **except**, BESCK104E**-Introduction toC Programming**
- 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

Skill Lab: All students have to register for this course during the first week of I/II semester in Physics cycle. Successful completion of the registered course and requisite CIE score is mandatory for the award of the degree. This course shall not be considered for vertical progression as well as for the calculation of SGPA and CGPA, but completion of the course is mandatory for the award of degree.



(Autonomous Institution Affiliated to VTU, Belagavi) Scheme of Teaching and Examinations-2022

Outcome-Based Education (OBE) and Choice Based Credit System (CBCS) (Effective from the academic year 2023 - 24)

II Sem	I Semester (CSE Stream) Dept CSE Teaching										Che	mistry	/ Cycle
							ching /Week		I	Examinatio	on		
SI. No	Course an	d Course Code	Course Title	TD/PSB	r Theory Lecture	→ Tutorial	Practical/ Drawing	SDA	Duration in hours	CIE Marks	SEE Marks	Total Marks	Credits
1	*ASC(IC)	BMATS201	Mathematics-II for CSE Stream	Maths	2	2	2	0	03	50	50	100	04
2	#ASC(IC)	BCHES202	Applied Chemistry for CSE Stream	Chemistry	2	2	2	0	03	50	50	100	04
3	ESC	BCEDK203	Computer-Aided Engineering Drawing	Civil/Mech Engg dept	2	0	2	0	03	50	50	100	03
4	ESC-II	BESCK204C	Introduction to Electronics Communication	Respective Engg Dept	3	0	0	0	03	50	50	100	03
5	PLC-II	BPLCK205D	Introduction to C++ Programming	Any Dept	2	0	2	0	03	50	50	100	03
6	AEC	BPWSK206	Professional Writing Skills in English	Humanities	1	0	0	0	01	50	50	100	01
7	HSMS	BICOK207	Indian Constitution	Humanities	1	0	0	0	01	50	50	100	01
8	HSMS	BSFHK258	Scientific Foundations of Health	Any Dept	1	0	0	0	01	50	50	100	01
				TOTAL	14	4	8	0	18	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)

Internal Evaluation, **SEE**- Semester End Examination, **IC** – Integrated Course (Theory Course Integrated with Practical Course)

*-BMATS201 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.

#-BCHES202-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	-II) Engineering Science Courses-II					(ETC-II) Emerging Technology Courses-II			
Code	Title	L	T	P	Code	Title	L	T	P
BESCK204A	Introduction to Civil Engineering	3	0	0	BETCK205A	Smart materials and Systems	3	0	0
BESCK204B	Introduction to Electrical Engineering	3	0	0	BETCK205B	Green Buildings	3	0	0
BESCK204C	Introduction to Electronics Communication	3	0	0	BETCK205C	Introduction to Nano Technology	3	0	0
BESCK204D	Introduction to Mechanical Engineering	3	0	0	BETCK205D	Introduction to Sustainable Engineering	3	0	0
BESCK204E	Introduction to C Programming	2	0	2	BETCK205E	Renewable Energy Sources	3	0	0
					BETCK205F	Waste Management	3	0	0
					BETCK205G	Emerging Applications of Biosensors	3	0	0
					BETCK205H	Introduction to Internet of Things(IoT)	3	0	0
					BETCK205I	Introduction to Cyber Security	3	0	0
					BETCK205J	Introduction to Embedded System	3	0	0
(PLC-II) Program	ming Language Courses-II								
Code	Title	L	T	P					
BPLCK205A	Introduction to Web Programming	2	0	2					
BPLCK205B	Introduction to Python Programming	2	0	2					
BPLCK205C	Basics of JAVA programming	2	0	2					
BPLCK205D	Introduction to C++ Programming	2	0	2					

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

- The student has to select one course from the ESC-II group.
- CSE/ISE and allied branches Students shall opt for any one of the courses from the ESC-II group **except**, BESCK245E **-Introduction toC Programming**
- 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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I Sem	nester (CSE S	ester (CSE Stream) Dept AI/ML Physics Cycle Teaching											
						Teac Hours				Examir	ation		
SI. No	Course ar	nd Course Code	Course Title	TD/PSB	Theory Lecture	Tutorial	Practical/ Drawing	SDA	Duration in hours	CIE Marks	SEE Marks	Total Marks	Credits
					L	T	P	S					
1	*ASC(IC)	BMATS101	Mathematics-I for CSE Stream	Maths	2	2	2	0	03	50	50	100	04
2	#ASC(IC)	BPHYS102	Applied Physics for CSE stream	Physics	2	2	2	0	03	50	50	100	04
3	ESC	BPOPS103	Principles of Programming Using C	CSE	2	0	2	0	03	50	50	100	03
4	ESC-I	BESCK104C	Introduction to Electronics Communication	Respective EnggDept	3	0	0	0	03	50	50	100	03
5	ETC-I	ВЕТСК105Н	Introduction to Internet of Things(IoT)	Any Dept	3	0	0	0	03	50	50	100	03
6	AEC	BENGK106	Communicative English	Humanitie s	1	0	0	0	01	50	50	100	01
7	HSMC	BKSKK107/ BKBKK107	SamskrutikaKannada/ BalakeKannada	Humanitie s	1	0	0	0	01	50	50	100	01
8	AEC/SDC	BIDTK158	Innovation and Design Thinking	Any Dept	0	2	0	0	02	50	50	100	01
9	MC	BSLK108	Skill Lab	Any Dept			3			100			00
	_			TOTAL	14	6	6	0	19	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).

Credit Definition:

- 3- hour Lecture (L) per week=1Credit
- 2-hoursTutorial(T) per week=1Credit
- 4- 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

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

 $03\text{-}Credits\ courses\ are\ to\ be\ designed\ for\ 40\ hours\ of\ Teaching-Learning\ Session$

 $\ensuremath{\mathsf{02-Credits}}$ 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.

*-BMATS101 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.

#-BPHYS102 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 then, 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-I) Engineering Science Courses-I					(ETC-I) Emerging Technology Courses-I			
Code	Title	L	T	P	Code	Title	L	T	P
BESCK104A	Introduction to Civil Engineering	3	0	0	BETCK105A	Smart Materials and Systems	3	0	0
BESCK104B	Introduction to Electrical Engineering	3	0	0	BETCK105B	Green Buildings	3	0	0
BESCK104C	Introduction to Electronics Communication	3	0	0	BETCK105C	Introduction to Nano Technology	3	0	0
BESCK104D	Introduction to Mechanical Engineering	3	0	0	BETCK105D	Introduction to Sustainable Engineering	3	0	0
BESCK104E	Introduction to C Programming	2	0	2	BETCK105E	Renewable Energy Sources	3	0	0
					BETCK105F	Waste Management	3	0	0
					BETCK105G	Emerging Applications of Biosensors	3	0	0
					BETCK105H	Introduction to Internet of Things (IOT)	3	0	0
					BETCK105I	Introduction to Cyber Security	3	0	0
					BETCK105J	Introduction to Embedded System	3	0	0
(PLC-I) Progr	amming Language Courses-I								
Code	Title	L	T	P					
BPLCK105A	Introduction to Web Programming	2	0	2					
BPLCK105B	Introduction to Python Programming	2	0	2					
BPLCK105C	Basics of JAVA programming	2	0	2					
BPLCK105D	Introduction to C++ Programming	2	0	2					
The course Bl	ESCK104E/204E, Introduction to C Progra	ımn	ning	, an	d all courses ui	nder PLC and ETC groups can be taught by AN	Y		

• The student has to select one course from the ESC-I group.

DEPARTMENT

- CSE/ISE and allied branches Students shall opt for any one of the courses from the ESC-I group **except,** BESCK104E**-Introduction to C Programming**
- 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

Skill Lab: All students have to register for this course during the first week of I/II semester in Physics cycle. Successful completion of the registered course and requisite CIE score is mandatory for the award of the degree. This course shall not be considered for vertical progression as well as for the calculation of SGPA and CGPA, but completion of the course is mandatory for the award of degree.



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Outcome-Based Education (OBE) and Choice Based Credit System (CBCS) (Effective from the academic year 2023 - 24)

II Sem	ester (CSE Str	eam)	Dept A	AI/ML							Chem	istry Cy	cle
							ching s/Week		F	Examinatio	on		
SI. No	Course an	d Course Code	Course Title	TD/PSB	Theory Lecture	Tutorial	Practical/ Drawing	SDA	Duration in hours	CIE Marks	SEE Marks	Total Marks	Credits
		1			L	T	P	S					1
1	*ASC(IC)	BMATS201	Mathematics-II for CSE Stream	Maths	2	2	2	0	03	50	50	100	04
2	#ASC(IC)	BCHES202	Applied Chemistry for CSE Stream	Chemistry	2	2	2	0	03	50	50	100	04
3	ESC	BCEDK203	Computer-Aided Engineering Drawing	Civil/Mech Engg dept	2	0	2	0	03	50	50	100	03
4	ESC-II	BESCK204D	Introduction to Mechanical Engineering	Respective Engg Dept	3	0	0	0	03	50	50	100	03
5	PLC-II	BPLCK205D	Introduction to C++ Programming	Any Dept	2	0	2	0	03	50	50	100	03
6	AEC	BPWSK206	Professional Writing Skills in English	Humanities	1	0	0	0	01	50	50	100	01
7	HSMS	BICOK207	Indian Constitution	Humanities	1	0	0	0	01	50	50	100	01
8	HSMS	BSFHK258	Scientific Foundations of Health	Any Dept	1	0	0	0	01	50	50	100	01
				TOTAL	14	4	8	0	18	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, **CIE**-Continuous

Internal Evaluation, SEE- Semester End Examination, IC – Integrated Course (Theory Course Integrated with Practical Course)

*-BMATS201 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.

#-BCHES202- 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	I) Engineering Science Courses-II					(ETC-II) Emerging Technology Courses-II			
Code	Title	L	T	P	Code	Title	L	T	P
BESCK204A	Introduction to Civil Engineering	3	0	0	BETCK205A	Smart materials and Systems	3	0	0
BESCK204B	Introduction to Electrical Engineering	3	0	0	BETCK205B	Green Buildings	3	0	0
BESCK204C	Introduction to Electronics Communication	3	0	0	BETCK205C	Introduction to Nano Technology	3	0	0
BESCK204D	Introduction to Mechanical Engineering	3	0	0	BETCK205D	Introduction to Sustainable Engineering	3	0	0
BESCK204E	Introduction to C Programming	2	0	2	BETCK205E	Renewable Energy Sources	3	0	0
					BETCK205F	Waste Management	3	0	0
					BETCK205G	Emerging Applications of Biosensors	3	0	0
					BETCK205H	Introduction to Internet of Things (IoT)	3	0	0
					BETCK205I	Introduction to Cyber Security	3	0	0
					BETCK205J	Introduction to Embedded System	3	0	0
(PLC-II) Programn	ning Language Courses-II								
Code	Title	L	T	P					
BPLCK205A	Introduction to Web Programming	2	0	2					
BPLCK205B	Introduction to Python Programming	2	0	2					
BPLCK205C	Basics of JAVA programming	2	0	2					
BPLCK205D	Introduction to C++ Programming	2	0	2					

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

- The student has to select one course from the ESC-II group.
- CSE/ISE and allied branches Students shall opt for any one of the courses from the ESC-II group except, BESCK2O4E-Introduction toC Programming
- 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



(Autonomous Institution Affiliated to VTU, Belagavi) Scheme of Teaching and Examinations-2022

Outcome-Based Education (OBE) and Choice Based Credit System (CBCS) (Effective from the academic year 2023 - 24)

	I Semester (Electrical & Electr	ronics Engineering Stream)	Dept EEF	2						Pl	ysics (Cycle
				Teac	hing Ho	urs / Wee	k		Exami	nation			
SI. No	Course	e and Course Code	Course Title	TD/PSB	Theory Lecture	⊣ Tutorial	Practical/ Drawing	SDA	Duration in hours	CIE Marks	SEE Marks	Total Marks	Credits
1	*ASC(IC)	BMATE101	Mathematics -I for EEE Streams	Maths	2	2	2	0	03	50	50	100	04
2	#ASC(IC)	ВРНҮЕ102	Applied Physics for EEE Stream	РНҮ	2	2	2	0	03	50	50	100	04
3	ESC	BEEE103	# Element of Electrical Engineering	EEE/ECE/TCE	2	2	0	0	03	50	50	100	03
4	ESC-I	BESCK104E	Introduction to C Programming	Respective Engg Dept	2	0	2	0	03	50	50	100	03
5	ETC-I	BETCK105E	Renewable Energy Sources	Any Dept	3	0	0	0	03	50	50	100	03
6	AEC	BENGK106	Communicative English	Humanities	1	0	0	0	01	50	50	100	01
7	HSMC	BKSKK107/ BKBKK107	Samskrutika Kannada/ BalakeKannada	Humanities	1	0	0	0	01	50	50	100	01
8	AEC/SDC	BIDTK158	Innovation and Design Thinking	Any Dept	0	2	0	0	02	50	50	100	01
9	МС	BSLK108	Skill Lab	Any Dept			3			100			00
		TOTAL	13	8	6	0	19	400	400	800	20		

#Electrical & Electronics Engineering Students have to study BEEE103- Element of Electrical Engineering compulsorily## Where as 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)

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

AlCTE 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
BESCK104A	Introduction to Civil Engineering	3	0	0	BETCK105A	Smart Materials and Systems	3	0	0
BESCK104B	Introduction to Electrical Engineering	3	0	0	BETCK105B	Green Buildings	3	0	0
BESCK104C	Introduction to Electronics Communication	3	0	0	BETCK105C	Introduction to Nano Technology	3	0	0
BESCK104D	Introduction to Mechanical Engineering	3	0	0	BETCK105D	Introduction to Sustainable Engineering	3	0	0
BESCK104E	Introduction to C Programming	2	0	2	BETCK105E	Renewable Energy Sources	3	0	0
					BETCK105F	Waste Management	3	0	0
					BETCK105G	Emerging Applications of Biosensors	3	0	0
					BETCK105H	Introduction to Internet of Things (IOT)	3	0	0
					BETCK105I	Introduction to Cyber Security	3	0	0
					BETCK105J	Introduction to Embedded System	3	0	0
(PLC-I) Progr	amming Language Courses-I								
Code	Title	L	T	P					
BPLCK105A	Introduction to Web Programming	2	0	2					
BPLCK105B	Introduction to Python Programming	2	0	2					
BPLCK105C	Basics of JAVA programming	2	0	2					
BPLCK105D	Introduction to C++ Programming	2	0	2					

The course BESCK104E/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-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

Skill Lab: All students have to register for this course during the first week of I/II semester in Physics cycle. Successful completion of the registered course and requisite CIE score is mandatory for the award of the degree. This course shall not be considered for vertical progression as well as for the calculation of SGPA and CGPA, but completion of the course is mandatory for the award of degree.



(Autonomous Institution Affiliated to VTU, Belagavi) Scheme of Teaching and Examinations-2022

Outcome-Based Education (OBE) and Choice Based Credit System (CBCS) (Effective from the academic year 2023 - 24)

II Sem	emester (Electrical & Electronics Engineering Stream) Dept EEE Teaching Teaching								nistry C	ycle			
							ching /Week		I	Examinati	on		
SI. No	Course and Course Code		Course Title	TD/PSB		Tutorial	Practical/ Drawing	SDA	Duration in hours	CIE Marks	SEE Marks	Total Marks	Credits
					L	T	P	S					
1	*ASC(IC)	BMATE201	Mathematics II for EESI	Maths	2	2	2	0	03	50	50	100	04
2	#ASC(IC)	BCHEE202	Chemistry for EES	Chemistry	2	2	2	0	03	50	50	100	04
3	ESC	BCEDK203	Computer-Aided Engineering Drawing	Civil/Mech Engg dept	2	0	2	0	03	50	50	100	03
4	ESC-II	BESCK204C	Introduction to Electronics Communication	Respective Engg Dept	3	0	0	0	03	50	50	100	03
5	PLC-II	BPLCK205D	Introduction to C++ Programming	Any Dept	2	0	2	0	03	50	50	100	03
6	AEC	BPWSK206	Professional Writing Skills in English	Humanities	1	0	0	0	01	50	50	100	01
7	HSMS	BICOK207	Indian Constitution	Humanities	1	0	0	0	01	50	50	100	01
8	HSMS	BSFHK258	Scientific Foundations of Health	Any Dept.	1	0	0	0	01	50	50	100	01
		TOTAL	14	4	8	0	18	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-I	I) Engineering Science Courses-II		(ETC-II) Emerging Technology Courses-II		L T P 3 0 0 3 0 0 3 0 0 3 0 0 3 0 0 3 0 0 3 0 0 3 0 0								
Code	Title	L	T	P	Code	Title	L	T	P				
BESCK204A	Introduction to Civil Engineering	3	0	0	BETCK205A	Smart materials and Systems	3	0	0				
BESCK204B	Introduction to Electrical Engineering	3	0	0	BETCK205B	Green Buildings	3	0	0				
BESCK204C	Introduction to Electronics Communication	3	0	0	BETCK205C	Introduction to Nano Technology	3	0	0				
BESCK204D	Introduction to Mechanical Engineering	3	0	0	BETCK205D	Introduction to Sustainable Engineering	3	0	0				
BESCK204E	Introduction to C Programming	2	0	2	BETCK205E	Renewable Energy Sources	3	0	0				
					BETCK205F	Waste Management	3	0	0				
					BETCK205G	Emerging Applications of Biosensors	3	0	0				
					BETCK205H	H Introduction to Internet of Things(IoT)		0	0				
					BETCK205I	Introduction to Cyber Security	3	0	0				
					BETCK205J	Introduction to Embedded System	3	0	0				
(PLC-II) Programn	ning Language Courses-II												
Code	Title	L	T	P									
BPLCK205A	Introduction to Web Programming	2	0	2									
BPLCK205B	Introduction to Python Programming	2	0	2									
BPLCK205C	Basics of JAVA programming	2	0	2									
BPLCK205D	Introduction to C++ Programming	2	0	2									

The course BESCK205E, 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



(Autonomous Institution Affiliated to VTU, Belagavi) Scheme of Teaching and Examinations-2022

Outcome-Based Education (OBE) and Choice Based Credit System (CBCS) (Effective from the academic year 2023 - 24)

I Semester (Mechanical Engineering Stream) Dept ME Physics Cycle													ycle
			Teaching Hours/Week						Examin				
Sl. No	Course ar	nd Course Code	CourseTitle	TD/PSB	Theory Lecture	Tutorial	Practical/ Drawing	SDA	Duration in hours	CIE Marks	SEE Marks	Total Marks	Credits
					L	Т	P	S					
1	*ASC(IC)	BMATM101	Mathematics I for Mechanical Engg Stream	Maths	2	2	2	0	03	50	50	100	04
2	#ASC(IC)	ВРНҮМ102	Applied Physics for MES	PHY	2	2	2	0	03	50	50	100	04
3	ESC	ВЕМЕМ103	Elements of Mechanical Engineering	Mechanical	2	2	0	0	03	50	50	100	03
4	ESC-I	BESCK104E	Introduction to C Programming	Respective Engg Dept.	2	0	2	0	03	50	50	100	03
5	ETC-I	BETCK105H	Introduction to Internet of Things (IoT)	Any Dept	3	0	0	0	03	50	50	100	03
6	AEC	BENGK106	Communicative English	Humanities	1	0	0	0	01	50	50	100	01
7	HSMC	BKSKK107/ BKBKK107	SamskrutikaKannada / Balake Kannada	Humanities	1	0	0	0	01	50	50	100	01
8	AEC/SDC	BIDTK158	Innovation and Design Thinking	Any Dept	0	2	0	0	02	50	50	100	01
9	MC		Skill Lab	Any Dept			3			100			00
		•		TOTAL	13	8	6	0	19	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)

Credit Definition:

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

2-hoursTutorial(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.

*-BMATM101 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.

#-BPHYM102 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-I) Engineering Science Courses-I		(ETC-I) Emerging Technology Courses-I	L T P 3 0 0 3 0 0 3 0 0									
Code	Title	L	T	P	Code								
BESCK104A	Introduction to Civil Engineering	3	0	0	BETCK105A	Smart Materials and Systems	3	0	0				
BESCK104B	Introduction to Electrical Engineering	3	0	0	BETCK105B	Green Buildings	3	0	0				
BESCK104C	Introduction to Electronics Communication	3	0	0	BETCK105C	Introduction to Nano Technology	3	0	0				
BESCK104D	Introduction to Mechanical Engineering	3	0	0	BETCK105D	Introduction to Sustainable Engineering	3	0	0				
BESCK104E	Introduction to C Programming	2 0 2		2	BETCK105E	Renewable Energy Sources	3	0	0				
					BETCK105F	Waste Management		0	0				
					BETCK105G	Emerging Applications of Biosensors	3	0	0				
					BETCK105H	Introduction to Internet of Things (IOT)	3	0	0				
					BETCK105I	Introduction to Cyber Security	3	0	0				
					BETCK105J	Introduction to Embedded System	3	0	0				
(PLC-I) Progr	amming Language Courses-I												
Code	Title	L	T	P									
BPLCK105A	Introduction to Web Programming	2	0	2									
BPLCK105B	Introduction to Python Programming	2	0	2									
BPLCK105C	, 1 0 0	2	0	2					·				
BPLCK105D	Introduction to C++ Programming	2	0	2									

The course BSCK104E, 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.
- MES stream Students shall opt for any one of the courses from the ESC-I group **except, BESCK104D Introduction to Mechanical 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

Skill Lab: All students have to register for this course during the first week of I/II semester in Physics cycle. Successful completion of the registered course and requisite CIE score is mandatory for the award of the degree. This course shall not be considered for vertical progression as well as for the calculation of SGPA and CGPA, but completion of the course is mandatory for the award of degree.



(Autonomous Institution Affiliated to VTU, Belagavi) Scheme of Teaching and Examinations-2022

Outcome-Based Education (OBE) and Choice Based Credit System (CBCS) (Effective from the academic year 2023 - 24)

II Semester (Mechanical Engineering Stream) Dept ME Chemistry Cycle													
							ching s/Week		I	Examinatio	on		
Sl. No	Course a	nd Course Code	Course Title	TD/PSB	Theory Lecture	Tutorial	Practical/ Drawing	SDA	Duration in hours	CIE Marks	SEE Marks	Total Marks	Credits
		I		L	L	Т	P	S					
1	*ASC(IC)	BMATM201	Mathematics-II for Mechanical Engg Stream	Maths	2	2	2	0	03	50	50	100	04
2	#ASC(IC)	ВСНЕМ202	Applied Chemistry for ME Stream	Chemistry	2	2	2	0	03	50	50	100	04
3	ESC	BCEDK203	Computer-Aided Engineering Drawing	Civil/Mech Engg dept	2	0	2	0	03	50	50	100	03
4	ESC-II	BESCK204C	Introduction to Electronics Communication	Respective Engg Dept	3	0	0	0	03	50	50	100	03
5	PLC-II	BPLCK205B	Introduction to Python Programming	Any Dept	2	0	2	0	03	50	50	100	03
6	AEC	BPWSK206	Professional Writing Skills in English	Humanities	1	0	0	0	01	50	50	100	01
7	HSMS	BICOK207	Indian Constitution	Humanities	1	0	0	0	01	50	50	100	01
8	AEC/SEC	BSFHK258	Scientific Foundations for Health	Any Dept	1	0	0	0	01	50	50	100	01
		•		TOTAL	14	4	8	0	18	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)

*-BMATM201 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.

#-BCHEM202- 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-I	I) Engineering Science Courses-II		(ETC-II) Emerging Technology Courses-II							
Code	Title	L	T	P	Code	Title	L	T	P	
BESCK204A	Introduction to Civil Engineering	3	0	0	BETCK205A	Smart materials and Systems	3	0	0	
BESCK204B	Introduction to Electrical Engineering	3	0	0	BETCK205B	Green Buildings	3	0	0	
BESCK204C	Introduction to Electronics Communication	3	0	0	BETCK205C	Introduction to Nano Technology	3	0	0	
BESCK204D	Introduction to Mechanical Engineering	3	0	0	BETCK205D	Introduction to Sustainable Engineering	3	0	0	
BESCK204E	Introduction to C Programming	2	0	2	BETCK205E	Renewable Energy Sources	3	0	0	
					BETCK205F	Waste Management	3	0	0	
					BETCK205G	Emerging Applications of Biosensors	3	0	0	
					BETCK205H	Introduction to Internet of Things(IoT)	3	0	0	
					BETCK205I	Introduction to Cyber Security	3	0	0	
					BETCK205J	Introduction to Embedded System	3	0	0	
(PLC-II) Programm	ning Language Courses-II									
Code	Title	L	T	P						
BPLCK205A	Introduction to Web Programming	2	0	2						
BPLCK205B	Introduction to Python Programming	2	0	2					1	
BPLCK205C	Basics of JAVA programming	2	0	2					1	
BPLCK205D	Introduction to C++ Programming	2	0	2						

The course BESCK205E, 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.
- Mechanical Engineering Sream Students shall opt for any one of the courses from the ESC-II group except, BESCK204D Introduction to Mechanical 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