

Visvesvaraya Technological University, Belagavi Scheme of Teaching and examinations-2022 Outcome-Based Education (OBE) and Choice Based Credit System (CBCS) (Effective from the academic year 2022-23)													
I Semester (CSE Stream) (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)	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	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 Languages Course-I		2	0	2	0	03				
6	AEC	BENGK106	Communicative English	Humanities	1	0	0	0	01	50	50	100	01
			OR										
		BPWSK106	Professional Writing Skills in English										
7	HSMC	BKSKK107 BKBBK107	Samskrutika 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	02	50	50	100	01
			OR										
		BSFHK158	Scientific Foundations of Health		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)	
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 1 st 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.	
<p>*- 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.</p> <p>#- BPHYS102 SEE shall have the 03 hours of theory examination and 02-03 hours of practical examination</p> <p>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).</p> <p>All 01 Credit- courses shall have the SEE of 01 hours duration and the pattern of the question paper shall be MCQ</p>	

(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) Programming 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 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 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

29052023/V10 scheme for Computer Science and Engineering and allied branches (CSE/ISE and BT all allied branches of CSE)

Visvesvaraya Technological University, Belagavi Scheme of Teaching and Examinations-2022 Outcome-Based Education (OBE) and Choice Based Credit System (CBCS) (Effective from the academic year 2022-23)													
II Semester (CSE Stream)				(For students attended 1 st semester under 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	
1	*ASC(IC)	BMATS201	Mathematics-II for CSE Stream	Maths	2	2	2	0	03	50	50	100	04
2	#ASC(IC)	BCHE202	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	BESCK204x	Engineering Science Course-II	Respective Engg. Dept	3	0	0	0	03	50	50	100	03
5	PLC-II	BETCK205x	Programming Language Course-II	Any Dept	2	00	2	0	03	50	50	100	03
	OR												
	ETC-II	BPLCK205x	Emerging Technology Course-II		3	0	0	0	03				
6	AEC	BPWSK206	Professional Writing Skills in English	Humanities	1	0	0	0	01	50	50	100	01
			OR										
		BENGK206	Communicative English										
7	HSMS	BICOK207	Indian Constitution	Humanities	1	0	0	0	01	50	50	100	01
		OR											
		BKSKK207/ BKBKK207	Sanskrutika Kannada/ Balake Kannada		1	0	0	0					
8	HSMS	BSFHK258	Scientific Foundations of Health	Any Dept	1	0	0	0	01	50	50	100	01
			OR										
		KIDTK258	Innovation and Design Thinking		1	0	0	0	01				
TOTAL										400	400	800	20

29052023/V10 scheme for Computer Science and Engineering and allied branches (CSE/ISE and BT all allied branches of CSE)

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)

- 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) Programming 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 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-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

29052023/V10 scheme for Computer Science and Engineering and allied branches (CSE/ISE and BT all allied branches of CSE)

Visvesvaraya Technological University, Belagavi Scheme of Teaching and Examinations-2022 Outcome-Based Education(OBE) and Choice Based Credit System(CBCS) (Effective from the academic year 2022-23)													
I Semester (CSE Stream)				(For 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	
1	*ASC(IC)	BMATS101	Mathematics-I for CSE Stream	Maths	2	2	2	0	03	50	50	100	04
2	#ASC(IC)	BCHES102	Applied Chemistry for CSE Stream	Chemistry	2	2	2	0	03	50	50	100	04
3	ESC	BCEDK103	Computer-Aided Engineering Drawing	Civil/Mech Engg dept	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	BPLCK105x	Programming Language Course-I		2	0	2	0	03				
6	AEC	BPWSK106	Professional Writing Skills in English	Humanities	1	0	0	0	01	50	50	100	01
			OR										
		BENGK106	Communicative English										
7	HSMS	BICOK107	Indian Constitution	Humanities	1	0	0	0	01	50	50	100	01
		OR											
		BKSKK107/ BKBKK107	Sanskrutika Kannada/ Balake Kannada		1	0	0	0					
8	HSMS	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	02				
TOTAL										400	400	800	20

29052023/V10 scheme for Computer Science and Engineering and allied branches (CSE/ISE and BT all allied branches of CSE)

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)	
<p>*- 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.</p> <p>#- BCHES102- SEE shall have the 03 hours of theory examination and 02-03 hours of practical examination</p> <p>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),</p> <p>All 01 Credit- courses shall have the SEE of 01 hours duration and the pattern of the question paper shall be MCQ</p>	
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
<p>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.</p>	
<p>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.</p>	

(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) Programming 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, 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 & allied branch students shall opt for any one of the courses from the ESC-I group **except**, BESCK145E-**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

29052023/V10 scheme for Computer Science and Engineering and allied branches (CSE/ISE and BT all allied branches of CSE)

Visvesvaraya Technological University, Belagavi Scheme of Teaching and Examinations-2022 Outcome-Based Education(OBE)andChoiceBasedCreditSystem(CBCS) (Effectivefromtheacademicyear 2022-23)													
II Semester (CSE Streams)				(For students who attended 1 st 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	
1	*ASC(IC)	BMATS201	Mathematics-II for CSEstream	Maths	2	2	2	0	03	50	50	100	04
2	#ASC(IC)	BPHYS202	Applied Physics for CSE Stream	Physics	2	2	2	0	03	50	50	100	04
3	ESC	BPOPS203	Principles of Programming Using C	CSE	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	ETC-II	BPLCK205x	Programming Language Course-II	Any Dept	2	00	2	0	03	50	50	100	03
	OR												
	PLC-II	BETCK205x	Emerging Technology Course-II		3	0	0	0	03				
6	AEC	BENGK206	Communicative English	Humanities	1	0	0	0	01	50	50	100	01
		OR											
		BPWSK206	Professional Writing Skills in English										
7	HSMC	BKSKK207 BKBKK207	Sanskrutika 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											
		BSFHK258	Scientific Foundations of Health		1	0	0	0	01				
TOTAL										400	400	800	20

29052023/V10 scheme for Computer Science and Engineering and allied branches (CSE/ISE and BT all allied branches of CSE)

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)

*- **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.**

#- **BPHYS202** 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 of 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) Programming 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.
- Civil Engineering Students shall opt for any one of the courses from the ESC-II group **except**, BESCK204E-**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-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

Visvesvaraya Technological University, Belagavi Scheme of Teaching and Examinations-2022 Outcome-Based Education (OBE) and Choice Based Credit System (CBCS) (Effective from the academic year 2022-23)														
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
1	*ASC(IC)	BMATE101	Mathematics-I for EEE Streams	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					03	50	50	100	03	
		OR			2	2	0	0						
					OR									
		BBEE103	## Basic Electronics for EEE stream		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	03					
6	AEC	BENGK106	Communicative English	Humanities	1	0	0	0	01	50	50	100	01	
		OR												
		BPWSK106	Professional Writing Skills in English											
7	HSMC	BKSKK107/ BKBKK107	Sanskrutika Kannada/ Balake Kannada	Humanities	1	0	0	0	01	50	50	100	01	
		OR												
		BICOK107	Indian Constitution		1	0	0	0						
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		1	0	0	0	01					

TOTAL										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)													
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 1 st 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.													
*- BMATE101Shall 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. #- BPHYE102SEE 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) Programming 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, 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

Visvesvaraya Technological University, Belagavi Scheme of Teaching and Examinations-2022 Outcome-Based Education (OBE) and Choice Based Credit System (CBCS) (Effective from the academic year 2022-23)													
II Semester (Electrical & Electronics Engineering Stream)				(For the students who attended 1 st semester under 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	
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	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	BPWKS206	Professional Writing Skills in English	Humanities	1	0	0	0	01	50	50	100	01
		OR											
		BENGK206	Communicative English										
7	HSMS	BICOK207	Indian Constitution	Humanities	1	0	0	0	01	50	50	100	01
		OR											
		BKSKK207/ BKBKK207	Sanskritika Kannada/ Balake Kannada										
8	HSMS	BSFHK258	Scientific Foundations of Health	Any Dept.	1	0	0	0	01	50	50	100	01
		OR											
		BIDTK258	Innovation and Design Thinking		1	0	0	0	01				
TOTAL										400	400	800	20

29052023/V10 Scheme for EEE/ECE/ETC/EIE/BM/ML/IO

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
BESCK201A	Introduction to Civil Engineering	3	0	0	BETCK205A	Smart materials and Systems	3	0	0
BESCK202B	Introduction to Electrical Engineering	3	0	0	BETCK205B	Green Buildings	3	0	0
BESCK203C	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
BESCK205E	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) Programming 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** BESCK203Introduction 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

Visvesvaraya Technological University, Belagavi Scheme of Teaching and Examinations-2022 Outcome-Based Education (OBE) and Choice Based Credit System (CBCS) (Effective from the academic year 2022-23)													
I Semester (Electrical & Electronics Engineering Stream)					(For 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	
1	*ASC(IC)	BMATE101	Mathematics-I for EES	Maths	2	2	2	0	03	50	50	100	04
2	#ASC(IC)	BCHEE102	Chemistry for EES	Chemistry	2	2	2	0	03	50	50	100	04
3	ESC	BCEDK103	Computer-Aided Engineering Drawing	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	BPLCK105x	Programming Language Course-I		2	0	2	0	03				
6	AEC	BPWSK106	Professional Writing Skills in English	Humanities	1	0	0	0	01	50	50	100	01
			OR										
		BENGK106	Communicative English										
7	HSMS	BICOK107	Indian Constitution	Humanities	1	0	0	0	01	50	50	100	01
			OR										
		BKSKK107/ BKBKK107	Sanskritika Kannada/ Balake Kannada										
8	HSMS	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.**

#- BCHEE102- 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 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.

(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) Programming 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 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

Visvesvaraya Technological University, Belagavi Scheme of Teaching and Examinations-2022 Outcome-Based Education (OBE) and Choice Based Credit System (CBCS) (Effective from the academic year 2022-23)														
II Semester (Electrical & Electronics Engineering Stream)					(For students who attended 1 st 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
1	*ASC(IC)	BMATE201	Mathematics-II for EES	Maths	2	2	2	0	03	50	50	100	04	
2	#ASC(IC)	BPHYE202	Applied Physics for EES	PHY	2	2	2	0	03	50	50	100	04	
3	ESC	BEEE203	# Elements of Electrical Engineering	EEE/ECE/TCE					03	50	50	100	03	
		OR			2	2	0	0						
		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	AEC	BENGK206	Communicative English	Humanities	1	0	0	0	01	50	50	100	01	
		OR												
		BPWSK206	Professional Writing Skills in English											
7	HSMC	BKSKK207/ BKBKK207	Sanskrutika Kannada/ Balake Kannada	Humanities	1	0	0	0	01	50	50	100	01	
		OR												
		BICOK207	Indian Constitution		1	0	0	0						
8	AEC/SDC	BIDTK258	Innovation and Design Thinking	Any Dept	1	0	0	0	01	50	50	100	01	
		OR												
		BSFHK258	Scientific Foundations of Health		1	0	0	0	01					
TOTAL										400	400	800	20	

<p># Electrical & Electronics Engineering Students have to study BEEE203 Elements of Electrical Engineering compulsorily</p> <p>## Whereas Electronics and allied stream students have to study BBEE203 Basic Electronics compulsorily</p>
<p>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)</p>
<p>*- 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.</p> <p>#- BPHYE202SEE shall have the 03 hours of theory examination and 02-03 hours of practical examination.</p> <p>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</p>

(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) Programming 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 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