VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI
B.E. in Electrical and Electronics Engineering
Scheme of Teaching and Examinations 2021
Outcome Based Education(OBE) and Choice Based Credit System (CBCS)
(Effective from the academic year 2021 - 22)

III SEMESTER

Sl. No	Course and Course Code	Course Title	Teaching Department	Teaching Hours /Week				Examination				Credits
				Theory Lecture	Tutorial	Practical/ Drawing	Self -Study	Duration in hours	CIE Marks	SEE Marks	Total Marks	
				L	T	P	S					
1	BSC 21MAT31	Transform Calculus, Fourier Series and Numerical Technics	Maths	2	2	--		03	50	50	100	3
2	IPCC 21EE32	Analog Electronic Circuits and Op - Amps	EE	3	--	2		03	50	50	100	4
3	IPCC 21EE33	Electric Circuit Analysis	EE	3	--	2		03	50	50	100	4
4	PCC 21EE34	Transformers and Generators	EE	2	2	--		03	50	50	100	3
5	PCC 21EEL35	Electrical Machines Laboratory - I	EE	--	--	2		03	50	50	100	1
6	INT 21INT36 ***	Summer Internship - I	Completed during the intervening period of II and III semesters. Lateral entry students have to attend the internship during the intervening period of III and IV semesters					--	100	--	100	2
7	HSMC 21KSK37/47	Samskrutika Kannada	HSMC	1	--	--		01	50	50	100	1
	HSMC 21KBK37/47	Balake Kannada										
	OR			OR								
	HSMC 21CIP37/47	Constitution of India and Professional Ethics		1	--	--						
				Examination is by objective type questions								
8	AEC 21EE38X	Ability Enhancement Course - III	EE	For theory courses				01	50	50	100	1
				1	--	--						
				For Laboratory courses								
				--	--	2						
9	UHV 21UH39	Social Connect and Responsibility	Any Department	1	--	--		01	50	50	100	1
							TOTAL	**18**	**500**	**400**	**900**	**20**

Note: BSC: Basic Science Course, IPCC: Integrated Professional Core Course, PCC: Professional Core Course, INT –Internship, HSMC: Humanity and Social Science & Management Courses, AEC –Ability Enhancement Courses. UHV- Universal Human Value Courses.
L –Lecture, T – Tutorial, P- Practical/ Drawing, S – Self Study Component, CIE: Continuous Internal Evaluation, SEE: Semester End Examination.

21KSK37/47 Samskrutika Kannada is for students who speak, read and write Kannada and 21KBK37/47 Balake Kannada is for non-Kannada speaking, reading, and writing students.

Integrated Professional Core Course (IPCC): Refers to Professional Theory Core Course Integrated with Practical of the same course. Credit for IPCC can be 04 and its Teaching – Learning hours (L : T : P) can be considered as (3 : 0 : 2) or (2 : 2 : 2). The theory part of the IPCC shall be evaluated both by CIE and SEE. The practical part shall be evaluated by CIE only and there shall be no SEE. For more details, the regulation governing the Degree of Bachelor of Engineering /Technology (BE/B.Tech) 2021-22 may be referred.

21INT36 *:** All the students admitted to engineering programs under the lateral entry category shall have to undergo a mandatory 21INT36 summer Internship-I of 03 weeks during the intervening period of III and IV semesters. Summer Internship shall include Inter / Intra Institutional activities. A University Viva-voce examination shall be conducted during the IV semester examinations and the prescribed credit earned after successful completion of the course 21INT36 shall be included in the III semester grade card. The III semester grade card shall be issued only after completing all the courses of III semester. The internship shall be considered as a head of passing and shall be considered for vertical progression and for the award of degree. Those, who do not take up / complete the internship shall be declared fail and shall have to complete during subsequent University examination after satisfying the internship requirements during subsequent semesters. (The faculty coordinator or mentor has to monitor the students' internship progress and interact with guide them for the successful completion of the internship.)
Summer Internship-I: SEE shall be through seminar and viva-voce.

Course prescribed to lateral entry Diploma holders admitted to III semester of Engineering programs

10	NCMC 21MATDIP31	Additional Mathematics - I	Maths	02	01	--		03	50	50	100	0

(1) Non – credit mandatory courses (NCMC): Additional Mathematics I and II prescribed for III and IV semesters respectively, to the lateral entry Diploma holders admitted to III semester of BE/B.Tech., programs, shall attend the classes during the respective semesters to complete all the formalities of the course and appear for the Continuous Internal Evaluation (CIE). In case, any student fails to register for the said course/fails to secure the minimum 40 % of the prescribed CIE marks, he/she shall be deemed to have secured an F grade. In such a case, the student has to fulfill the requirements during subsequent semester/s to appear for CIE.

(2) NCMC Courses shall not be considered for vertical progression as well as for the calculation of SGPA and CGPA, but completion of the courses shall be mandatory for the award of degree.

Ability Enhancement Course - III			
21EE381	Vedic Mathematics	21EE384	Circuit laboratory using Pspice (Laboratory)
21EE382	Business Mathematics	21EE385	555 IC Projects (Laboratory)
21EE383	Art of Public Speaking		

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IV SEMESTER

Sl. No	Course and Course Code	Course Title	Teaching Department	Teaching Hours /Week				Examination				Credits
				Theory Lecture	Tutorial	Practical/ Drawing	Self -Study	Duration in hours	CIE Marks	SEE Marks	Total Marks	
				L	T	P	S					
1	BSC 21MAT41	Complex Analysis, Probability and Statistical Methods	Maths	2	2	--		03	50	50	100	3
2	IPCC 21EE42	Digital System Design	EE	3	--	2		03	50	50	100	4
3	IPCC 21EE43	Microcontroller	EE	3	--	2		03	50	50	100	4
4	PCC 21EE44	Electric Motors	EE	3	--	--		03	50	50	100	3
5	AEC 21BE45	Biology for Engineers	BT, CHE, PHY	2	--	--		02	50	50	100	2
6	PCC 21EEL46	Electrical Machine Laboratory - II	EE	--	--	2		03	50	50	100	1
7	HSMC 21KSK37/47	Samskrutika Kannada	HSMC	1	--	--		01	50	50	100	1
	HSMC 21KBK37/47	Balake Kannada										
	OR			OR								
	HSMC 21CIP37/47	Constitution of India		1	--	--						
				Examination is by objective type questions								
8	AEC 21EE48X	Ability Enhancement Course - IV	EE	For theory courses				01	50	50	100	1
				1	--	--						
				For Laboratory courses								
				--	--	2						
9	UHV 21UH49	Universal Human Values and Professional Ethics	Any Department	1	--	--		01	50	50	100	1
							TOTAL	**20**	**450**	**450**	**900**	**20**

Note: BSC: Basic Science Course, IPCC: Integrated Professional Core Course, PCC: Professional Core Course, AEC –Ability Enhancement Courses, HSMC: Humanity and Social Science and Management Courses, UHV- Universal Human Value Courses.
L –Lecture, T – Tutorial, P- Practical/ Drawing, S – Self Study Component, CIE: Continuous Internal Evaluation, SEE: Semester End Examination.

21KSK37/47 Samskrutika Kannada is for students who speak, read and write Kannada and 21KBK37/47 Balake Kannada is for non-Kannada speaking, reading, and writing students.

Course prescribed to lateral entry Diploma holders admitted to III semester of Engineering programs

10	NCMC 21MATDIP41	Additional Mathematics - II	Maths	02	01	--		03	50	50	100	0

(1) Non – credit mandatory courses (NCMC): Additional Mathematics II prescribed for IV semester, to the lateral entry Diploma holders admitted to III semesters BE/B.Tech., programs, shall attend the classes during the respective semesters to complete all the formalities of the course and appear for the Continuous Internal Evaluation (CIE). In case, any student fails to register for the said course/fails to secure the minimum 40 % of the prescribed CIE marks, he/she shall be deemed to have secured an F grade. In such a case, the student has to fulfill the requirements during subsequent semester/s to appear for CIE.
(2) NCMC Courses shall not be considered for vertical progression as well as for the calculation of SGPA an CGPA, but completion of the courses shall be mandatory for the award of degree

Ability Enhancement Course - IV

21EE481	Business Communication	21EE484	Microcontroller Projects (Laboratory)
21EE482	Block Chain	21EE485	Smart Thinking Skills
21EE483	Decision Making in Engineering Design		

Summer Internship-II (21INT57): shall be carried out at industry, State and Central Government /Non-government organizations (NGOs, Micro, Small and Medium Enterprise (MSME), Innovation centers or Incubation centers. The internship can also be Rural internship. All the students shall have to undergo a mandatory internship of 04 weeks during the intervening period of IV and V semesters. A University Viva-Voce examination (Presentation followed by Question & Answer session) shall be conducted during V semester and the prescribed credit shall be included in the V semester. The internship shall be considered as a head of passing and shall be considered for the award of degree. Those, who do not take

up/complete the internship shall be declared fail and shall have to complete during subsequent University examination after satisfying the internship requirements. The in charge Faculty or Mentor has to monitor the students' internship progress and interact to guide them for the successful completion of the internship. **Summer Internship-II:** SEE shall be through seminar and viva-voce.
Integrated Professional Core Course (IPCC): Refers to Professional Theory Core Course Integrated with Practical of the same course. Credit for IPCC can be 04 and its Teaching – Learning hours (L : T : P) can be considered as (3 : 0 : 2) or (2 : 2 : 2). Theory part of the IPCC shall be evaluated both by CIE and SEE. The practical part shall be evaluated by CIE only and there shall be no SEE. For more details the regulation governing the Degree of Bachelor of Engineering /Technology (BE/B.Tech.,)2021-22 may be referred.

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V SEMESTER

Sl. No	Course and Course Code		Course Title	Teaching Department	Teaching Hours /Week				Examination				Credits
					Theory Lecture	Tutorial	Practical/ Drawing	Self -Study	Duration in hours	CIE Marks	SEE Marks	Total Marks	
					L	T	P	S					
1	BSC/PCC 21EE51		Switchgear and Protection	EE	3	--	--		03	50	50	100	3
2	IPCC 21EE52		Control Systems	EE	3	--	2		03	50	50	100	4
3	PCC 21EE53		Transmission and Distribution	EE	3	--	--		03	50	50	100	3
4	PCC 21EE54		Power Electronics	EE	3	--	--		03	50	50	100	3
5	PCC 21EEL55		Power Electronics Laboratory	EE	--	--	2		03	50	50	100	1
6	AEC 21RMI56		Research Methodology and Intellectual Property Rights	EE or Any Department	2	--	--		02	50	50	100	2
7	INT 21INT57		Summer Internship - II	Completed during the intervening period of IV and V semesters.					--	100	--	100	3
8	HSMC 21CIV58		Environmental Studies (Paper setting: Civil Engineering Board)	Civil/ Biotech/ Environmental	1	--	--		01	50	50	100	1
								TOTAL	**18**	**450**	**350**	**800**	**20**
9	NCMC	21PE59	Physical Education (PE) (Sports and Athletics)	PE	--	--	2		--	50	50	100	0
		21YO59	Yoga	Yoga									
		21NS59	National Service Scheme- I (NSS -I)	NSS									

Note: BSC: Basic Science Course, PCC: Professional Core Course, IPCC: Integrated Professional Core Course, AEC –Ability Enhancement Course INT –Internship, HSMC: Humanity and Social Science & Management Courses.
L –Lecture, T – Tutorial, P- Practical/ Drawing, S – Self Study Component, CIE: Continuous Internal Evaluation, SEE: Semester End Examination.

Integrated Professional Core Course (IPCC): refers to Professional Theory Core Course Integrated with Practical of the same course. Credit for IPCC can be 04 and its Teaching – Learning hours (L : T : P) can be considered as (3 : 0 : 2) or (2 : 2 : 2). Theory part of the IPCC shall be evaluated both by CIE and SEE. The practical part shall be evaluated by CIE only and there shall be no SEE. For more details the regulation governing the Degree of Bachelor of Engineering /Technology (BE/B.Tech.) 2021-22 may be referred.

(1) Non – credit mandatory course (NCMC): Students shall select any one the NCMCs namely, Physical Education (Sport and Athletics)/ Yoga/ NSS - I prescribed for V semester and Physical Education (Sport and Athletics)/Yoga/ NSS - II course prescribed for VI semesters and shall attend classes during the respective semesters to complete all the formalities of the course and appear for the University examination. In case, any student fails to register for the said course/fails to secure the minimum of 40 % of the prescribed CIE marks, he/she shall be deemed to have secured F grade. In such a case, the student has to fulfil the requirements during subsequent semester/s to appear for SEE.
(2) The above mentioned NCMCs shall not be considered for vertical progression as well as for the calculation of SGPA and CGPA, but completion of the courses shall be mandatory for the award of degree.
(3) The students who take a course on Physical education/ Yoga, he/she has to take up the semester-end practical examination prescribed for 100 marks. The students who opt for the NSS course have to submit reports and attend to viva-voce examination. The marks for the report shall be 50 marks and for presentation and viva-voce 50 marks.

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VI SEMESTER

Sl. No	Course and Course Code		Course Title	Teaching Department	Teaching Hours /Week				Examination				Credits
					Theory Lecture	Tutorial	Practical/ Drawing	Self -Study	Duration in hours	CIE Marks	SEE Marks	Total Marks	
					L	T	P	S					
1	HSMC 21EE61		Management and Entrepreneurship	EE or Any Department	3	--	--		03	50	50	100	3
2	IPCC 21EE62		Power System Analysis - 1	EE	3	--	2		03	50	50	100	4
3	PCC 21EE63		Signals and Digital Signal Processing	EE	3	--	--		03	50	50	100	3
4	PEC 21EE64X		Professional Elective - I	EE	3	--	--		03	50	50	100	3
5	OEC 21XX65X		Open Elective - I	Concerned Department	3	--	--		03	50	50	100	3
6	PCC 21EEL66		Digital Signal Processing Laboratory	EE	--	--	2		03	50	50	100	1
7	MP 21EEM67		Mini Project	EE	Two contact hours /week for interaction between the faculty and students.				--	100	--	100	2
8	AEC 21EE68X		Ability Enhancement Course - V	EE	For theory courses: 1	--	--		01	50	50	100	1
					For Laboratory courses: --	--	2						
								TOTAL	**19**	**450**	**350**	**800**	**20**
9	NCMC	21PE69	Physical Education (PE) (Sports and Athletics)	PE	--	--	2		--	50	50	100	0
		21YO69	Yoga	Yoga									
		21NS69	National Service Scheme (NSS)	NSS									

Note: HSMC: Humanity and Social Science & Management Courses, IPCC: Integrated Professional Core Course, PCC: Professional Core Course, PEC: Professional Elective Courses, OEC –Open Elective Course, MP –Mini Project, AEC –Ability Enhancement Courses, NCMC: Non Credit Mandatory Courses.
L –Lecture, T – Tutorial, P - Practical / Drawing, S – Self Study Component, CIE: Continuous Internal Evaluation, SEE: Semester End Examination.

Professional Elective - I

21EE641	Electrical and Electronic Measurements	21EE644	High Voltage Engineering (Prerequisite course for HV and Relay Laboratory)
21EE642	Electromagnetic Field Theory	21EE645	Sensors and Transducers
21EE643	Electrical Machine Design		

Open Electives – I offered by the Department of Electrical and Electronics Engineering to other Department students

21XX651	Industrial Servo Control Systems	21XX654	Energy Management
21XX652	PLC and SCADA	21XX655	Advanced Control Systems
21XX653	Renewable Energy Systems		

Ability Enhancement Course - V

21EE641	Vedic Mathematics (Rajesh Kumar Thakur)	21EE644	HV and Relay Laboratory (Prerequisite course: 21EE654 High Voltage Engineering)
21EE642	Industrial Safety	21EE645	Lab View for Electrical Machine Analysis
21EE643	Internet of Things		

Integrated Professional Core Course (IPCC): Refers to Professional Theory Core Course Integrated with Practical of the same course. Credit for IPCC can be 04 and its Teaching – Learning hours (L : T : P) can be considered as (3 : 0 : 2) or (2 : 2 : 2). The theory part of the IPCC shall be evaluated both by CIE and SEE. The practical part shall be evaluated by CIE only and there shall be no SEE. For more details, the regulation governing the Degree of Bachelor of Engineering /Technology (BE/B.Tech) 2021-22 may be referred.

Professional Elective Courses(PEC):

A professional elective (PEC) course is intended to enhance the depth and breadth of educational experience in Engineering and Technology curriculum. Multidisciplinary courses that are added supplement the latest trend and advanced technology in the selected stream of engineering. Each group will provide an option to select one course out of five course. The minimum students' strength for offering professional electives is 10. However, this conditional shall not be applicable to cases where the admission to the programme is less than 10.

Open Elective Courses:

Students belonging to a particular stream of Engineering and Technology are not entitled for the open electives offered by their parent Department. However, they can opt an elective offered by other Departments, provided they satisfy the prerequisite condition, if any. Registration to open electives shall be documented under the guidance of the Program Coordinator/ Advisor/Mentor.

Selection of an open elective shall not be allowed if,

(i) The candidate has studied the same course during the previous semesters of the program.

(ii) The syllabus content of open electives is similar to that of the Departmental core courses or professional electives.

(iii) A similar course, under any category, is prescribed in the higher semesters of the program.

In case, any college is desirous of offering a course (not included in the Open Elective List of the University) from streams such ass Law, Business (MBA), Medicine, Arts, Commerce, etc., can seek permission, at least one month before the commencement of the semester, from the University by submitting a copy of the syllabus along with the details of expertise available to teach the same in the college.

The minimum students' strength for offering open electives is 10. However, this conditional shall not be applicable to cases where the admission to the programme is less than 10.

Mini-project work: Mini Project is a laboratory-oriented course which will provide a platform to students to enhance their practical knowledge and skills by the development of small systems/applications.

Based on the ability/abilities of the student/s and recommendations of the mentor, a single discipline or a multidisciplinary Mini- project can be assigned to an individual student or to a group having not more than 4 students.

CIE procedure for Mini-project:

(i) Single discipline: The CIE marks shall be awarded by a committee consisting of the Head of the concerned Department and two faculty members of the Department, one of them being the Guide. The CIE marks awarded for the Mini-project work shall be based on the evaluation of project report, project presentation skill, and question and answer session in the ratio of 50:25:25. The marks awarded for the project report shall be the same for all the batch mates.

(ii) Interdisciplinary: Continuous Internal Evaluation shall be group-wise at the college level with the participation of all the guides of the project. The CIE marks awarded for the Mini-project, shall be based on the evaluation of project report, project presentation skill, and question and answer session in the ratio 50:25:25. The marks awarded for the project report shall be the same for all the batch mates.

SEE for Mini-project:

(i) Single discipline: Contribution to the Mini-project and the performance of each group member shall be assessed individually in the semester-end examination (SEE) conducted at the department.

(ii) Interdisciplinary: Contribution to the Mini-project and the performance of each group member shall be assessed individually in semester-end examination (SEE) conducted separately at the departments to which the student/s belongs.

(1) Non – credit mandatory course (NCMC): Students shall select any one the NCMCs namely, Physical Education (Sport and Athletics), Yoga and NSS-II courses prescribed for VI semester and shall attend classes to complete all the formalities of the course and appear for the University examination. In case, any student fails to register for the said course/fails to secure the minimum 40 % of the prescribed CIE marks, he/she shall be deemed to have secured F grade. In such a case, the student has to fulfil the requirements during subsequent semester/s to appear for SEE.

(2) These Courses shall not be considered for vertical progression as well as for the calculation of SGPA an CGPA, but completion of the courses shall be mandatory for the award of degree.

(3) The students who take course on Physical education /Yoga, he/she has to take up practical examination for SEE. The students who take NSS course have to submit report, for SEE has to present (PPT) and answer vivo-voce for marks in the ratio 50:50.

VII semester Classwork and Research Internship /Industry Internship (21INT82)

Swapping Facility

Institutions can swap VII and VIII Semester Scheme of Teaching and Examinations to accommodate research internship/ industry internship after the VI semester**.**

(2) Credits earned for the courses of VII and VIII Semester Scheme of Teaching and Examinations shall be counted against the corresponding semesters whether VII or VIII semester is completed during the beginning of IV year or later part of IV year of the programme.

Elucidation:

At the beginning of IV year of the programme i.e., after VI semester, VII semester classwork and VIII semester Research Internship /Industrial Internship shall be permitted to be operated simultaneously by the University so that students have ample opportunity for internship. In other words, a good percentage of the class shall attend VII semester classwork and similar percentage of others shall attend to Research Internship or Industrial Internship.

Research/Industrial Internship shall be carried out at an Industry, NGO, MSME, Innovation center, Incubation center, Startup, Centers of Excellence (CoE), Study Center established in the parent institute and /or at reputed research organizations / institutes. The intership can also be rural internship. The mandatory Research internship /Industry internship is for 24 weeks. The internship shall be considered as a head of passing and shall be considered for the award of degree. Those, who do not take up/complete the internship shall be declared fail and shall have to complete during the subsequent University examination after satisfying the internship requirements.

Research internship: Research internship is intended to offer the flavour of current research going on in in the research field. It helps students get familiarized with the field and imparts the skill required for carrying out research.

Industry internship: Is an extended period of work experience undertaken by students to supplement their degree for professional development. It also helps them learn to overcome unexpected obstacles and successfully navigate organizations, perspectives, and cultures. Dealing with contingencies helps students recognize, appreciate, and adapt to organizational realities by tempering their knowledge with practical constraints. The student can take up Interdisciplinary Research Internship or Industry Internship.

The faculty coordinator or mentor has to monitor the students' internship progress and interact with them to guide for the successful completion of the internship. University shall not bear any expenses incurred in respect of internship.

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Swappable VII and VIII SEMESTER

VII SEMESTER

Sl. No	Course and Course Code	Course Title	Teaching Department	Teaching Hours /Week				Examination				Credits
				Theory Lecture	Tutorial	Practical/ Drawing	Self -Study	Duration in hours	CIE Marks	SEE Marks	Total Marks	
				L	T	P	S					
1	PCC 21EE71	Power System Analysis - 2	EE	3	--	--		03	50	50	100	3
2	PEC 21EE72X	Professional Elective - II	EE	3	--	--		03	50	50	100	3
3	PEC 21EE73X	Professional Elective - III	EE	3	--	--		03	50	50	100	3
4	OEC 21XX74X	Open Elective – II	Concerned Department	3	--	--		03	50	50	100	3
5	Project 21EEP75	Project Work	EE	Two contact hours /week for interaction between the faculty and students.				03	100	100	200	10
6	AEC 21EE76X	Ability Enhancement Course – VI (Online)	EE	2	--	--		02	--	--	--	2
							TOTAL	**17**	**300**	**300**	**600**	**24**

VIII SEMESTER

Sl. No	Course and Course Code	Course Title	Teaching Department	Teaching Hours /Week				Examination				Credits
				Theory Lecture	Tutorial	Practical/ Drawing	Self -Study	Duration in hours	CIE Marks	SEE Marks	Total Marks	
				L	T	P	S					
1	Seminar 21EE81	Technical Seminar	EE	One contact hour /week for interaction between the faculty and students.				--	100	--	100	01
2	INT 21INT82	Research Internship/ Industry Internship	EE	Two contact hours /week for interaction between the faculty and students.				03 (Batch wise)	100	100	200	15
								TOTAL	**200**	**100**	**300**	**16**

Professional Elective - II

21EE721	Power System Operation and Control	21EE724	Electric Vehicles Technologies
21EE722	Renewable Energy Sources	21EE725	Reactive Power Control in Electric Power Systems
21EE723	HVDC and FACTS		

Professional Elective - III

21EE731	Computer Aided Electrical Drawing	21EE734	Power System Economics
21EE732	Micro- and Nano-Scale Sensors and Transducers	21EE735	ANN With Applications to Power Systems
21EE733	Big Data Analytics in Power Systems		

Open Electives - II offered by the Department of Electrical and Electronics Engineering to other Department students

21XX741	Industrial Electrical Systems	21XX744	Electrical Power Quality
21XX742	Electric Vehicles	21XX745	Energy Conservation and Audit
21XX743	Disasters Management		

Ability Enhancement Course - VI

21EE761	Internet Of Things For Agriculture 4.0	21EE764	Power System Analysis Laboratory
21EE762	Environmental Effects of Wind Plants	21EE765	HV and Relay Laboratory (Prerequisite: 21EE644 High Voltage Engineering and 21EE721 Switchgear Protection)
21EE763	Strategic Thinking Skills		

Note: PCC: Professional Core Course, PEC: Professional Elective Courses, OEC –Open Elective Course, AEC –Ability Enhancement Courses.
L –Lecture, T – Tutorial, P- Practical / Drawing, S – Self Study Component, CIE: Continuous Internal Evaluation, SEE: Semester End Examination.

Note: VII and VIII semesters of IV year of the programme

(1) Institutions can swap VII and VIII Semester Scheme of Teaching and Examinations to accommodate research internship/ industry internship after the VI semester**.**

(2) Credits earned for the courses of VII and VIII Semester Scheme of Teaching and Examinations shall be counted against the corresponding semesters whether VII or VIII semester is completed during the beginning of IV year or later part of IV year of the programme.

PROJECT WORK (21EEP75): The objective of the Project work is

(i) To encourage independent learning and the innovative attitude of the students.
(ii) To develop interactive attitude, communication skills, organization, time management, and presentation skills.
(iii) To impart flexibility and adaptability.
(iv) To inspire team working.
(v) To expand intellectual capacity, credibility, judgment and intuition.
(vi) To adhere to punctuality, setting and meeting deadlines.
(vii) To instil responsibilities to oneself and others.
(viii) To train students to present the topic of project work in a seminar without any fear, face the audience confidently, enhance communication skills, involve in group discussion to present and exchange ideas.

CIE procedure for Project Work:

(1) Single discipline: The CIE marks shall be awarded by a committee consisting of the Head of the concerned Department and two senior faculty members of the Department, one of whom shall be the Guide.

The CIE marks awarded for the project work, shall be based on the evaluation of project work Report, project presentation skill, and question and answer session in the ratio 50:25:25. The marks awarded for the project report shall be the same for all the batch mates.

(2) Interdisciplinary: Continuous Internal Evaluation shall be group-wise at the college level with the participation of all guides of the college. Participation of external guide/s, if any, is desirable. The CIE marks awarded for the project work, shall be based on the evaluation of project work Report, project presentation skill, and question and answer session in the ratio 50:25:25. The marks awarded for the project report shall be the same for all the batch mates.

TECHNICAL SEMINAR (21EES81): The objective of the seminar is to inculcate self-learning, present the seminar topic confidently, enhance communication skill, involve in group discussion for exchange of ideas. Each student, under the guidance of a Faculty, shall choose, preferably, a recent topic of his/her interest relevant to the programme of Specialization.

(i) Carry out literature survey, systematically organize the content.
(ii) Prepare the report with own sentences, avoiding a cut and paste act.
(iii) Type the matter to acquaint with the use of Micro-soft equation and drawing tools or any such facilities.
(iv) Present the seminar topic orally and/or through PowerPoint slides.
(v) Answer the queries and involve in debate/discussion.
(**vi)** Submit a typed report with a list of references.

The participants shall take part in the discussion to foster a friendly and stimulating environment in which the students are motivated to reach high standards and become self-confident.

Evaluation Procedure:

The CIE marks for the seminar shall be awarded (based on the relevance of the topic, presentation skill, participation in the question and answer session, and quality of report) by the committee constituted for the purpose by the Head of the Department. The committee shall consist of three teachers from the department with the senior-most acting as the Chairman.

Marks distribution for CIE of the course:

Seminar Report:50 marks
Presentation skill:25 marks
Question and Answer: 25 marks.■