I : Department File Annexures

Academic Year: 2022-23

1. Vision, Mission and Program Educational Objectives, Course Outcomes and Program Outcomes

Vision

"PESCE shall be a leading institution imparting quality engineering and management education developing creative and socially responsible professionals."

Mission

- Provide state of the art infrastructure, motivate the faculty to be proficient in their field of specialization and adopt best teaching-learning practices.
- Impart engineering and managerial skills through competent and committed faculty using outcome based educational curriculum.
- Inculcate professional ethics, leadership qualities and entrepreneurial skills to meet the societal needs.
- Promote research, product development and industry-institution interaction.

Quality Policy

“Highly committed in providing quality, concurrent technical education and continuously striving to meet expectations of stake holders "

Vision

"The department strives to equip our graduates with Knowledge and Skills to contribute significantly to Information Science & Engineering and enhance quality research for the benefit of society."

Mission

The Department of Information Science & Engineering is committed to

M1: Provide students with state of art facilities and tools of Information Science & Engineering to become productive, global citizens and life-long learners.

M2: Prepare students for careers in IT industry, Higher education and Research.

M3: Inculcate leadership qualities among students to make them competent Information Science & Engineering professionals or entrepreneurs.

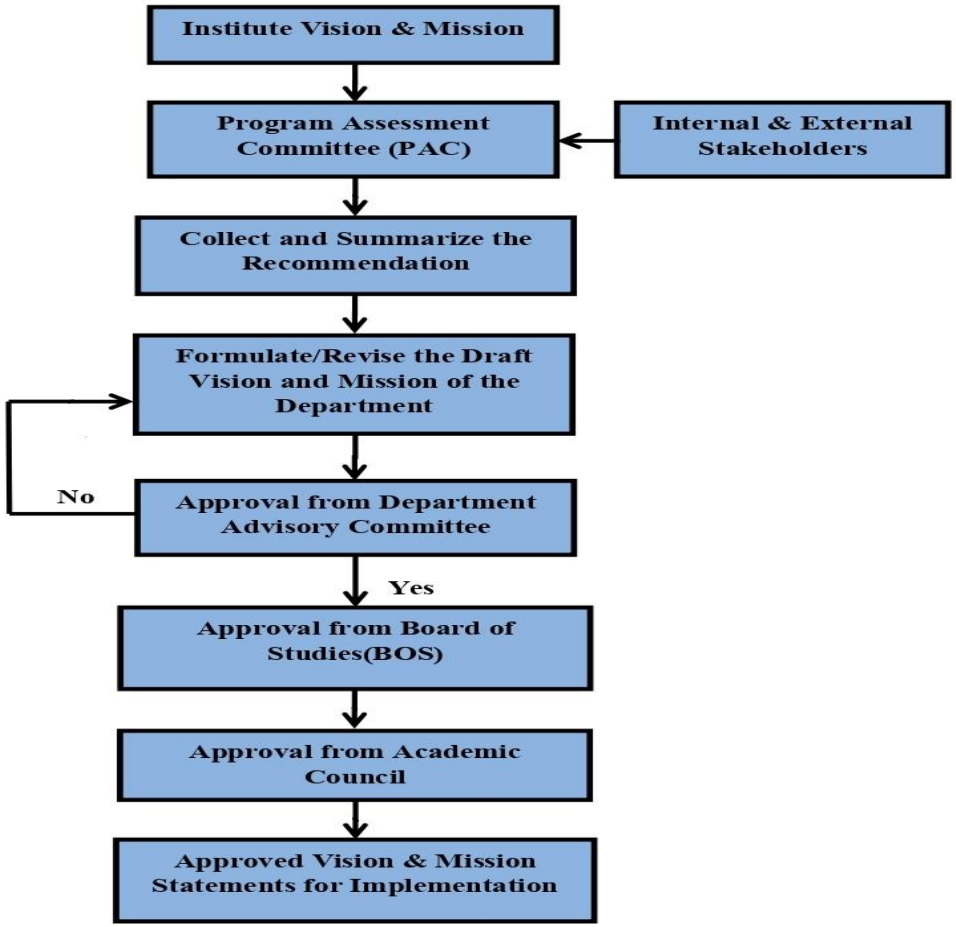
2. Program Educational Objectives (PEOs), Mapping of PEOs with Mission of the Department and its justification

Program Educational Objectives (PEOs), Mapping of PEOs with Mission of the Department and its justification

PEO Statements	M 1	M 2	M3	M n
PEO1: Establish a productive Information Science & Engineering career in industry, government or academia.	3	3	2	

PEO2: Interact with their peers in other disciplines by exhibiting professionalism and team work to contribute to the economic growth of the country.	**2**	**1**	**3**	https://docs.google.com/document/d/1ON2frokOIaZ4TCYuSWOoO1IUbJaLAjVU/edit?usp=sharing&ouid=100643837356048439976&rtpof=true&sd=true
PEO3: Promote the development of innovative systems and solutions to the problems in Information Science using hardware and software integration.	**3**	**3**	**2**	
PEO4: Pursue higher studies in Engineering, Management or Research.	**2**	**3**	**1**	

3. Process for defining the Vision and Mission of the Department andPEOs of the program



4. List of Program Outcomes (POs)

PO1. Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

PO2. Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

PO3. Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

PO4. Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

PO5. **Modern tool usage**: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

PO6. The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

PO7.Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

PO8. Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

PO9. Individual and teamwork: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

PO10. Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective

presentations, and give and receive clear instructions.

PO11. Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

PO12. Lifelong learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

B. List of Program Specific Outcomes (PSOs)

Information Science & Engineering Graduates will be able to:

PSO1. Analyze, design, develop and test the principles of System software and Database concepts for computer-based systems.

PSO2. Develop computer communication systems and applications for Information security.

PSO3. Apply the knowledge of Information Science and Engineering to solve any software and hardware related problems and to organize, manage and monitor IT Infrastructure.

List of Program Specific Outcomes (PSOs) (New for 2021 Scheme)

PSO1. Excel in the IT profession by utilizing mathematical concepts, programming paradigms and software development practices for a successful career.

PSO2. Continuously learn and develop solutions in the IT world by applying the emerging technologies in a multidisciplinary environment.

5. Course Syllabus of all Courses with Overview, Objectives and Outcomes

2021 Scheme 3rd and 4th Syllabus

1) ***https://drive.google.com/file/d/1wz6kZi407PUvn9vsmfVt-EheeIlbQGj5/view?usp=drive_link***

2018 Scheme 5th and 6th Syllabus

2) **https://drive.google.com/file/d/1msv4WpOpqhyEL01b0HThKMulja_hbh2p/view?usp=sharing**

2018 Scheme 7th and 8th Syllabus

3) **https://drive.google.com/file/d/1K32F2zYsZP6QZJp2a39wjNDGVE-QiKzq/view?usp=sharing**

6. Courses Outcomes mapping with POs & PSOs for CBCS Scheme

Courses Outcomes mapping with POs & PSOs for CBCS Scheme															
Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
P18IS31	2	2.6													
P18IS32	2.20	2.80	2.80	2.00		1.60							1.50	3.00	2.75
P18IS33	1.40	3.00	2.20		2.00				2.00				1.50	2.00	2.00
P18IS34	3.00	2.20	1.80							2.20			2.00	2.00	2.00
P18IS35	2.20	2.40	2.40	1.25									2.00		1.80
P18IS36	2.00	2.20	2.00										2.00		
P18ISL37	2.00	2.00	2.00		2.00				2.00					3.00	2.00
P18ISL38	2.00	2.00	2.00		2.00										2.00
P18IS41	2.60	2.60													
P18IS42	1.67	1.50	2.00	1.67	2.00		1.00	2.00	1.75	2.25	1.50	1.50	1.75		
P18IS43	2.80	3.00	3.00	2.20									3.00		2.00

P18IS44	2.20	2.00	2.00	1.00									1.00	1.00	1.00
P18IS45	1.80	1.00	2.00			1.00	1.00	1.00			1.50		1.00	1.00	1.00
P18IS46	2.60	2.20	2.40	1.00	2.00				2.00		2.00	2.00		2.60	
P18ISL47	1.33	1.67	1.33	1.00										1.33	
P18ISL48	2.00	2.00	2.00										2.00		
P18IS51	1.00	1.80	1.00	1.33		1.33	1.00	1.00	1.50	2.00	1.40	1.00	1.40	1.40	
P18IS52	2.40	2.00	1.80					1.80	2.00				2.00	1.20	1.20
P18IS53	2.00	1.00	1.20	1.00										1.80	1.60
P18IS54	2.00	2.60	2.20	1.60	2.00				2.00					2.00	2.00
P18IS551	2.20	2.40	3.00		1.00							2.00	3.00		
P18IS554	1.80	1.00	1.00		2.00							1.00			1.00
P18ISL56	3.00	3.00	1.00	2.00	1.75	2.00					3.00		1.50		
P18ISL57	2.00	2.75	2.75	2.00	2.75			1.00				1.00		2.00	2.00
P18ISL58	3	2.3333	3	2			2			2					
P18IS61	2.00	2.00	2.00	1.00	1.00							1.00			1.75
P18IS62	2.20	2.20	2.80	1.80						1.33	1.00		1.33		2.00
P18IS63	3.00	1.00	3.00	1.50	2.25	1.00	1.00	2.20						1.67	2.50
P18IS641	1.75	1.50	2.00	2.00	2.00	1.50								1.40	
P18IS643	2.00	2.40	2.40	1.00										2.00	1.60
P18ISL66	1.00	1.50	2.00		2.00				2.00	1.00	2.00				1.50
P18ISL67	3.00	2.00	2.00		2.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00		1.67	2.00
P18ISL68	2		2		2.5								1	1	2
P18IS71	1.80	2.00	2.00	1.00	2.00			1.00	1.00	1.00		1.00			1.00
P18IS72	3.00	2.50	2.50	2.00	3.00	2.00		2.00	2.00	2.00				2.00	2.00
P18IS73	1.75	2.00		1.33		2.00		2.00			2.00			2.00	1.25
P18IS744	1.00	1.80	1.80	1.50								2.00	2.00		
P18ISO754	2.00	2.20	2.00										2.00		
P18ISL76	2.00	1.00	1.00	1.00	2.00							1.00			1.00
P18ISL77	3.00	3.00	3.00	2.33	3.00	2.00						2.00	1.00	2.00	2.00

P18ISL78	2.00	2.00	2.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.40	1.40	1.60		1.60
P18IS81	1.60	1.50	1.50	2.67	2.75	2.00						2.00			1.00
P18IS821	1.67	1.67	2.33	2.00		2.00		2.00			2.00	2.00		1.00	1.00
P18IS83	2.50	2.00	2.50	1.00	1.50	1.00	1.00	2.20	2.20	2.80	2.20	1.20	2.00		3.00
P18IS84	2.00	2.00	2.50	2.00	2.50	1.00	1.00	2.40	2.75	2.50	2.25	1.80	2.00	1.00	2.00

7. Course attainment of all Courses (CIE & SEE) for the current academic year

8. PO & PSO Attainment (Direct, Indirect & Final) for the academic year 2022-23

	PO & PSO Attainment (Direct, Indirect & Final) for the academic year 2022-23															
Course	**Attainment %**	**PO 1**	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**	**PO 9**	**PO10**	**PO11**	**PO12**	**PSO 1**	**PSO 2**	**PSO 3**
IS31[E]		2.00	2.50													
IS31[A]	**79.36**	1.59	1.98													
IS32 [E]		2.20	2.80	2.80	2.00		1.60							1.50	3.00	2.75
IS32 [A]	**64.53**	1.42	1.81	1.81	1.29		1.03							0.97	1.94	1.81
IS33 [E]		1.40	3.00	2.20		2.00				2.00				1.50	2.00	2.00
IS33 [A]	**66.02**	0.92	1.98	1.45		1.32				1.32				0.99	1.32	1.32
IS34 [E]		3.00	2.20	1.80							2.20			2.00	2.00	2.00
IS34 [A]	**61.07**	1.83	1.34	1.10							1.34			1.22	1.22	1.22
IS35 [E]		2.20	2.40	2.40	1.25									2.00		1.80
IS35 [A]	**53.08**	1.17	1.27	1.27	0.66									1.06		0.96
IS36 [E]		2.00	2.20	2.00										2.00		

IS36 [A]	**46.51**	0.93	1.02	0.93										0.93		
ISL37[E]		2.00	2.00	2.00		2.00				2.00					3.00	2.00
ISL37[A]	**64.29**	1.29	1.29	1.29		1.29				1.29					1.93	1.29
ISL38[E]		2.00	2.00	2.00		2.00										2.00
ISL38[A]	**83.80**	1.68	1.68	1.68		1.68										1.68
IS41[E]		2.00	2.50													
IS41[A]	**82.53**	1.65	2.06													
IS42 [E]		1.67	1.50	2.00	1.67	2.00		1.00	2.00	1.75	2.25	1.50	1.50	1.75		
IS42 [A]	**63.32**	1.06	0.95	1.27	1.06	1.27		0.63	1.27	1.11	1.42	0.95	0.95	1.11		
IS43 [E]		2.80	3.00	3.00	2.20									3.00		2.00
IS43 [A]	68.65	1.92	2.06	2.06	1.51									2.06		1.37
IS44 [E]		2.20	2.00	2.00	1.00									1.00	1.00	1.00
IS44 [A]	**54.46**	1.20	1.09	1.09	0.54									0.54	0.54	0.54
IS45 [E]		1.80	1.00	2.00			1.00	1.00	1.00			1.50		1.00	1.00	1.00
IS45 [A]	**82.88**	1.49	0.83	1.66			0.83	0.83	0.83			1.24		0.83	0.83	0.83
IS46 [E]		2.60	2.20	2.40	1.00	2.00				2.00		2.00	2.00		2.60	
IS46 [A]	**72.27**	1.88	1.59	1.73	0.72	1.45				1.45		1.45	1.45		1.88	
ISL47[E]		1.33	1.67	1.33	1.00										1.33	
ISL47[A]	**64.08**	0.85	1.07	0.85	0.64										0.85	
ISL48[E]		2.00	2.00	2.00										2.00		
ISL48[A]	**49.30**	0.99	0.99	0.99										0.99		
IS51 [E]		1.00	1.80	1.00	1.33		1.33	1.00	1.00	1.50	2.00	1.40	1.00	1.40	1.40	
IS51 [A]	**61.61**	0.62	1.11	0.62	0.82		0.82	0.62	0.62	0.92	1.23	0.86	0.62	0.86	0.86	
IS52 [E]		2.40	2.00	1.80					1.80	2.00				2.00	1.20	1.20
IS52 [A]	**54.06**	1.30	1.08	0.97					0.97	1.08				1.08	0.65	0.65
IS53 [E]		2.00	1.00	1.20	1.00										1.80	1.60
IS53 [A]	**58.33**	1.17	0.58	0.70	0.58										1.05	0.93
IS54 [E]		2.00	2.60	2.20	1.60	2.00				2.00					2.00	2.00
IS54 [A]	**58.15**	1.16	1.51	1.28	0.93	1.16				1.16					1.16	1.16
IS551 [E]		2.20	2.40	3.00		1.00							2.00	3.00		

IS551 [A]	**56.11**	1.23	1.35	1.68		0.56							1.12	1.68		
IS554 [E]		1.80	1.00	1.00		2.00							1.00			1.00
IS554 [A]	**68.53**	1.23	0.69	0.69		1.37							0.69			0.69
ISL56[E]		3.00	3.00	1.00	2.00	1.75	2.00					3.00		1.50		
ISL56[A]	**87.86**	2.64	2.64	0.88	1.76	1.54	1.76					2.64		1.32		
ISL57[E]		2.00	2.75	2.75	2.00	2.75			1.00				1.00		2.00	2.00
ISL57[A]	**93.57**	1.87	2.57	2.57	1.87	2.57			0.94				0.94		1.87	1.87
ISL58[E]		3.00	2.33	3.00	2.00			2.00			2.00					
ISL58[A]	**87.14**	2.61	2.03	2.61	1.74			1.74			1.74					
IS61 [E]		2.00	2.00	2.00	1.00	1.00							1.00			1.75
IS61 [A]	**66.37**	1.33	1.33	1.33	0.66	0.66							0.66			1.16
IS62 [E]		2.20	2.20	2.80	1.80						1.33	1.00		1.33		2.00
IS62 [A]	**66.92**	1.47	1.47	1.87	1.20						0.89	0.67		0.89		1.47
IS63 [E]		3.00	1.00	3.00	1.50	2.25	1.00	1.00	2.20						1.67	2.50
IS63 [A]	**55.32**	1.66	0.55	1.66	0.83	1.24	0.55	0.55	1.22						0.92	1.38
IS643 [E]		2.00	2.40	2.40	1.00										2.00	1.60
IS643 [A]	**76.72**	1.53	1.84	1.84	0.77										1.53	1.23
IS644 [E]		2.00	1.75	1.00									1.00			1.00
IS644 [A]	**52.58**	1.05	0.95	0.53									0.53			0.53
ISL66[E]		1.00	1.50	2.00		2.00				2.00	1.00	2.00				1.50
ISL66[A]	**92.14**	0.92	1.38	1.84		1.84				1.84	0.92	1.84				1.38
ISL67[E]		3.00	2.00	2.00		2.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00		1.67	2.00
ISL67[A]	**94.29**	2.83	1.89	1.89		1.89	0.94	0.94	1.89	1.89	1.89	0.94	0.94		1.57	1.89
ISL68[E]		2.00		2.00		2.50								1.00	1.00	2.00
ISL68[A]	**96.43**	1.93		1.93		2.41								0.96	0.96	1.93
IS71 [E]		1.80	1.60	2.00	1.00	2.00	2.00		1.00	1.00	1.00		1.00		1.00	1.00
IS71 [A]	**61.27**	1.55	1.38	1.72	0.86	1.72	1.72		0.86	0.86	0.86		0.86		0.86	0.86
IS72 [E]		3.00	2.50	2.50	2.00	3.00	2.00		2.00	2.00	2.00				2.00	2.00
IS72 [A]	**53.03**	1.59	1.33	1.33	1.06	1.59	1.06		1.06	1.06	1.06				1.06	1.06
IS73 [E]		1.75	2.00		1.33		2.00		2.00			2.00			2.00	1.25

IS73 [A]	**80.21**	1.40	1.60		1.07		1.60		1.60			1.60			1.60	1.00
IS742[E]		3.00	2.50	2.50	2.00	3.00	2.00		2.00	2.00	2.00				2.00	2.00
IS742 [A]	**67.21**	2.02	1.68	1.68	1.34	2.02	1.34		1.34	1.34	1.34				1.34	1.34
IS743 [E]		2.20	1.60	1.40	1.40		1.40		2.00					2.00	2.00	1.00
IS743 [A]	**75.93**	1.67	1.21	1.06	1.06		1.06		1.52					1.52	1.52	0.76
ISL76[E]		2.00	1.00	1.00	1.00	2.00							1.00			1.00
ISL76[A]	**97.10**	1.94	0.97	0.97	0.97	1.94							0.97			0.97
ISL77[E]		3.00	3.00	3.00	2.33	3.00	2.00						2.00	1.00	2.00	2.00
ISL77[A]	**92.03**	2.76	2.76	2.76	2.15	2.76	1.84						1.84	0.92	1.84	1.84
ISL78[E]		2.00	2.00	2.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.40	1.40	1.60		1.60
ISL78[A]	**99.29**	1.99	1.99	1.99	0.99	0.99	0.99	0.99	1.99	1.99	1.99	1.39	1.39	1.59		1.59
IS81 [E]		1.60	1.50	1.50	2.67	2.75	2.00						2.00			1.00
IS81 [A]	**54.43**	0.87	0.82	0.82	1.45	1.50	1.09						1.09			0.54
IS821 [E]		1.67	1.67	2.33	2.00		2.00		2.00			2.00	2.00		1.00	1.00
IS821 [A]	**55.05**	0.92	0.92	1.28	1.10		1.10		1.10			1.10	1.10		0.55	0.55
IS83 [E]		2.50	2.00	2.50	1.00	1.50	1.00	1.00	2.20	2.20	2.80	2.20	1.20	2.00		3.00
IS83 [A]	**99.27**	2.48	1.99	2.48	0.99	1.49	0.99	0.99	2.18	2.18	2.78	2.18	1.19	1.99		2.98
IS84 [E]		2.00	2.00	2.50	2.00	2.50	1.00	1.00	2.40	2.75	2.50	2.25	1.80	2.00	1.00	2.00
IS84 [A]	**99.95**	2.00	2.00	2.50	2.00	2.50	1.00	1.00	2.40	2.75	2.50	2.25	1.80	2.00	1.00	2.00
Direct Attainment		**1.55**	**1.48**	**1.49**	**1.12**	**1.56**	**1.15**	**0.93**	**1.40**	**1.51**	**1.57**	**1.46**	**1.08**	**1.24**	**1.25**	**1.25**

Survey	**PO1**	**PO2**	**PO3**	**PO4**	**PO5**	**PO6**	**PO7**	**PO8**	**PO9**	**PO10**	**PO11**	**PO12**	**PSO1**	**PSO2**
Program Exit Survey	2.14	2.05	1.95	1.54	2.02	1.52	1.10	1.80	1.95	1.93	1.76	1.41	1.77	1.78
Alumni Survey	1.61	1.94	2.08	1.54	1.92	1.52	1.10	1.80	1.95	1.93	1.76	1.41	1.68	1.78
Parent Survey	2.14	1.85	1.88	1.39	1.92	1.52	1.05	1.63	1.86	1.75	1.59	1.27	1.60	1.61
Indirect Attainment	1.96	1.95	1.97	1.49	1.96	1.52	1.08	1.74	1.92	1.87	1.70	1.36	1.68	1.72

9. Indirect assessment formats-collection & analysis from all stakeholders

1) **https://drive.google.com/drive/folders/1NLPCKYwolRNBjzw4xmFuOa0rjbjIBKE1?usp=sharing**

10. Assessment of POs & PSOs for the year 2022-23 (Continuous Improvement)

Assessment of POs & PSOs for the year 2022-23 (Continuous Improvement)			
POs & PSOs	**Target Level**	**Attainment Level**	**Observations**
PO1: Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.	1.50	1.63	• The target is attained. In some courses the PO attainment is lower than the target. • In order to assist students comprehend the fundamentals of programming, a practical approach to teaching was initially devised. • Students in the course P18IS33 lack in programming skills necessary to apply principles of data structures. • Writing assembly-level programs (RISC & CISC) in the course P18IS35 requires memorization of instruction sets. • In P18IS52, students have difficulties in understanding the fundamental ideas of operating systems.
Action Plan: 1) To focus on more programming concepts.			

2) Workshops will be organized for enhancing the knowledge of students. 3) Course syllabus will be revised for few courses.			
PO2: Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.	1.43	1.57	• Attainment is slightly higher than the target. • Interpretation of logic in the context of digital design was found to be having gaps. • Writing and analyzing assembly language program using the subroutine are found to be less appreciated. • Students find it difficult to solve problems on scheduling algorithms.
Action Plan: 1) Attainment can be improvised by adopting illustrative way in solving problems. 2) Encourage students to practice more assembly language programs using subroutines. 3) Students will be insisted to solve more scheduling problems.			
PO3: Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.	1.46	1.59	• Overall PO attainment is higher than the target. • The curriculum lack in addressing creative design thinking and impact on public health and safety. • Students lack to apply the appropriate data structures in different applications (P18IS33).
Action Plan: 1) Planning to introduce new course related to design thinking in upcoming scheme. 2) Organizing talks/visits for the students to create awareness about public health, safety and environmental hazard. 3) To solve problems on applications related to the use of data structures.			

PO4: Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.	1.08	1.19	• PO attainment is higher than the target.
Action Plan: 1) Students were advised to refer IEEE journal articles and Scopus indexed journals to enhance their awareness of research, data analysis, and interpretation. 2) Students will be motivated to attend various seminars /workshop/technical talks conducted outside the institution. 3) Students will be encouraged to publish their papers in conferences /journals to improve the writing skills. 4) Students will be encouraged to attend National and international conferences.			
PO5: Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.	1.41	1.64	• Target is achieved. • Students are less exposed to modern tools.
Action Plan: 1) Laboratory sessions will enable the students to learn more modern tools with hands on sessions. 2) Students will be insisted to use Draw.io tool in DBMS course. 3) Students will be insisted to use JFLAP tool in Theory of Computation course. 4) Students will be advised to take webinars and seminars regarding using modern tools.			
PO6: The engineer and society: Apply reasoning informed by the contextual	1.06	1.23	• Attainment is higher than the target.

knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.			• Minimal number of projects is carried to address societal, health and safety issues. • Few students are involved in activities of professional bodies.
Action Plan: 1) Interaction with the professional bodies like IEEE/ISTE to be enhanced by arranging expert talks for creating more awareness among the students about professional engineering practices. 2) Students are motivated to join professional organization like IEEE, ISTE etc. 3) Students will be encourage to carry out inter domain projects so that they would realize the importance of a project involving society, safety, health, and the legalities.			
PO7: Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.	0.77	0.96	• PO attainment is higher than the target.
Action Plan: 1) Students will encourage indulging in projects where environmental issues can be addressed. 2) Encouraging students to witness and realize the impact of professional solutions in terms of sustainability and environmental effects through AICTE activity points.			
PO8: Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.	1.26	1.47	• Attainment is higher than the target. • Aspects that will provide a learning platform for students to take ethical practices needs to be improved.

<table>
<tr><td colspan="4">Action Plan:
1) To ensure professional ethics, project will be rigorously scrutinize, code reviews will be carried out, and a plagiarism check will be undertaken.
2) The soft skill training provided by the training and placement cell to enhance professional and ethical values.
3) Student will be disciplined for unethical practices.</td></tr>
<tr><td>PO9: Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.</td><td>1.37</td><td>1.60</td><td>• Attainment is higher than the target.
• Individual and team work was observed during project work and extracurricular activities.</td></tr>
<tr><td colspan="4">Action Plan:
1) Organizing interaction of alumni with students, to share their experience.
2) Students will be motivated to participate in inter/intra college project exhibitions.
3) Department encourages students to conduct/participate technical events.</td></tr>
<tr><td>PO10: Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.</td><td>1.35</td><td>1.63</td><td>• Attainment is higher than the target.
• Communication skill of students needs to be Improvised.</td></tr>
<tr><td colspan="4">Action Plan:
1) Plan to organize/attend the different events related to communication skills.
2) The communication, presentation and report writing skills are to be further improved among the students by motivating them to participate in paper presentation.</td></tr>
</table>

PO11: Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.	1.23	1.51	• Attainment is higher than the target.
Action Plan: 1) Students will be encouraged to submit project proposal for funding agencies. 2) Planned to organize more industrial visits to enable the students to understand the importance of leadership qualities and project management.			
PO12: Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.	0.98	1.14	• Attainment is higher than the target.
Action Plan: 1) Students will be encouraged to take up online courses which would help them in continuous learning. 2) Students will be motivated to take up more MOOC courses throughout the program to equip themselves in strengthening their skills.			
PSO 1: Analyze, design, develop and test the principles of System software and Database concepts for Computer-based systems.	1.24	1.33	• Though the overall target is attained, in few courses the PO attainment is lower than the target. • In the course P18IS46 students lack in writing and analyzing assembly code. • In the course P18IS33 students find it difficult to apply appropriate data structures concepts to a

			given problem. • Topics related to emerging technologies need to be increased.
Action Plan: 1) Planned to conduct tutorials to improvise programming skills. 2) Students will be motivated to solve more problems on applications of data structures. 3) The students will be assisted to take up MOOC courses related to emerging Technologies.			
PSO2: Develop computer communication systems and applications for Information security.	1.24	1.34	• Attainment is slightly higher than the target. • Students lack in solving problems related to networking. • Students found difficult to understand the concept of Cryptography and IDS.
Action Plan: 1) Students to be encouraged to solve more problems on networking. 2) Planned to organize workshops/technical talks related to applications of information security.			
PSO3: Apply the knowledge of Information Science and Engineering to solve any software and Hardware related problems and to organize, manage and monitor IT Infrastructure.	1.18	1.32	• Attainment is slightly higher than the target. • Minimal number of multidisciplinary projects.
Action Plan: 1) Encourage the students to take multidisciplinary projects.			

11. Content Delivery details beyond the syllabus for the attainment of POs and PSOs during 2022-23

Content Delivery details beyond the syllabus for the attainment of POs and PSOs during 2022-23						
SI. No.	**GAP**	**Action Taken**	**Date/Month/Year**	**Resource Person with designation**	**% of students**	**Relevance to POs, PSOs**
1.	Students found it difficult in Programming of Mobile App Development	Organized 3 days workshop on Mobile app Development	27/04/2023 to 29/04/2023	Mr. Nithin Kumar, Asst. Prof. and Mrs. Usha C S, Asst. Prof.	100% of 6th sem Students	PO1, PO3, PO5, PSO1, PSO2, PSO3
2.	Students have lack of knowledge of software testing tool	Organized 1 day workshop on software testing tools	14/01/2023	Mrs. Pavithra Nagaraju	100 % of 6th sem students	PO5

12. Vision, Mission, PEOs, Pos and COs are published and disseminated among stakeholders.

The Vision and Mission of the Department of Information Science and Engineering, as well as the Program Educational Objectives of B.E- Information Science and Engineering, are disseminated among various stakeholders and are published at all prominent places such as:

- Institute website
- Syllabus books

- Department notice board
- HOD's chamber
- Department Office room
- Faculty rooms
- Classrooms
- Laboratories and
- Department Library.

The Vision, Mission and PEOs are disseminated to the internal Stake holders (Management, Faculty Members, Technical staff and Students) and External Stake Holders (Parents, Employers, Industry and Alumni) through continuous interaction.

Awareness about Vision, Mission and PEOs is created among stakeholders through the following measures:

- ❖ The vision and mission and PEOs statements are explicitly communicated to the newly enrolled students and the parents during orientation and induction program.
- ❖ The HoD elaborates the statements to the external stakeholders during the Board of Studies (BoS) meeting, Department Advisory Committee (DAC) and Alumni meeting.
- ❖ The vision and mission and PEOs statements are uploaded to the website for the employers' reference.

13. About the department

Information science is an interdisciplinary field primarily concerned with the analysis, collection, classification, manipulation, storage, retrieval, movement, dissemination, and protection of information. Information science is one of the important branches of PESCE, Mandya. The Department of Information science and Engineering takes pride in producing quality engineers over the past 23 years. The

credit for all the flowery results goes to the highly motivating staff, from which all students draw inspiration. The department got NBA accreditation thrice i.e 2008, 2017 and 2023 respectively.

The Department was started in the year 2000. The present intake of the undergraduate program is 60. The strength of an IS major lies in his/her ability to apply the knowledge of information systems and technology to help organizations compete more successfully in the marketplace or to streamline current operations. The focus of the department is to provide students with in-depth knowledge in the field of computer and information technology through the following two academic programs. This undergraduate curriculum emphasizes on theoretical and practical aspects of information science. The curriculum is designed to meet industry standard and cope with the fast changing technology. Extension lectures and industrial visits are organized frequently to provide an overview on recent and current trends of information technology. Apart from curriculum, the students are encouraged to participate in research projects, technical events, cultural activities and sports. The department has a strong coverage of alumni network to support curriculum development and career guidance for ongoing student batches. Our department faculty remains a constant source of inspiration to students in order to achieve outstanding results and excellent placement records.

The department has achieved good Placement, conducted International /National Conferences and other sponsored short-term courses, National seminars and symposia. Students from the department are recruited by top IT companies. The presence of our alumni at various organizations and reputed universities across the globe has helped our graduates to plan their future endeavors.

II : CURRICULAR ASPECTS

Internal Quality Assurance Cell (IQAC)

1. Process for designing the program curriculum

Programme Curriculum Design Process:

The Programme curriculum is designed based on curriculum guidelines provided by AICTE, UGC and VTU. It is aligned with well-defined Programme Educational Objectives (PEOs), Programme Outcomes (POs) and Programme Specific Outcomes (PSOs). The curriculum is a judicious mix of basic, intermediate and advanced topics, thereby allowing the students to acquire the required domain knowledge, skills and attitude to develop as effective engineers. Emerging technology development and the need of the software industry are also considered while designing the curriculum. The department frames its program curriculum based on the vision and mission of the institution and the department. The curriculum is revised to help students to be industry ready. Flow chart for design/ revision of Program Curriculum is shown in Figure 2.1.

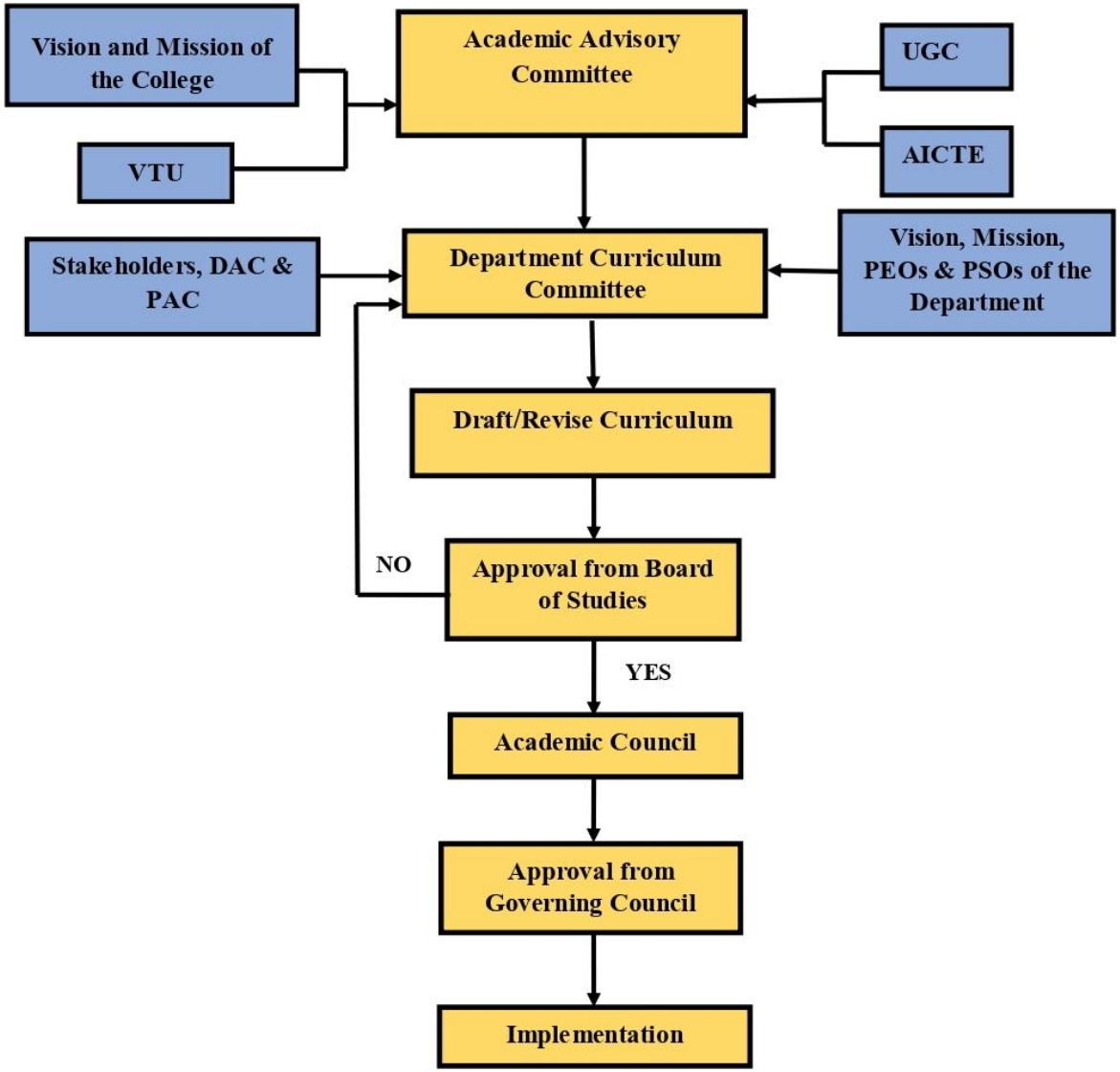


Figure 2.1: Process for Designing Programme Curriculum

Design Process:

The process flow for Designing Programme Curriculum is as follows:

- Based on Institute mission &vision and guidelines from AICTE, UGC and VTU Academic Advisory Committee (AAC) formulate the Curriculum broadly following the VTU Autonomy guidelines for recommended courses such as Humanities and Social Sciences, Basic Sciences, Engineering Sciences, Professional Cores, Professional Electives, Open Electives, Project Work and Internships.
- The scheme of study and the credit distribution is defined at the institution level. The curriculum structure, the course code, course title, the number of contact hours (Lecture: Tutorial: Practical) and the number of credits for the Programme is given by AAC.
- The Department Curriculum Committee discusses the outline of the curriculum given by Academic Advisory Committee and identifies the courses.
- Course Coordinators define the Course Outcomes (COs) suitably so that COs contributes significantly to the attainment of POs and PSOs. The syllabus of various courses are framed.
- A mapping of the CO – PO/PSO matrix is created for all the courses to ensure that the scheme of study meets all the POs/PSOs.
- The Course Coordinators presents the draft syllabus in Department Curriculum committee and the necessary changes are incorporated.
- The curriculum is submitted in the Board of Studies (BOS) meeting. The recommendations and modifications suggested by BOS members are incorporated in curriculum and forwarded to Academic Council.
- After the approval from Academic Council (AC) and Governing Council (GC) the curriculum is finalized. The curriculum is implemented and the impact will be considered for further implementations.

Academic Advisory committee (AAC)

Academic Advisory committee comprises Principal, Dean (Academic), COE and all head of the departments. The Heads of the department are the chairperson of the BoS of respective department. The Principal is the chairperson of the committee (AAC).

Roles of AAC:

- To Initiate the Curriculum design process.
- To collect the feedback from the Academic Council, stake holders like industries, Alumni and employers regarding the existing curriculum, its deficiency and also the requirement from various industries. The Academic Dean collects feedback from Placement Officer regarding the strengths and weakness of students observed during Campus selection process.
- The Dean will submit a report to the Principal about the present curriculum status of each department, its deficiency, feedback from the industry and also the requirement of Industry.
- With the approval of the Principal, Dean calls the meeting of Chairperson of the Board of studies.
- Conducts the review of existing syllabus and discuss the feedback collected from the various stake holders. Based on the feedback report, instruct the HoDs to review the curriculum keeping the Vision, Mission of the Institute and department and also PEOs and PSOs of the department.
- AAC will ascertain that the curriculum design from each department shall adhere to the guidelines given by UGC, AICTE and affiliated university with respect to Outcome Based Education.

Department Curriculum Committee (DCC):

The major objective of this committee is to support the department in designing the curriculum. The committee will comprise of all faculty members of the department with Head of the department as chairperson.

- Committee proposes courses according to industry requirement.
- Frame courses to be included in the curriculum.
- COs and course articulation matrix for each course is reviewed and approved.

Program Assessment Committee (PAC):

PAC committee is responsible for smooth conduction of programme chaired by Head of the department with coordinator and faculty members of different cadres.

- Plan and design different assessment tools to attain POs and PSOs.
- Review the attainment for each course.
- Necessary actions will be recommended for improvisation of attainment of COs, PSOs and POs.

Department Advisory Committee (DAC):

DAC committee constitutes HOD, senior faculties and two experts from peer academic institutes. The main aim of the committee is to discuss the academic activities and give suggestions to improve teaching learning process.

- Provide inputs for the academic activities.
- Review the curriculum.

Board of Studies Committee (BoS):

The Board of Studies (BoS) in ISE is responsible for designing the curriculum. The composition of the Board includes Head of the Department as the Chairman, Department faculty members in various cadres on rotation (internal members), University nominee, Academic experts and Industry representatives nominated by the Academic Council.

- Review the draft syllabus submitted by Department Curriculum Committee.
- Ensure that all norms and regulations pertaining to UG program are strictly followed.
- Suggest the changes or modifications to be made into the existing courses.
- Suggest introducing of new core and elective courses in the syllabus.

2. Structure of the Curriculum

Structure of the Curriculum						
Course Code	**Course Title**	**Total Number of contact hours**				**Credits**
		Lecture (L)	**Tutorial (T)**	**Practical #(P)**	**Total Hours**	
P18MA11	Engineering Mathematics - I	4	0	0	4	4
P18PH12	Engineering Physics	4	0	0	4	4
P18CV13	Engineering Mechanics	3	0	0	3	3
P18ME14	Elements of Mechanical Engineering	3	0	0	3	3
P18EE15	Basic Electrical Engineering	3	0	0	3	3
P18MEL16	Basic Mechanical Engineering Science Laboratory	0	0	3	3	1.5
P18PHL17	Engineering Physics Laboratory	0	0	3	3	1.5
P18HU18	Effective Communication Development (ECD)	0	2	0	2	0
P18HM19	Indian Constitution, Human Rights & Professional Ethics (ICHRPE)	2	0	0	2	0
P18MA21	Engineering Mathematics-II	4	0	0	4	4
P18CH22	Engineering Chemistry	4	0	0	4	4
P18CS23	C & Basics of Python Programming	3	0	0	3	3
P18MED24	Computer Aided Engineering Drawing	1	0	4	5	3
P18EC25	Basic Electronics	3	0	0	3	3
P18CSL26	C & Basics of Python Programming Laboratory	0	0	3	3	1.5
P18CHL27	Engineering Chemistry Laboratory	0	0	3	3	1.5
P18HU28	Professional Communication Development	0	2	0	2	1
P18EV29	Environmental Studies	2	0	0	2	0
P18HM210	Language(Kannada)	2	0	0	2	1
P18MA31	Transform Calculus, Fourier's & Numerical Techniques	4	0	0	4	4

P18IS32	Digital Design	3	0	0	3	3
P18IS33	Data Structures & Algorithms	3	0	0	3	3
P18IS34	Discrete Mathematics & Applications	3	0	0	3	3
P18IS35	Computer Organization & Architecture	3	0	0	3	3
P18IS36	OOPS with Java(FC-I)	2	2	0	4	3
P18ISL37	Data Structures Lab	0	0	3	3	1.5
P18ISL38	Digital Design Lab	0	0	3	3	1.5
P18HU39	Aptitude and reasoning Development – Basic BEGINEER(ARDB)	2	0	0	2	0
P18HUDIP310	Comprehensive Communication Development(CCD)	2	0	0	2	[2]
P18HUDIP311	Indian Constitution, Human Rights and Professional Ethics[ICHRPE]	2	0	0	2	0
P18MADIP31	Additional Mathematics- I	4	0	0	4	0
P18MA41	Complex Analysis, Statistics, Probability and Numerical Techniques	4	0	0	4	4
P18IS42	Data Base Management System	3	0	0	3	3
P18IS43	Finite automata & formal languages	3	0	0	3	3
P18IS44	Design And Analysis of Algorithms	3	0	0	3	3
P18IS45	Software Engineering	3	0	0	3	3
P18IS46	AVR Micro Controller(FC-II)	2	2	0	4	3
P18ISL47	Design and Analysis of Algorithms Lab	0	0	3	3	1.5
P18ISL48	Java Programming Lab	0	0	3	3	1.5
P18HU49	Aptitude and reasoning Development – INTERMIDIATE (ARDI)	2	0	0	2	1
P18EVDIP410	Environmental Studies	2	0	0	2	0
P18MADIP41	Additional Maths –II	4	0	0	4	0
P18IS51	Management & Entrepreneurship for IT Industry	4	0	0	4	4
P18IS52	Operating System	4	0	0	4	4
P18IS53	Communication Networks	4	0	0	4	4
P18IS54	Data Mining	4	0	0	4	4

P18IS55X	Professional Elective – I	2	2	0	4	3
P18ISL56	Data Base Management Systems Lab	0	0	3	3	1.5
P18ISL57	Data Mining Lab	0	0	3	3	1.5
P18ISL58	Skill Oriented Lab-I [Python Lab]	0	0	2	2	1
P18IS591	Technical Skills [Python Programming]	0	2	0	2	1
P18HU510	Aptitude and Reasoning Development – ADVANCED. (ARDA)	0	2	0	2	1
P18IS61	Machine Learning	4	0	0	4	4
P18IS62	Object Oriented System Development	4	0	0	4	4
P18IS63	Internet of things	4	0	0	4	4
P18IS64X	Professional Elective-II	2	2	0	4	3
P18ISO65X	Open Elective-I	3	0	0	3	3
P18ISL66	Machine Learning Lab	0	0	3	3	1.5
P18ISL67	IOT Laboratory	0	0	3	3	1.5
P18ISL68	Skill Oriented Lab-II[Mobile Application Development Lab]	0	0	2	2	1
P18HU691	Technical Skill –II[Internals of C Programming]	0	2	0	2	1
P18IS71	Data Science	4	0	0	4	4
P18IS72	Information & Network Security	4	0	0	4	4
P18IS73	Cyber Security	4	0	0	4	4
P18IS74X	Professional Elective-III	2	1	0	3	3
P18ISO75X	Open Elective-II	3	0	0	3	3
P18ISL76	Data Science Laboratory	0	0	3	3	1.5
P18ISL77	Devops Laboratory	0	0	3	3	1.5
P18IS78	Project Work Phase-I & Project Seminar	0	0	4	4	2
P18IS81	Big Data	4	0	0	4	4
P18IS82X	Professional Elective-IV	2	1	0	3	3
P18IS83	Internship	0	0	0	0	2
P18IS84	Project Work Phase-II	0	0	0	0	6
P18IS85	Self-study course & Seminar	0	0	4	4	2
Total						175

3. State the Components of the Curriculum

The Institute has constituted a committee to design a uniform scheme of teaching for the UG curriculum. The main focus of this committee is to design a scheme so that the curriculum is a balanced structure and appropriate for the UG Programmes. The committee has designed 2018 scheme of teaching for the UG curriculum from the academic year 2018-19 onwards as per the guidelines of AICTE and VTU. The changes are approved by the BOS Committee and further by the Academic Council.

The curriculum B.E. (ISE) has been designed with the following major components and a cohesive set of courses are mapped to the following major components:

1. Basic Sciences
2. Engineering Sciences
3. Humanities and Social Sciences
4. Program Core – Theory and Labs
5. Program Electives
6. Open Electives
7. Project work - Mini project and Major Project
8. Internship / Seminar
9. Self-study Course& Seminar

The program curriculum grouping based on course components for 2018 scheme and the list of courses corresponding to the various course components are given in the following Table 2.2

Table 2.2. Programme curriculum grouping based on course Components of 2018 Scheme

Basic Sciences				
Sl. No.	**Sub Code**	**Subject**	**Contact Hrs.**	**Credits**
1	P18MA11	Engineering Mathematics-I	4	4
2	P18PH12	Engineering Physics	4	4
3	P18PHL17	Engineering Physics Laboratory	3	1.5
4	P18MA21	Engineering Mathematics-II	4	4
5	P18CH22	Engineering Chemistry	4	4
6	P18CHL27	Engineering Chemistry Laboratory	3	1.5
7	P18MA31	Engineering Mathematics-III	4	4
8	P18MA41	Engineering Mathematics-IV	4	4
		Total credits	30	27
Engineering Science				
Sl. No.	**Sub Code**	**Subject**	**Contact Hrs.**	**Credits**
1	P18CV13	Engineering Mechanics	3	3
2	P18ME14	Elements of Mechanical Engineering	3	3
3	P18EE15	Basic Electrical Engineering	3	3
4	P18MEL16	Basic Mechanical Engineering Science Laboratory	3	1.5
5	P18CS23	C & Basics of Python Programming	3	3
6	P18MED24	Computer Aided Engineering Drawing	5	3
7	P18EC25	Basic Electronics	3	3
8	P18CSL26	C and Basics of Python programming Laboratory	3	1.5
		Total credits	**26**	**21**

Humanities and Social Sciences				
Sl. No.	**Sub Code**	**Subject**	**Contact Hrs.**	**Credits**
1	P18HU18	Effective Communication Development(ECD)	2	0
2	P18HM19	Indian Constitution, Human Rights & Professional Ethics(ICHRPE)	2	0
3	P18HU28	Professional Communication Development(PCD)	2	1
4	P18EV29	Environmental Studies	2	0
5	P18HM210	Language (Kannada)	2	1
6	P18HUDIP310	Comprehensive Communication Development(CCD)	2	[2]
7	P18HU39	Aptitude and Reasoning Development-BEGINNER(ARDB)	2	0
8	P18HUDIP311	Indian Constitution, Human Rights & Professional Ethics	2	0
9	P18HU49	Aptitude and Reasoning Development-Intermediate (ARDI)	2	1
10	P18EVDIP410	* Environmental Studies	2	0
11	P18HU510	Aptitude and Reasoning Development – Advanced (ARDI)	2	1
12	P18IS51	Management & Entrepreneurship	4	4
		Total credits	26	08

Program Core [Theory and Labs]				
Sl. No.	**Sub Code**	**Subject**	**Contact Hrs.**	**Credits**
1	P18IS32	Digital Design	3	3
2	P18IS33	Data Structures & Algorithms	3	3
3	P18IS34	Discrete Mathematics & Applications	3	3
4	P18IS35	Computer Organization & Architecture	3	3
5	P18IS36	OOPS with Java	4	3
6	P18IS42	Data Base Management System	3	3
7	P18IS43	Finite Automata & Formal Languages	3	3
8	P18IS44	Design And Analysis of Algorithms	3	3
9	P18IS45	Software Engineering	3	3
10	P18IS46	AVR Micro Controller	4	3
11	P18IS52	Operating System	4	4
12	P18IS53	Communication Networks	4	4
13	P18IS54	Data Mining	4	4
14	P18IS59X	Technical Skills -I	2	1
15	P18IS61	Machine Learning	4	4
16	P18IS62	Object Oriented System Development	4	4
17	P18IS63	Internet Of Things	4	4
18	P18HU69X	Technical Skill –II	2	1
19	P18IS71	Data Science	4	4
20	P18IS72	Information & Network Security	4	4
21	P18IS73	Cyber Security	4	4
22	P18IS81	Big Data	4	4
23	P18ISL37	Data Structures Lab	3	1.5

24	P18ISL38	Digital Design Lab	3	1.5
25	P18ISL47	Design and Analysis of Algorithms Lab	3	1.5
26	P18ISL48	Java Programming Lab	3	1.5
27	P18ISL56	Data Base Management Systems Lab	3	1.5
28	P18ISL57	Data Mining Lab	3	1.5
29	P18ISL58	Skill Oriented Lab-I	2	1
30	P18ISL66	Machine Learning Lab	3	1.5
31	P18ISL67	IOT Laboratory	3	1.5
32	P18ISL68	Skill Oriented Lab-II	2	1
33	P18ISL76	Data Science Laboratory	3	1.5
34	P18ISL77	DevOps Laboratory	3	1.5
		Total credits	107	89

Program Electives				
Sl. No.	**Sub Code**	**Subject**	**Contact Hrs.**	**Credits**
1	P18IS55X	Professional Elective – I	4	3
2	P18IS64X	Professional Elective-II	4	3
3	P18IS74X	Professional Elective-III	3	3
4	P18IS82X	Professional Elective-IV	3	3
		Total credits	14	12

Open Electives				
Sl. No.	**Sub Code**	**Subject**	**Contact Hrs.**	**Credits**
1	P18ISO65X	Open Elective - I	3	3
2	P18ISO75X	Open Elective-II	3	3
		Total credits	08	06

Project(s)				
Sl. No.	**Sub Code**	**Subject**	**Contact Hrs.**	**Credits**
1	P18 IS78	Project Work Phase-I & Project Seminar	4	2
2	P18IS84	Project work Phase -II	0	6
		Total credits	4	8
Industry Visit/Internships/Seminars				
Sl. No.	**Sub Code**	**Subject**	**Contact Hrs.**	**Credits**
1	P18IS83	Internship	0	2
		Total credits	00	02
Others				
Sl. No.	**Sub Code**	**Subject**	**Contact Hrs.**	**Credits**
1	P18IS85	Self-study course & Seminar	4	2
		Total credits	4	2

Curriculum content (% of total no of credits of the 2018 scheme is depicted in Figure 2.2 using chart and 2021 scheme is depicted in Figure 2.3.

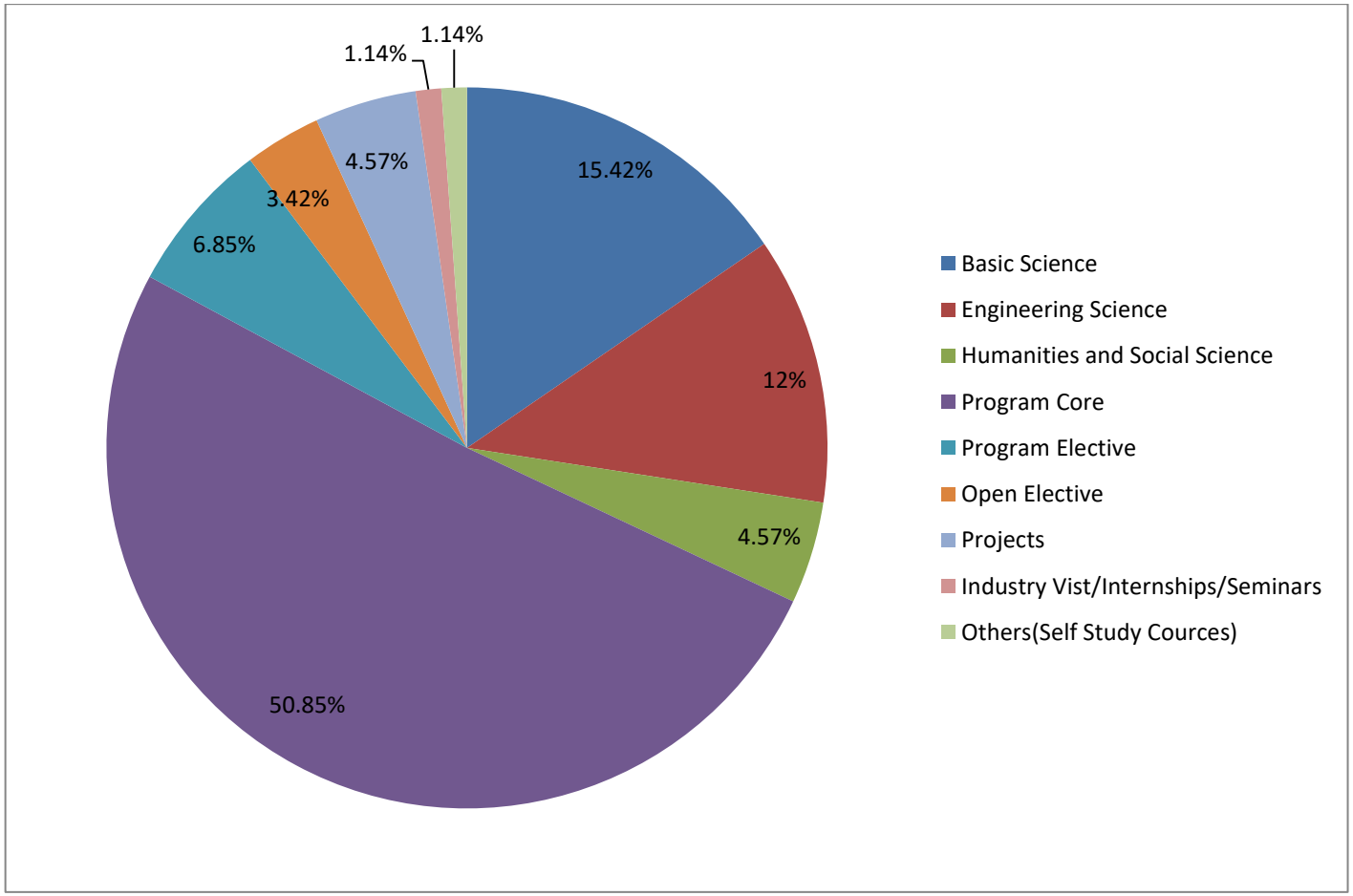


Figure 2.2.Curriculum Content in % of 2018 Scheme

State the components of the curriculum			
Program curriculum grouping based on course components			
Course Component	**Curriculum Content (% of total number of credits of the program)**	**Total number of contact hours**	**Total number of Credits**
Basic Sciences	15.42	30	27
Engineering Sciences	12	26	21
Humanities and Social Sciences	4.57	26	08
Program Core Courses	50.85	107	89
Program Electives Courses	6.85	14	12
Open Electives Courses	3.42	08	06
Project(s)	4.57	04	08
Internships/Seminars	1.14	00	02
Any other (NPTEL Course)	1.14	00	02
Total number of Credits			175

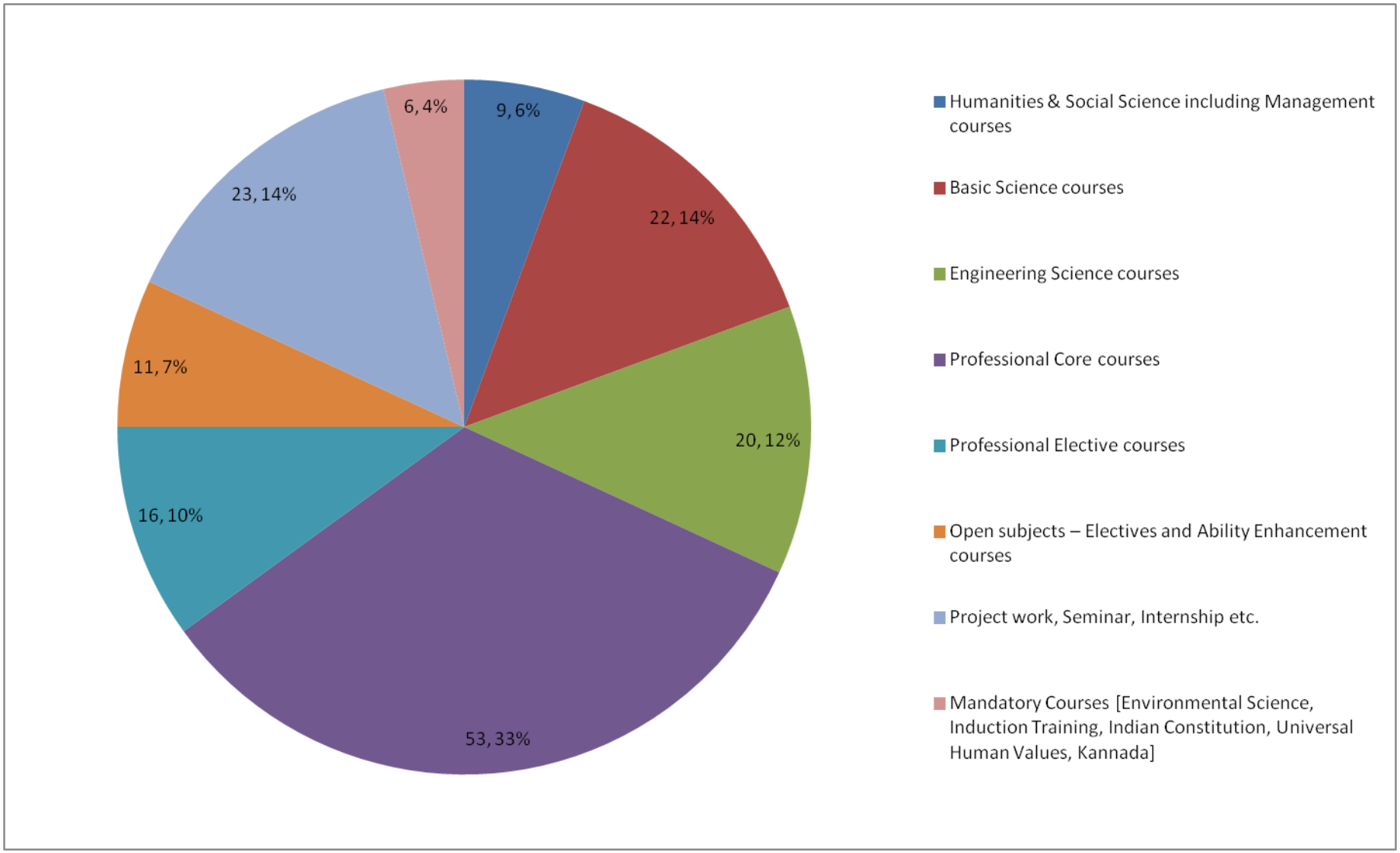

9, 6%
22, 14%
20, 12%
53, 33%
16, 10%
11, 7%
23, 14%
6, 4%
Humanities & Social Science including Management courses
Basic Science courses
Engineering Science courses
Professional Core courses
Professional Elective courses
Open subjects – Electives and Ability Enhancement courses
Project work, Seminar, Internship etc.
Mandatory Courses [Environmental Science, Induction Training, Indian Constitution, Universal Human Values, Kannada]

Figure 2.3.Curriculum Content in % of 2021 Scheme

2021 Scheme

Sl. No.	Subject Area	No. of Credits
1	Humanities & Social Science including Management courses	**09**
2	Basic Science courses	**22**
3	Engineering Science courses	**20**
4	Professional Core courses	**53**
5	Professional Elective courses	**16**
6	Open subjects – Electives and Ability Enhancement courses	**11**
7	Project work, Seminar, Internship etc.	**23**
8	Mandatory Courses [Environmental Science, Induction Training, Indian Constitution, Universal Human Values, Kannada]	**06**
	TOTAL	**160**

4. State the Process to identify the compliance of curriculum for attaining PO's and PSO's

The curriculum offered in the Department of Information Science and Engineering is set in line with UGC, AICTE and parent university guidelines, comprising courses from Basic science, Engineering Sciences, Humanities and Social Sciences, Program Core, Program Electives, and Open Electives, Project Based Learning, Seminar, Internships etc. The curriculum and syllabus are structured such that each course meets one or more of the outcomes relating to the skills, knowledge and behaviors that the students will acquire throughout the program. The step-wise process for developing and finding the compliance of curriculum with POs and PSOs is shown in Figure 2.4.

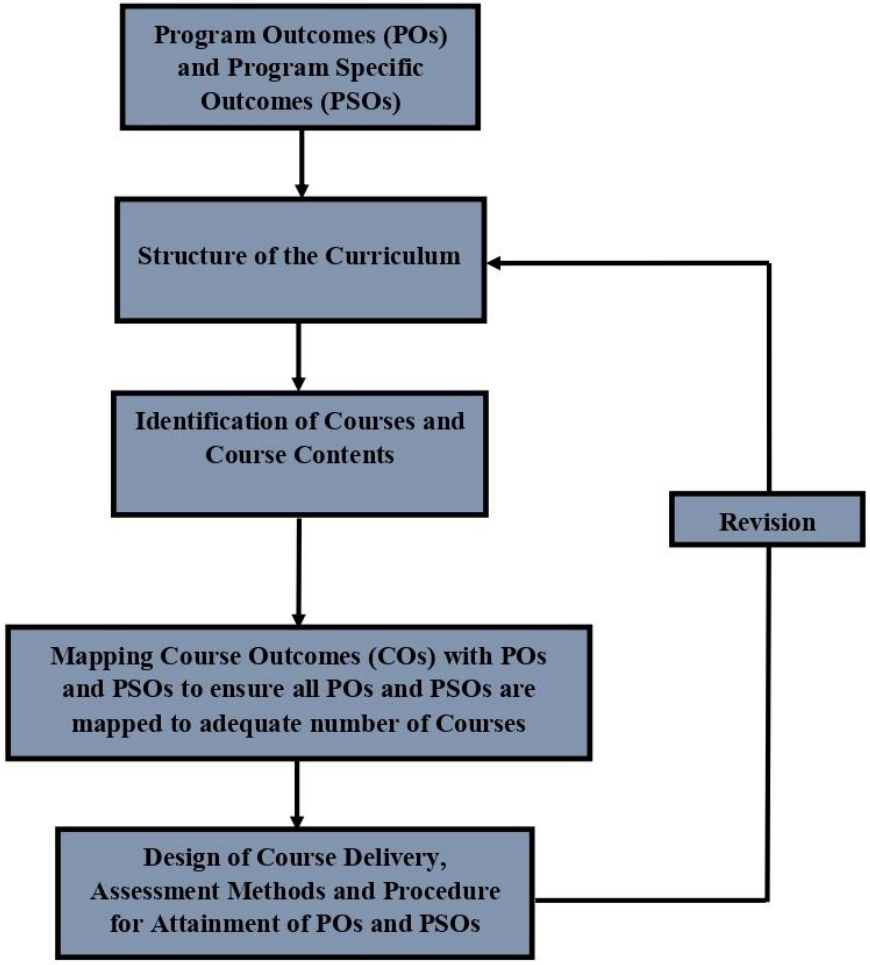


Figure 2.4: Process to identify the compliance of curriculum for attaining PO's and PSO's

- Each of the courses in the curriculum is selected so as to meet the POs and PSOs.
- COs for a particular course are defined such that it covers at least 2 POs and one PSO in the Course Articulation Matrix.
- Each course outcome is mapped to satisfy some of the Programme outcomes at Low (1), Moderate (2) or High (3) levels based on following presumptions:
- CO-PO Mapping is 1 if corresponding PO could be attained at introductory level by the CO through introduction to terminologies, facts and theories.
- Critical thinking will not be beyond understanding at this level and correspond to Bloom's learning levels Remember and Understand.
- CO-PO mapping is 2 if PO is reinforced through some practice approach like problem solving using underlying concepts. Critical thinking here is at the Bloom's learning level Apply.
- CO-PO mapping is 3 if the specific PO could be achieved highly or substantially like industry readiness or expertise in a tool etc. Critical thinking will be higher order thinking like Analyze, Evaluate and Create.
- All courses of the program are mapped with the POs and PSOs along with their level of correlation: 1 (low), 2(medium) and 3 (high) in the Programme Articulation matrix. This identifies the extent to which each course contributes to each of the POs and gives an idea of the strong and weak POs. It is also ensured that all POs/PSOs have a high correlation with an adequate number of courses.
- In order to maintain adequate coverage to all POs and PSOs, corrective measures such as redefining course outcomes or modifying/ introducing courses to address specific POs and PSOs are taken up.
- Direct assessment provides the attainment of each course outcome which is computed at the end of each semester.
- Attainment of outcomes and feedback on each course is discussed in the PAC meeting.

5. Percentage of Programmes where syllabus revision was carried out during the year

Percentage of Programmes where syllabus revision was carried out during the year							
Programme Code	**Programme name**	**Name of the Department**	**Year of Introduction**	**If revision has been carried out in thesyllabus during last 5 year**	**Year of revision**	**Percentage of Syllabus content added or replaced**	**Link of the relevant document**
		Information Science and Engineering	2018	Yes	2021	20%	
Document: 1) https://drive.google.com/file/d/1wz6kZi407PUvn9vsmfVt-EheeIlbQGj5/view?usp=sharing 2) https://drive.google.com/file/d/1GzSwreUy2hxLHvqvKlTqfvuccjYovvyj/view?usp=sharing							

$$\frac{\text{No. of courses in which syllabus was revised during the last year}}{\text{Total No. Of courses offered by the department during the last year}} = \frac{05}{30} = 0.166$$

6. Courses having focus on employability/entrepreneurship/ skill development offered by the Department

Courses having focus on employability/entrepreneurship/ skill development offered by the Department				
Name of the Course	**Course Code**	**Name of the Programme**	**Activities with direct bearing on Employability/ Entrepreneurship/ Skill development**	**Year of introduction (during the last five years)**
Robotic Process Automation	P18IS554	B.E in IS&E	Employability	2018
Innovation and Design Thinking	P21AEC309	B.E in IS&E	Employability	2021
Employability	P21HSMC408	B.E in IS&E	Employability	2021

Enhancement Skills-IV				
Aptitude and Reasoning Development – Advanced.(ARDA)	P18HU510	B.E in IS&E	Employability	2018
Technical Skills-II (Internals of C Programming)	P18HU691	B.E in IS&E	Employability	2018

Documents:

1. https://drive.google.com/file/d/1XCwsmUEYqeAGx_q6IhrhCNhuJxWg3gYc/view?usp=sharing

2. https://drive.google.com/file/d/19yWy5Atv9LRAFC3xtnF9Eu5pHd4ldQHY/view?usp=drive_link

$$\frac{\text{No. of courses having focus on employability or entrepreneurship or skill development}}{\text{Total No. Of courses in the department}} = \frac{05}{05} = 1$$

7. Percentage of new courses introduced of the total number of courses across all programs offered during the year

Annexure-2.5

Percentage of new courses introduced of the total number of courses across all programs offered during the year

Name of the Programme	Name of the new course introduced	Year of introduction	Link of the relevant document
Since only third and fourth sem syllabus was framed there is no change in the syllabus. Hence no new course were introduced.			

Documents:

1. Minutes of relevant Academic Council/BOS meetings
2. Any additional information

8. Percentage of programmes in which Choice Based Credit System (CBCS)/Elective Course System has been implemented

Percentage of programmes in which Choice Based Credit System (CBCS)/Elective Course System has been implemented				
Name of all Programmes adopting CBCS course system	**Name of elective course**	**Course Code**	**Year of implementation of CBCS /elective course system**	**Link of the relevant document**
Information Science and Engineering	Software Testing	P18IS551	2018	
	Robotic Process Automation	P18IS554	2018	
	Software Project Management	P18IS742	2018	
	Distributed System	P18IS743	2018	
	Robotic Process Automation(Open Elective)	P18ISO754	2018	
	Web Technologies	P18IS643	2018	
	Supply Chain Management	P18IS644	2018	
	Internet Programming	P18ISO652	2018	
	Management Information System	P18IS821	2018	
Documents: 1. https://drive.google.com/file/d/1tpFIj8nwTLokEF4nqjW_cL54XtherT3z/view?usp=sharing				

$$\frac{\text{No.of programs having choice Based Credit System}}{\text{No. Of Programs offered during the last year in the department}} = \frac{09}{09} = 1$$

9. Number of value-added courses for imparting transferable and life skills offered during the year

Number of value-added courses for imparting transferable and life skills offered during the year						
Name of the value added courses (with 30 or more contact hours) offered during last five years	**Course Code**	**Year of offering**	**No. of times Offered during the same year**	**Year of discontinuation**	**No. of students enrolled in the year**	**No. of students completing the course in the year**
NPTEL/MOOC		2022-23	01		69	67
Robotic Process Automation	P18IS5XX	2019-20	04		35	35
Robotic Process Automation	P18ISO75X and P17IS75X	2020-21	03		60	60
Documents: 1. https://docs.google.com/document/d/1lDdh4afgKTsdoo_umsk727gxXBvsgCt-/edit?usp=sharing&ouid=100643837356048439976&rtpof=true&sd=true						

10. Average Percentage of students enrolled in the value-added courses

$$\frac{\text{No. of students enrolled in the value added course}}{\text{No. of students}} = \frac{67}{69} = 97\%$$

11. Percentage of students undertaking student projects

$$\frac{\text{No. of students undertaking field projects/internships/students projects}}{\text{Total No. of students}} = \frac{69}{69} = 100\%$$

12. Identification of projects and allocation methodology to Faculty Members.

- The student's projects are selected in line with department mission, vision and Program outcomes.
- Students are provided with brief idea of various fields for selecting the project ideas.
- The list of previous year projects is displayed at notice board which ensures no repetition of project work and also encourages students to enhance the previous works.
- Project teams were selected by the students using the criteria of average CGPA to maintain equality among all the students.
- Projects are identified to relevant context. The need for the project and the end users of the project are verified for the current context.
- The problem definition with their requirements and constraints are verified.
- The knowledge, methodology, skill set and interest of the students to implement the project are considered to undertake the projects.
- All the faculty members were allocated as guides through random selection to guide the student's project.
- Each project team varies from three to four students.
- A project coordinator is appointed by the Head of the department who is responsible for planning, scheduling and execution of all the activities related to the student project work in both phase-1 and phase-2.

Academic Year	Project Co-ordinator
2019-2020	M R Suresh
2020-2021	T M Geethanjali
2021-2022	T M Geethanjali
2022-2023	T M Geethanjali

Batch No	NAME	USN	Guide Name	Title of the Project	Domain	PO's	PSO's
1	KAVANACHANDRA S	4PS19IS026	S M Bramesh	A Data-Driven Approach for Business Process Re- Engineering	Machine Learning	PO1,PO2,PO3,PO5,PO6 PO8,PO9,PO10,PO11	PSO3
	KOUSHIK KUMAR MS	4PS19IS027					
	NIKITHA N	4PS19IS039					
	YASHAS RAJ. D	4PS19IS063					
2	RUCHITHA C P	4PS19IS046	Dr. Anitha M L	Yoga Pose Estimation using deep learning techniques	Deep Learning	PO1,PO2,PO3,PO6,PO8 PO9,PO10,PO11,PO12	PSO3
	SHOBITH M GOWDA	4PS19IS049					
	VENU GOPAL. B	4PS19IS061					
	SHREY GUPTA	4PS19IS050					
3	VARSHINI K N	4PS19IS059	Rakshith N	Air Gesture of Characters and numbers for Visually impaired people using Machine Learning Approach	Machine Learning/ Internet of Things	PO1,PO2,PO3,PO5 PO8,PO9,PO10,PO11	PSO2 PSO3
	AISHWARYA L	4PS19IS003					
	MADHU CHANDRA S M	4PS18IS023					
	SUSHMITHA N	4PS20IS403					
4	AKSHAY KUMAR	4PS19IS005	T M Geethanjali	Prosthetic Arm	Internet of things, Deep Learning	PO1,PO2,PO3,PO5 PO6,PO7,PO8,PO9 PO10,PO11	PSO2 PSO3
	SAMARTH U.S KATTI	4PS19IS047					
	NISHANT NAYAN	4PS19IS040					
	MD AMAN ALAM	4PS19IS032					
5	GAGANA M P	4PS19IS021	T M Geethanjali	Large –Scale Traffic Sign-Detection and Recognition with Audio Alert using Deep Learning Techniques	Deep Learning	PO1,PO2,PO3,PO6,PO8 PO9,PO10,PO11	PSO2 PSO3
	SANGEETHA B S	4PS19IS048					
	SINCHANA.C	4PS19IS051					
	MANASA M P	4PS18IS403					
6	AKHILA B K	4PS19IS004	Dr. Anitha M L	Translation of Hand Gesture to Voice and Text	Computer Vision	PO1,PO2,PO3,PO6,PO8 PO9,PO10, PO11,PO12	PSO3
	H P MANOJ	4PS19IS024					
	SOHAN M SINGH	4PS19IS054					
	MOHAMMED SAQUIB	4PS19IS035					

7	JYOTHI RAM	4PS19IS025	S M Bramesh	Mining Chronic Disease Progression Patterns from Electronic Health Records	Machine Learning	PO1,PO2,PO3,PO5,PO6 PO8,PO9,PO10,PO11 PO12	PSO3
	KRUTHIKA M	4PS19IS028					
	MEGHANA R	4PS19IS033					
	THANUSH K Y	4PS18IS052					
8	SKANDA B K	4PS19IS053	Rakshith N	Voice Controlled Wheelchair with Collision Avoidance System	Internet of Things	PO1,PO2,PO3,PO5,PO8 PO9,PO10,PO11	PSO2 PSO3
	MONISH.M.B.K.	4PS19IS036					
	NAVEEN KUMAR P	4PS20IS402					
	THANUSH R	4PS19IS056					
9	D. SHRIYANS DHRUV	4PS19IS017	Dr. Anitha M L	Automatic Headlight Controller for Vehicles	Internet of Things	PO1,PO2,PO3,PO8,PO9 PO10,PO11	PSO3
	MOHAMMED FARHAN M	4PS19IS034					
	M M AATIFULLA BAIG	4PS19IS001					
	SARVESH	4PS18IS040					
10	N S TINU	4PS19IS037	B S Puttaswamy	Agribot	IOT	PO1,PO2,PO3,PO4,PO5 PO6,PO7,PO8,PO9 PO10, PO11,PO12	PSO1 PSO3
	CHITRITHA K	4PS19IS016					
	HARSHITHA U	4PS20IS400					
	MANOJ H R	4PS18IS025					
11	AMRITA PAUL	4PS19IS006	T S Prabhakar	Last Mile Connectivity using Haversine Algorithm	M L	PO1,PO2,PO3 PO4,PO5,PO6,PO7 PO8,PO9 PO10PO11,PO12	PSO1 PSO3
	AYUSH	4PS19IS010					
	S K SAYANTANI	4PS19IS052					
12	DARSHAN M	4PS19IS018	Dr. Mahesh Kaluti	Smart Sericulture system using IoT	IOT Internet of things	PO1,PO2,PO3,PO5 PO7,PO11,PO12	PSO1 PSO3
	RAKESH SHARMA K	4PS19IS044					
	ROHITH.R.M	4PS19IS045					
13	GANGA C	4PS19IS022	Dr. Mahesh Kaluti	Krishi Rental Web Application	Web Applicati on	PO1,PO2,PO3,PO6 PO11,PO12	PSO1 PSO3
	GAYATHRI S R	4PS19IS023					
	KRUTHIKA H D	4PS20IS401					
	KUSHAL K	4PS19IS029					

14	VIGHNESHA BHAKTA K P	4PS19IS062	M R Suresh	Bitcoin Price Prediction	Web Application	PO1,PO2,PO3,PO6 PO11,PO12	PSO1 PSO3
	AVIDA SHETTY M S	4PS19IS009					
	R SURYA KARAN	4PS19IS043					
	ARAVIND S C	4PS18IS003					
15	BHAVANA R	4PS19IS012	Dr. Mahesh Kaluti	Bandhan – An Approach to Reduce Human and Child Trafficking	Web Application	PO1,PO2,PO3 PO6,PO8 PO11,PO12	PSO1 PSO3
	BHAVANI P L	4PS19IS013					
	VARUN K	4PS19IS060					
	MANEESH GOWDA M M	4PS19IS031					
16	AMRUTH J SHETTY	4PS19IS007	T S Prabhakar	Driver Safety System	M L & IOT	PO1,PO2,PO3,PO4 PO5,PO6 PO7,PO8,PO9 PO10,PO11,PO12	PSO1 PSO3
	THEJESVAR V M	4PS19IS057					
	LIKHITH P	4PS19IS030					
	SUSHILJOGI M	4PS19IS055					
17	BHAVANA K	4PS19IS011	M R Suresh	Human Action Recognition in Videos	Image Processing	PO1,PO2,PO5,PO6 PO8,PO10,PO11 PO12	PSO1 PSO3
	CHAITRASHREE	4PS19IS014					
	NITHIN H L	4PS19IS042					
	CHARAN C V	4PS19IS015					
18	NAVYA PRABHU K P	4PS19IS038	M R Suresh	Automated Bird Species Identification using Audio Signal Processing	Image Processing	PO1,PO2,PO5,PO6 PO8,PO10,PO11 PO12	PSO1 PSO3
	YASHASWINI K V	4PS19IS064					
	DIVYA.S	4PS19IS020					

The progress of a project is monitored by the guide on day to day basis and they have to report the updates to the respective guide regularly. The continuous progress is assessed through periodic review by panel based on Rubrics, given below Projects will be evaluated on the basis of Working principle, implementation methodology, design process of components, performance of the system, application of projects and future scopes, Demonstration of the project work, Presentation, regularity and Viva-Voce by panel Members.

2018 Scheme Project Phase-1 Evaluation Process

2018 Scheme project Evaluation process is done framing a committee consisting of Head of the department, senior faculty member and guide. Committee members and guide are given equal weightage. Project Phase - I is Evaluated for 100 Marks is presented in Table 2.15 below Consisting of

- Synopsis Phase (20 Marks / Both Guide & Committee)
- Design Phase (30 Marks/ Both Guide & Committee)
- Report (20 Marks/ only Guide)
- Final Presentation (30 Marks/ only Committee Members)

Table 2.15: Project Phase-1 Evaluation Process

Synopsis Phase Evaluation				
Identification of Problem Domain and Objectives of their work.	Excellent (4)	Good (3)	Average (2)	Poor (1)
Technical Knowledge, Awareness related to the Project.	Excellent (4)	Good (3)	Average (2)	Poor (1)
Presentation	Excellent (2)	Good (1.5)	Average (1)	Poor (0.5)

Design Phase Evaluation				
Visual aid Identification with explanation and assignments.	Excellent (6)	Good (5)	Average (3)	Poor (2)
Principles and Elements of Design with Regularity.	Excellent (5)	Good (4)	Average (3)	Poor (2)
Effort and Presentation	Excellent (4)	Good (3)	Average (2)	Poor (1)

Report Evaluation				
Project Report Organization	Excellent (10)	Good (9)	Average (8)	Poor (6)
Description of Concepts and Technical Details.	Excellent (10)	Good (9)	Average (8)	Poor (6)

2018 Scheme Project Phase-2 Evaluation Process

Project Phase-2 Rubrics Evaluated for 100 Marks Internal is presented in Table 2.16 Consisting of

- Implementation Phase (30 Marks / Both Guide & Committee)
- Demonstration Phase (40 Marks/ Both Guide & Committee)
- Report (25 Marks/ only Guide)
- Technical Paper (5 Marks/ only Committee Members)

Table 2.16: Project Phase-2 Evaluation Process

Implementation Phase Evaluation				
Technical Knowledge and awareness related to the project	Excellent (15)	Good (14)	Average (12)	Poor (9)
Regularity and Attendance	Excellent (6)	Good (5)	Average (3)	Poor (2)
Presentation	Excellent (9)	Good (8)	Average (7)	Poor (5)

Demonstration Phase Evaluation				
Incorporation of Suggestions	Excellent (15)	Good (14)	Average (12)	Poor (9)
Project Demonstration	Excellent (15)	Good (14)	Average (12)	Poor (9)
Presentation	Excellent (10)	Good (9)	Average (7)	Poor (5)

Report Evaluation				
Project Report Organization	Excellent (15)	Good (14)	Average (12)	Poor (9)
Project Demonstration	Excellent (15)	Good (14)	Average (12)	Poor (9)
Presentation	Excellent (10)	Good (9)	Average (7)	Poor (5)

Project Course Outcomes with Course Articulation Matrix for P18 scheme:

Course Outcome

CO #	Course Outcome	Program Outcome Addressed (PO #) with BTL
CO1	Ability to apply acquired knowledge in reviewing current literature for problem identification and definition while continuing the required learning.	**PO1 [L4], PO2 [L4] PO12 [L2]**
CO2	Ability to design and develop the functional units of circuits and systems for the identified problem so as to provide sustainable solution	**PO3 [L5] PO7[L4]**
CO3	To acquire proficiency of modern hardware and software tools which are used in the analysis, design and development of electronic products and systems through experimentation, investigation and debugging.	**PO4 [L5] PO5 [L5]**
CO4	Ability to communicate effectively through presentation, documentation and demonstration.	**PO9 [L5], PO10 [L5] PO11[L2]**
CO5	Ability to effectively manage and use resources and the team for being intact with ethics in developing complete solutions.	**PO9 [L5] PO11[L5]**

Course Articulation Matrix (CAM)

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
#1	3	3										2	3	
#2			3				3						2	
#3				3	3									3
#4									2	3	2			
#5									3		3			

13. Describe processes followed to improve quality of teaching and learning

It is a well-known fact that to accomplish a goal in education, the necessary actions are Teaching and Learning. One acts as the Cause and the other as the Effect. (Teaching is the cause and Learning is the effect). The process followed to improve the quality of teaching and learning in the department of Information Science and Engineering is described in following Figure 2.5

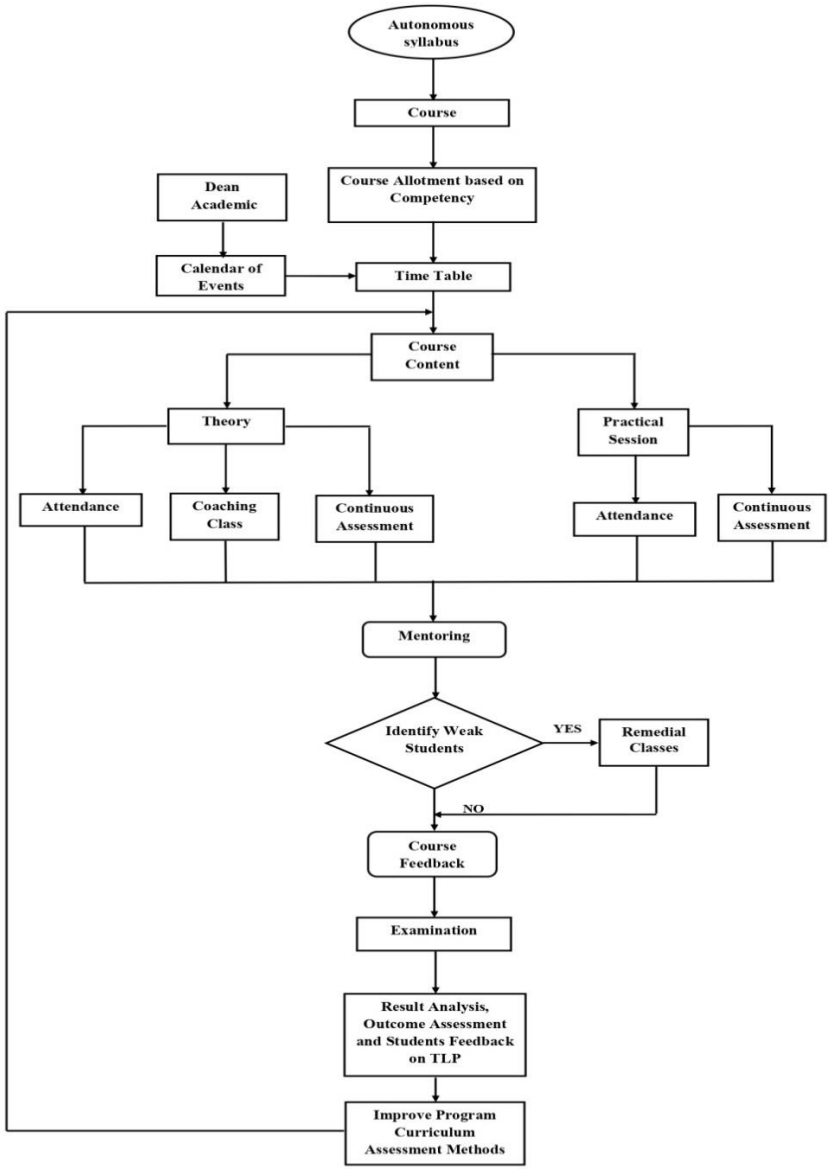
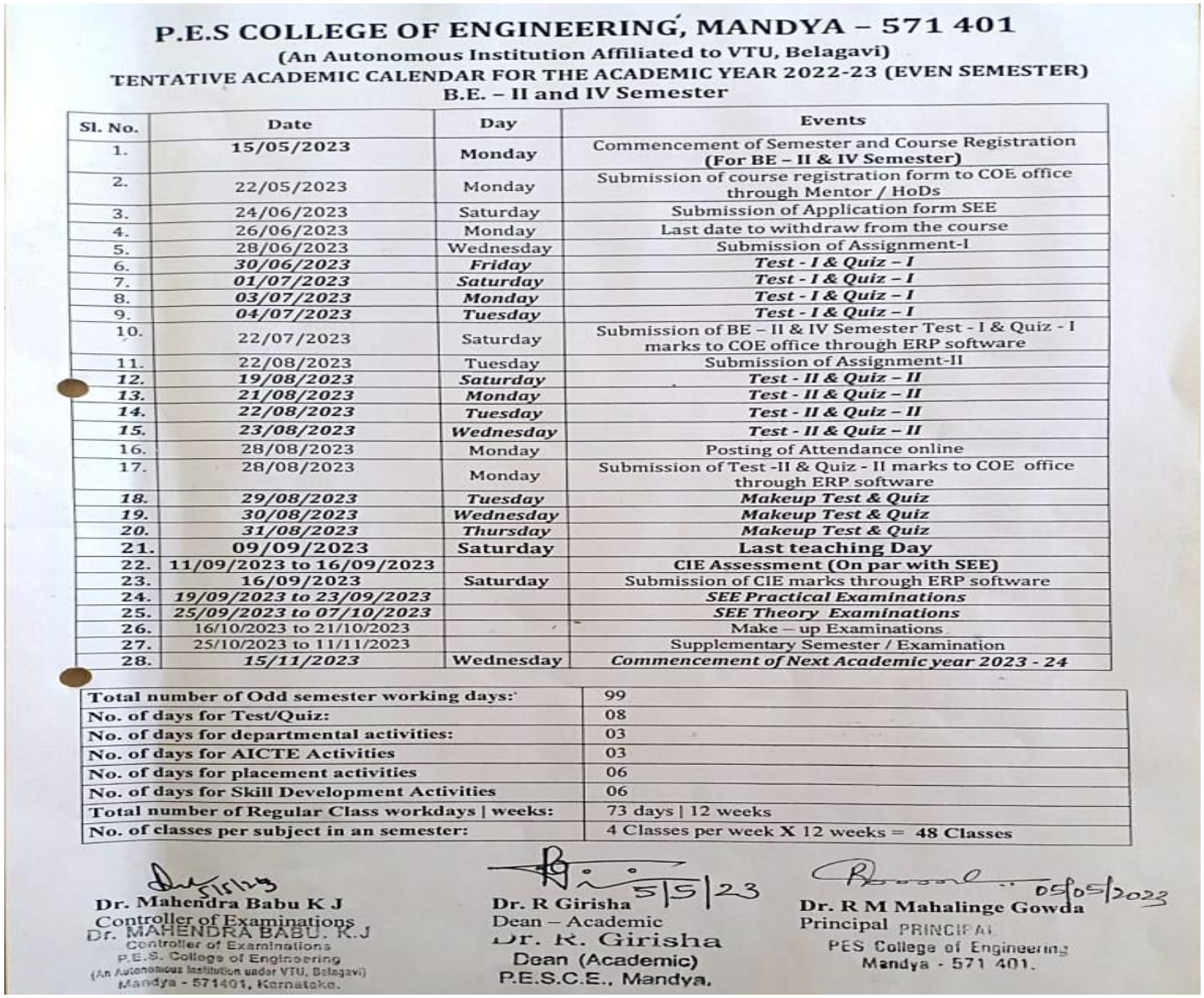


Figure 2.5: Teaching Learning Process

To accomplish this, the department follows certain steps as mentioned below:

A. Adherence to Academic calendar (Institute calendar):

Department is aligned with Institute academic calendar prior to the commencement of the semester. An Academic Calendar is designed to streamline the activities of the institute through the duration of the term. The Academic year is divided into two semesters - even and odd. The calendar includes important information such as internal test dates, last dates for registration, dropping and withdrawing courses, final examination dates etc. Once the academic calendar is ready, the lesson plans for the subjects offered during that semester are designed. The lesson plan contains class-by-class topics that are to be covered, encompassing the syllabus. The lesson plan is also designed taking into account the Course Outcomes, thereby allocating the appropriate amount of time for each topic while restricting each unit to an almost equal number of classes. Some deadlines are to be followed for completing Internal Evaluations of projects/assignments etc. They have to be completed and evaluated before the final internal so that the student can get an idea of their marks in that particular course. Finally, during the last week of classes, deadlines are announced for the finalization of the internal marks component. A sample of Institute academic calendar is presented in Figure 2.6.



P.E.S COLLEGE OF ENGINEERING, MANDYA – 571 401

(An Autonomous Institution Affiliated to VTU, Belagavi)

TENTATIVE ACADEMIC CALENDAR FOR THE ACADEMIC YEAR 2022-23 (EVEN SEMESTER)

B.E. – II and IV Semester

Sl. No.	Date	Day	Events
1.	15/05/2023	Monday	Commencement of Semester and Course Registration (For BE – II & IV Semester)
2.	22/05/2023	Monday	Submission of course registration form to COE office through Mentor / HoDs
3.	24/06/2023	Saturday	Submission of Application form SEE
4.	26/06/2023	Monday	Last date to withdraw from the course
5.	28/06/2023	Wednesday	Submission of Assignment-I
6.	*30/06/2023*	*Friday*	*Test - I & Quiz – I*
7.	*01/07/2023*	*Saturday*	*Test - I & Quiz – I*
8.	*03/07/2023*	*Monday*	*Test - I & Quiz – I*
9.	*04/07/2023*	*Tuesday*	*Test - I & Quiz – I*
10.	22/07/2023	Saturday	Submission of BE – II & IV Semester Test - I & Quiz - I marks to COE office through ERP software
11.	22/08/2023	Tuesday	Submission of Assignment-II
12.	*19/08/2023*	*Saturday*	*Test - II & Quiz – II*
13.	*21/08/2023*	*Monday*	*Test - II & Quiz – II*
14.	*22/08/2023*	*Tuesday*	*Test - II & Quiz – II*
15.	*23/08/2023*	*Wednesday*	*Test - II & Quiz – II*
16.	28/08/2023	Monday	Posting of Attendance online
17.	28/08/2023	Monday	Submission of Test -II & Quiz - II marks to COE office through ERP software
18.	*29/08/2023*	*Tuesday*	*Makeup Test & Quiz*
19.	*30/08/2023*	*Wednesday*	*Makeup Test & Quiz*
20.	*31/08/2023*	*Thursday*	*Makeup Test & Quiz*
21.	09/09/2023	Saturday	Last teaching Day
22.	11/09/2023 to 16/09/2023		CIE Assessment (On par with SEE)
23.	16/09/2023	Saturday	Submission of CIE marks through ERP software
24.	*19/09/2023 to 23/09/2023*		*SEE Practical Examinations*
25.	*25/09/2023 to 07/10/2023*		*SEE Theory Examinations*
26.	16/10/2023 to 21/10/2023		Make – up Examinations
27.	25/10/2023 to 11/11/2023		Supplementary Semester / Examination
28.	*15/11/2023*	Wednesday	*Commencement of Next Academic year 2023 - 24*

Total number of Odd semester working days:	99
No. of days for Test/Quiz:	08
No. of days for departmental activities:	03
No. of days for AICTE Activities	03
No. of days for placement activities	06
No. of days for Skill Development Activities	06
Total number of Regular Class workdays | weeks:	73 days | 12 weeks
No. of classes per subject in an semester:	4 Classes per week X 12 weeks = **48 Classes**

5/5/23

05/05/2023

Dr. Mahendra Babu K J
Controller of Examinations
Dr. MAHENDRA BABU. K.J
Controller of Examinations
P.E.S. College of Engineering
(An Autonomous Institution under VTU, Belagavi)
Mandya - 571401, Karnataka.

Dr. R Girisha
Dean – Academic
Dr. R. Girisha
Dean (Academic)
P.E.S.C.E., Mandya.

Dr. R M Mahalinge Gowda
Principal PRINCIPAL
PES College of Engineering
Mandya - 571 401.

Figure 2.6: Academic Calendar

Maintenance of Course files:

For each course, a course file is prepared by the concerned faculty to inculcate improvement by analyzing the course file content. Once the courses are allocated, the faculty members prepare a detailed lesson plan for a particular course. Lesson plan is prepared by the subject handling faculty before the commencement of the semester and is dually approved by the Head of the department. A sample copy of Lesson Plan is presented in Figure 2.7. According to the lesson plan, work done has been inculcated in the Attendance Register to ensure coverage of syllabus dually monitored by Head of the department. Course hand-out and materials are prepared keeping in mind the lesson plan and course outcomes. Course hand-out and any other related material will be kept in drive by sharing the link to the students. The course file consists of following items.

- Institute Academic Calendar
- Time Table
- Student List
- Syllabus
- Lesson Plan
- CIE Papers with Scheme
- Assignment Questions
- Model Question Paper
- SEE Papers
- Result Analysis
- Feedback Report

B. Use of Various instructional methods and pedagogical initiatives:

Pedagogies play an important role in delivering of content and it varies with the audience. Course allocation is made based on the choice/ expertise of the faculty members one month before the commencement of semester. Faculty members use various pedagogical methods for effective teaching learning process. Project-based learning, ICT-supported learning, Collaborative/ Cooperative teaching Learning, Soft Skill training, Induction Program, industry internships etc., are some pedagogical techniques adopted to improve overall student learning levels. It is suitable for our curricula. Some specific cases of these elements at our department are listed below.

Project-based learning:

Project Based Learning (PBL) is significantly more effective than traditional instruction to train competent and skilled practitioners and it promotes long-term retention of knowledge and skills. It is an innovative practice that is used to implement Outcome Based Education, Students is encouraged to carry out project Component included in the laboratory and mini projects to apply their engineering knowledge from fifth semester onwards and are guided by the faculty members.

Laboratory Project Component

The Laboratory Project Component is evaluated for 20 marks and are evaluated as represented in Table 2.5. Laboratory Project Component list for various courses is given in Table 2.6.

Table 2.5: Laboratory Project Component Evaluation

Laboratory Project Component Evaluation				
Identification of Problem Domain and Detailed Analysis (5 Marks)	Excellent (5)	Good (4)	Average (3)	Poor (2)
Design /Methodology (5 Marks)	Excellent (5)	Good (4)	Average (3)	Poor (2)
Project Demonstration (5 Marks)	Excellent (5)	Good (4)	Average (3)	Poor (2)
Project Report Organization including Description of Concepts and Technical Details (5 Marks)	Excellent (5)	Good (4)	Average (3)	Poor (2)

Percentage of students undertaking field projects/ internships/ student projects, Impact analysis(Supporting documents of Internship letter,certificates and summary report)			
Programme name	**Program Code**	**Name of Students undertaking field projects/internships**	**Link of the relevant document**
B.E	IS&E	69	https://docs.google.com/spreadsheets/d/1OAcQ1iemt2J8Lki8fricXiTpMPP7myoX/edit?usp=sharing&ouid=100643837356048439976&rtpof=true&sd=true

14. Methodologies to support weak students and encourage bright students:

Guidelines to identify weak students

The mentors regularly conduct meetings regarding progress of their mentees and weaker student co-ordinator is responsible to identify students who scored less than 20 marks in the CIE's for more than 2 subjects. Under the HOD direction, the student's mentors and the coordinator evaluates the progress of those students who score below 20 marks in more than 2 subjects are considered as academically weak students and same is also intimated to their parents during parent's teachers meeting conducted after CIE.

1) **https://drive.google.com/file/d/1RAu-_GkGnslRky4yjKvCDKgMMd4s9hjD/view?usp=share_link**

MENTORING SYSTEM

Identification Criteria	Actions taken
Students scoring less than 20 marks in Internal Assessment	• Student mentors follows their progress regularly advising students about attending classes, making up classes missed, reasons for securing less marks and getting additional help. • Intimating parents to counsel their wards through parents meeting conducted after Internal Assessment. • Conduction of Contact classes by the course instructor to clear the doubts of the weaker student.
Students who fail in semester exams	• Conduction of extra contact classes to those who failed in previous semester subjects. • Counselling is given to the student. • Discussion on important concepts and question bank.

Guidelines to identify Bright students

Identification Criteria	Actions taken
Students awarded with First Class with Distinction (FCD) in their Semester exams.	• Students secured FCD's are being felicitated in the department level functions to motivate them to continue their Excellency in academics, to take up real world projects& encourage to participate in inter college national/international fests, write technical papers and also to

	motivate to take civil exams. • Involve fast learners for peer tutoring the slow learners. • Students are motivated to take up one additional advanced level MOOC/SWAYAM / NPTEL in that course. • Students are encouraged to take up competitive exams like GATE, GRE, TOEFL, IELTS, CAT, PGCET etc. • Bright and diligent students are motivated and inspired to get top ranks in their SEE and in competitive examinations.
Students securing ranks at College Level.	Distribution of Gold medals on Graduation ceremony

Impact Analysis of Weak Students:

- Improvement in Semester end examinations.
- Develops positive attitude among students.
- Improvement in analytical and communication skills.
- Improvement in programming skills.

Impact Analysis of Bright students:

- Improvement in CGPA.
- Improvement in communication skills and interpersonal skills.
- Improvement in programming skills.
- Improvement in inter-institute event participation.
- Improvement in placement and higher studies.
- The students were able to do quality projects, present papers in conferences and Journals

15. List of ICT enabled tools used by teachers including online resources for effective teaching and learning process

List of ICT enabled tools used by teachers including online resources for effective teaching and learning process			
Number of teachers on roll	**Number of teachers using ICT (LMS, e-Resources)**	**Name of ICT tools and Resourcesused**	**Name of E-resources and techniques used**
10	10	PPT/Black Board/Youtube Videos/NPTEL study materials/Blog	E-journals, Blog

16. No of teachers completed online courses NIL

17. No of students completed online courses

$$\frac{\text{No. of Students completed online courses}}{\text{Total No. of Students}} = \frac{67}{69} = 97\%$$

III: ADMINISTRATIVE MODULE, FACILITIES AND TECHNICAL SUPPORT, INFRASTRUCTURE AND LEARNING RESOURCES

1. Department Area Details

2. Department Building Details

Department Building Details										
DEPARTMENT NAME:										
Instructional Area Carpet Area	**Room No.**	**In Sq. Mtrs.**	**Administrative Area Carpet Area**	**Room No.**	**In Sq. Mtrs.**	**Amenities Area Carpet Area**	**Room No.**	**In Sq. Mtrs.**	**Circulation and other area**	**In Sq. Mtrs.**
Class Room 1	Class Room 1	6.0X9.7 mtrs	Class Room						First Floor	
Class Room 2	GBL 203	**10.6X6.4 mtrs**	Class Room						First Floor	
Class Room 3	GBL 204	10.6X6.4 mtrs	Class Room						First Floor	
Seminar Hall	Seminar Hall	6.0X9.7 mtrs	Seminar Hall						Ground Floor	
S/W Lab 1	S/W Lab 1	11.81X4.5 mtrs	S/W Lab 1						First Floor	
S/W Lab 2	S/W Lab 2	6X7.3 mtrs	S/W Lab 2						First Floor	
S/W Lab 3	S/W Lab 3	11.81X4.5 mtrs	S/W Lab 3						Ground Floor	
S/W Lab 4	S/W Lab 4	6X2.5 mtrs	S/W Lab 4						Ground Floor	
Research Lab	Research Lab	6X4.6 mtrs	Research Lab						First Floor	
Digital Design Lab	Digital Design Lab	8.2X4.6 mtrs	Digital Design Lab						First Floor	
Document: https://drive.google.com/file/d/1-jKmpB3D41ZDYQbqBuB-oemJS-FYtb4_/view?usp=sharing										

3. Approved Department Budget for 2022-23

Approved Department Budget for 2022-23				
Total Budget: Rs.		**Actual Expenditure: Rs.**		**Total No. of students:**
Non-recurring	**Recurring**	**Non-Recurring**	**Recurring**	**Expenditure per student**
6,60,000=00	2,00,000=00	6,60,000=00	2,00,000=00	

Sl. No.	Items	Budgeted in 2022-23	Actual expenses in
1.	Laboratory Equipment	5,00,000=00	5,00,000=00
2.	Software		
3.	Laboratory Consumable	50,000=00	50,000=00
4.	Maintenance and Spares	1,50,000=00	1,50,000=00
5.	R & D	1,60,000=00	1,60,000=00
6.	Training and Travel		
7.	Miscellaneous Expenses for Academic Activities		
	Total		8,60,000=00

Document: https://drive.google.com/file/d/1eFBkIz6RXlzF2UB74LTmFvkmeSiTDW-F/view?usp=sharing

4. Approved Lab Budget for Equipment & Consumable for 2022-23

Annexure – 3.3							
Approved Lab Budget for Equipment & Consumable for 2022-23							
Sl. No.	**Items**	**Laboratory Equipment**			**Laboratory Consumable**		
		Budgeted in	**Actual expenses in**	**Investment Frominception to till Rs.**	**Budgeted in**	**Actual expenses in**	**Investment From inception to till Rs.**
1.	Digital Design Lab				50,000=00	51,135=00	
	Total						

5. Department level Committees details

Other Committees–DAC, PAC, BoS, Alumni Committee, DPGC, Time table Committee, Dept.Registration Committee, NBA Committee

1) **https://drive.google.com/file/d/13O4-UwpEy0BsA6aGoMUYCuDDGKpV3Jot/view?usp=sharing**

2) **https://drive.google.com/file/d/19ddhy8bmPX-_COFggfxbC68eYQEtIG0S/view?usp=share_link**

6. Time Table

ODD Sem

1) **https://drive.google.com/file/d/1CSc3iU_gYJMo8p9G3NkrD3TpS0G6DF7L/view?usp=sharing**

EVEN Sem

1) **https://drive.google.com/file/d/1oCFr3gR-atJLIm1VWjkwU3gepOl4Gc95/view?usp=sharing**

7. Mentoring details: (Current academic year)

- Year wise, number of students enrolled and full time teacherson roll.
- Circulars pertaining to assigning mentors to mentees

1) https://drive.google.com/file/d/1Q4jkshCW438k5K0jIVGJrx1Ofjmm6HAA/view?usp=sharing

2) https://drive.google.com/file/d/1_NGnvFseyHqTCtHkY6nUj69h5cXK0xVr/view?usp=sharing

8. **Department Meetings Minutes& Proceedings (Staff, Non-teaching, Students meeting)**

1) https://drive.google.com/file/d/19l1YWOW2FgB3fNi7V-1oaDbbFFBYFcks/view?usp=sharing

9. **Students Performance Analysis (SPA) Meeting Minutes**

1) https://drive.google.com/file/d/13O4-UwpEy0BsA6aGoMUYCuDDGKpV3Jot/view?usp=sharing

10. **Course Articulation Matrix(CAM) Proceedings & Action taken reports**

11. **Dept. Association fund details with planned activities & budget**

1) https://drive.google.com/file/d/12wdvFqhGqqJGyjAItbRXryY28Gvm65cE/view?usp=sharing

12. Dept. Library Details

Dept. Library Details											
Sl. No.	Books		No. of Journals		No. of Conference Proceedings	No. of project Reports		No. of M.Sc (Engg.) / Ph.D Thesis	No. of CD's	No. of Technical Magazines	No. Digital Teaching Resources (PPT'S/Videos)
	No. of Titles	Total No. of Volumes	National	International		UG	PG				
1	693				01	18					

13. Movement Register

1) **https://drive.google.com/file/d/1IBVQRNBIqb1Hv_jdhXRWnh76-1nzcA8A/view?usp=sharing**

14. Stock Ledger

1) **https://drive.google.com/file/d/1s1TD4ZpZ__NtTCYJ0jQ6k6aDDIhLAK1S/view?usp=sharing**

15. Consumables Ledger

1) **https://drive.google.com/drive/folders/1Ly95o0kqOkHVy3Fez7IBPBI2qDrDOJyc?usp=sharing**

16. Equipment/Instrument identification details

1) **https://drive.google.com/file/d/1s1TD4ZpZ__NtTCYJ0jQ6k6aDDIhLAK1S/view?usp=sharing**

17. Stock verification Committee reports

1) **https://drive.google.com/file/d/1TzOqjI9w2DQByjxqhRH8NUCCNtlnzy-L/view?usp=sharing**

18. Action taken on previous years stock verification Committee report -NA

19. Workshops Conducted to the students

1) **https://drive.google.com/file/d/1jM3f6dnqnL_wHAyw5qiU5hG00gZ20ol4/view?usp=sharing**

20. FDP's Conducted by the department

Initiatives are taken to organize at least one FDP for each semester.

21. Industry Visits for Current semester

1) **https://docs.google.com/document/d/1TxAZpWnHUnEkXNC1vERf9jePY4rY95Pm/edit?usp=sharing&ouid=100643837356048439976&rtpof=true&sd=true**

2) **https://docs.google.com/spreadsheets/d/1RDicnBwDdqCZRiJSXQauBjlANiORLtdI/edit?usp=sharing&ouid=100643837356048439976&rtpof=true&sd=true**

22. Invited Lectures Conducted for Current Semester

1) **https://drive.google.com/file/d/1laRUBKhfASRgL-VKc2HoELNO30ZrZ102/view?usp=sharing**

2) **https://drive.google.com/file/d/1rVrxKhWD5-xjzF_UCkloFLRwIOEOzNX2/view?usp=sharing**

3) **https://drive.google.com/file/d/1lW3ADgMjoaCFqH5RFZFOemNGlSrM0Gnt/view?usp=sharing**

23. Student feedback on Initiatives to Industry Interaction - NA

24. No. of department activities published in newspaper/social Media

1) **https://www.linkedin.com/posts/aniruddhkoundinya_learning-experience-informationscience-activity-7059179975769280514-xxx2?utm_source=share&utm_medium=member_desktop**
2) **https://www.linkedin.com/posts/arun-kumar-k-m-_talkshow-activity-7030143135703810048-Ewh4?utm_source=share&utm_medium=member_desktop**
3) **https://www.linkedin.com/posts/pes-college-of-engineering_pes-pesce-pescollegeofengineering-activity-7022176213766995968-MIe-**

?utm_source=share&utm_medium=member_desktop

4) https://drive.google.com/file/d/1pYDFlpSLImNBy07jup7RwQWSUKN1LEoR/view?usp=sharing

25. No. of International Conferences held

1) https://drive.google.com/file/d/1V-dlxSeLABAI-qRiSsrtRr8zy4rxC3zH/view?usp=sharing
2) https://drive.google.com/file/d/17IRxcxw2onYF5Hm_X1WgIv4OUgpDuZlk/view?usp=sharing

26. No. of International Collaborations

Initiatives are taken to have international collaborations.

27. Alumni Details

Present Details:									
Sl. No.	**Name**	**USN**	**Postal Address**	**Mail ID**	**Contact No.**		**Present Job**	**Position**	**Additional Information for professional achievements after graduation**
					Mob	**Land line**			
1	Sangeetha B S	4PS19IS048	Beeravalli [v&p],Akkihebbal hobli,k r pete taluk,Mandya District -571605	sangeethabs632@gmail.com	6364139297		Not yet on boarded	Analyst	Nill
2	Darshan M	4PS19IS018	#90, new Street, Hosaholalu, K.R.Pete, Mandya 571426	darshanbmshetty@gmail.com	8495984060		LTTS	Associate Engineer	Job
3	Sarvesh	4PS18IS040	B403 Aspen woods apartment Doddakamanahalli	Sarvesh5460@gmail.com	9504488222		Quintech	Data analyst	.

			road off Bannerghatta Road-560076						
4	Kruthika H D	4PS20IS401	#1051, 15th cross kaveri circle, Mysore	kruthi5566@gmail.com	8088712056		Srichid Technologies	Software Engineer	Nil
5	Likhith P	4PS19IS030	D/no 88 K Ramswamy layout 2nd extension block , Nanjangud 571301	likhithshaiv@gmail.com	9481311988		Tata Consultancy Service	System Engineer	Nill
6	Akhila B K	4PS19IS004	Bandihole, K R Pete, Mandya-571426	akhilagowda1881@gmail.com	7022056523		Software Engineer	Associate professional software engineer	NA
7	Sowjanya M Y	4PS18IS046	Lakshmi Hayagriva nilaya, N P Kempegowda Layout, Mandya	sowjanyahebbar15@gmail.com	7406979518		Yes	Associate	NA
8	Divyashree M D	4PS18IS013	B G S Road, Sri kantappa Layout, Bidadi, Ramanagar (tq&dist) 562109	divyashree.md252@gmail.com	9945822164		Valtech , Bangalore Karnataka 560078	Associate software developer	Nil
9	Kalpitha K	4PS18IS019	Kurubarahalli, Bilagumba Post, Ramanagara tq and dist. 561259	kalpitha47@gmail.com	9902917177		Associate Engineer	Storage Admin	Have improved my technical skills

28. Average Results in %

1) https://docs.google.com/spreadsheets/d/1MncT_6yX6PibbkZG2qkhINpLd7Q5L-Y2/edit?usp=sharing&ouid=100643837356048439976&rtpof=true&sd=true

29. Average Feedback in %

1) https://docs.google.com/spreadsheets/d/1g1BWPv50wy6Mh55o7Lkhg28RlJMGWP0m/edit?usp=sharing&ouid=100643837356048439976&rtpof=true&sd=true

30. No. of Rank obtained

Three ranks will be awarded for every batch.

31. Adequate and well equipped laboratories and technical manpower

Adequate and well equipped laboratories and technical manpower							
Sl. No.	**Name of the Laboratory**	**No. of students persetup (Batch Size)**	**Name of the Important equipment**	**Weekly utilization status (all the courses for which the lab isutilized)**	**Technical Manpower support**		
					Name of the technical staff	**Designation**	**Qualification**
1	Software Lab-I	12	Android Studio, JDK 9.8 Server,	Mobile Application Development Lab, Machine Learning Lab	B K Kumar Gowda	Programmer	B.E, M.Tech (KSOU)
2	Software Lab-I	12	Android Studio, JDK 9.8 Server,	Data Mining Lab, Devops Lab	Mahesha M S	Programmer	Diploma in CSE
3	Software Lab-II	12	Python 13.1	Data Structure Lab	Sumalatha K C	Computer Operator	MSc(IT)
4	Software Lab-II	12	MySQL, Turbo C++	Data Science Lab, IoT Lab, Analysis and Design Algorithms Lab	Sumalatha K C	Computer Operator	MSc(IT)
5	Software Lab-III	12	MySQL, Turbo C++	DBMS Lab, Java Lab, Data Science Lab	Sumalatha K C	Computer Operator	MSc(IT)
6	Digital Design Lab	12	Xlinx, Simulator,	Digital Design Lab	S M S Kumar	Mechanic	B.A,ITI (Electrical)
7	Software Lab-IV	12	Android Studio	Mobile Application Development Lab, Machine	Mahesha M S	Programmer	Diploma in CSE

				Learning Lab, Analysis and Design Algorithms Lab			
8	Research Lab	12	Android Studio, JDK 9.8, Server, Cisco Packet Tracer	Project / Research Work	B K Kumar Gowda	Programmer	B.E, M.Tech. (KSOU)

32. Project Laboratory and its utilization

1) **https://drive.google.com/file/d/1bjYvEu_nExhvBUEx6J7g98t0vZxCJ9gN/view?usp=sharing**

33. Maintenance of First Aid Box

1) **https://drive.google.com/file/d/14bGKu0WUwQVm1RLR1StTgVouS4uyWzem/view?usp=sharing**
2) **https://drive.google.com/file/d/1jc9s94I266GPivu1vL9cLM-WoR1pPweT/view?usp=sharing**

34. Maintenance of fire Extinguishers

1) **https://drive.google.com/file/d/1U9H95y_s0dVxP7McLnl3a1nmoSs_c6vy/view?usp=sharing**
2) **https://drive.google.com/file/d/1SYzNl5ndPtUs5m2JLobBgJYM1Fiva0H0/view?usp=sharing**

35. Industry supported laboratories NIL

IV: Research, Innovations and Extension

1. **Percentage of teachers recognized as research guides**

$$\frac{\text{No. of teachers recognized as research guides}}{\text{Total No. of full time teachers}} = \frac{02}{10} = 0.20$$

2. **Number of Ph.D's registered per teacher (as per the data given w.r.t recognized Ph.D guides/ supervisors**

$$\frac{\text{No. of Ph.D registered during the last year}}{\text{No. of Teachers as a recognized guides during the last year}} = \frac{01}{02} = 0.5$$

Number of Ph.D's registered per teacher (as per the data given w.r.t recognized Ph.D guides/ supervisors					
Qualification (Ph.D./D.M/M.Ch./D.N.B Super specialty/D.Sc./D'Lit.) and Year ofobtaining	**Whether recognized as research Guide for Ph.D./D.M/M.Ch./D. N.B Super specialty/D.Sc./D'Lit.**	**Is the teacher still serving the institution/ If not last year of the service of Faculty to the Institution**	**Name of the scholar**	**Year of registration of the scholar**	**Title of the thesisfor scholar**
Dr. Anitha M L	Yes	Yes	ANITHA T NAIR	2018	Computer Aided Diagnosis For Diabetic Retionpathy using Machine Learning Techniques
	Yes	Yes	B.P. CHAITRA	2018	Decision Support System for Enhancing Productivity of Vegetable Crops

	Yes	Yes	PANKAJ KUMAR G	2020	Towards Cognitively Plausible Game Playing Systems using High performance Computing and Soft Computing Techniques
	Yes	Yes	DHANANJAYA KUMAR K	2020	Intelligent Predictive Model for Managing Traffic Congestion and Monitoring.
Dr. Mahesh Kalluti	Yes	Yes	SUSHANT MANGASULI	2017	An Effective Video Streaming Framework For Disaster Management System Using Manets
	Yes	Yes	SHIVASHANKAR S K	2020	Enhancing Efficiency of Routing Protocol in MANET's using An Artificial Neural Network (ANN) with Machine Learning
	Yes	Yes	VIVEK SHARMA S	2020	Multi Sensors Data Fusion in Block Chain Technology for Remote Health Monitoring
	Yes	Yes	SWOMYA N	2023	A Strong Clinical data in to data warehouse in order to predict od disease using machine learning

Documents:

- **https://drive.google.com/file/d/14ygIolNvFAHsdWS8Su5KO8ZWqVQZ9N1b/view?usp=sharing**
- **https://drive.google.com/file/d/13rzaKVu4SvT17pF04u41AOd8Tx02NZCI/view?usp=sharing**

3. Number of research papers per teacher in the Journals notified on UGC website

Number of research papers per teacher in the Journals notified on UGC website						
Name of the author/s	**Department of the teacher**	**Title of paper**	**Name ofjournal**	**Year of publication**	**ISSN number**	**Link of the recognition in UGC enlistment of the Journal**
Dr Mahesh Kaluti	IS&E	Bandhan -An Approach To Reduce Human And Child Trafficking	International Research Journal of Modernization in Engineering Technology and Science	July-2023		https://drive.google.com/file/d/16AdA4te7AG7lVWxYSEjsYeiIeNRL4ctW/view?usp=sharing
Dr Mahesh Kaluti	IS&E	Efficient Multimedia Content Transmission Model for Disaster Management using Delay Tolerant Mobile Adhoc Networks	International Journal of Advanced Computer Science and Applications,	Aug-2023	ISSN 2156-5570	https://drive.google.com/file/d/1LLEo-3i-j4fJRHBLaZ2u6MEE_UurHzvC/view?usp=sharing
Dr Mahesh Kaluti	IS&E	Smart Sericulture System Using Iot	International Research Journal of Modernization in Engineering Technology and Science	July-2023	e-ISSN: 2582-5208	https://drive.google.com/file/d/1f7OHU0-HhQ_oNcBFFhDMZ-P3zBK5R5oz/view?usp=sharing
Dr Mahesh Kaluti	IS&E	An Smart Approach For Hiring Agricultural Machinery By Krishi Hire Web Portal	International Research Journal of Modernization in Engineering Technology and Science	July-2023	e-ISSN: 2582-5208	https://drive.google.com/file/d/1-jRulfhFA9fR5x-NEc6UBHHmjNyUUxq3/view?usp=sharing
Puttaswamy B S	IS&E	Identifying The Paddy Crop Disease In Mobile App Using Image Processing And Machine Learning Techniques	International Research Journal of Modernization in Engineering Technology and Science	September-2022	e-ISSN: 2582-5208	https://drive.google.com/file/d/1OJkwskW4Q6Jelf41YlsubwtQOKs2TIST/view?usp=drive_link
Puttaswamy B S	IS&E	An IoT based Smart Water Management	International Journal of All Research Education and	July 2022	ISSN: 2455-6211	https://drive.google.com/file/d/1q7VAGnWmUcho2

		System	Scientific Methods			GKM7CSXUw2RaKxfThgk/view?usp=drive_link
T M Geethanjali	IS&E	Semantic Segmentation of Kidney Tumors Using Variants of U-Net Architecture	International Journal of Online and Biomedical Engineering (iJOE)	July 2022	DOI: https://doi.org/10.3991/ijoe.v18i10.31347	https://drive.google.com/file/d/1dWJ9i-3hOBrW8PW6iOOJhw7wesuf_Odt/view?usp=drive_link
T M Geethanjali	IS&E	Semantic Segmentation of Kidney and Tumors using LinkNet Models	International Conference on Cognition And Recognition (ICCR)	January 2023	· DOI: 10.1007/978-3-031-22405-8_30	https://drive.google.com/file/d/1216cm8lu7aSCkbvdeYQe4JBzdPVEReYN/view?usp=drive_link
T M Geethanjali	IS&E	Matching of Contact and Contactless FingerPrint Using CNN Model	IOSR Journal of Engineering(IOSRJEN)	July 2022	volume 12, issue 7, ISSN(p):2278-8719	https://drive.google.com/file/d/13fHEKak2nv5QrDp1FFcn0nH9te1wdPPX/view?usp=drive_link
T M Geethanjali	IS&E	Two fold encryption and decryption using fingerprint	International Conference on Recent Trends in Science & Technology (ICRTST)	July 2022	Grenze ID: 01.GIJET.8.3.684	https://drive.google.com/file/d/1XrEB2uom6GcOCEbYWywVl-dtgudsmMzo/view?usp=drive_link
T M Geethanjali	IS&E	Semantic Segmentation of Pancreas in Computed Tomography Images using Convolutional Neural Networks	International Conference on Recent Trends in Science & Technology (ICRTST)	January 2023	Grenze ID:01.GIJET.9.1.627	https://drive.google.com/file/d/1RnQt4uHqnG9ZSQKSLdH_Qrk4rA9BFW4F/view?usp=drive_link
Rakshith N	IS&E	Hybrid Energy Harvesting Model for Attaining Energy Neutrality in IoT-based Smart Agricultural System	International Journal of Engineering Trends and Technology	July 2023	https://doi.org/10.14445/22315381/IJETT-V71I7P216	https://drive.google.com/file/d/12uDmfXYD4tmkrdoTo6chschrhpDTN4-N/view?usp=drive_link
Rakshith N	IS&E	Multi-objective Sand Cat Swarm Optimization Algorithm for Cluster	International Journal of Intelligent Engineering & Systems	August 2023	DOI: 10.22266/ijies2023.1231.27	https://drive.google.com/file/d/1b5FwRIIR56qW7YEJTOzyzd-

		Head and Routing Path Selection in WSN				_B1mupxnv/view?usp=drive_link
Dr.Minavathi	IS&E	Semantic Segmentation of Kidney Tumors Using Variants of U-Net Architecture	International Journal of Online and Biomedical Engineering (iJOE)	July 2022	DOI: https://doi.org/10.3991/ijoe.v18i10.31347	https://drive.google.com/file/d/1dWJ9i-3hOBrW8PW6iOOJhw7wesuf_Odt/view?usp=drive_link
Dr.Minavathi	IS&E	Semantic Segmentation of Kidney and Tumors using LinkNet Models	International Conference on Cognition And Recognition (ICCR)	January 2023	· DOI: 10.1007/978-3-031-22405-8_30	https://drive.google.com/file/d/1216cm8lu7aSCkbvdeYQe4JBzdPVEReYN/view?usp=drive_link
Dr.Minavathi	IS&E	Hybrid Energy Harvesting Model for Attaining Energy Neutrality in IoT-based Smart Agricultural System	International Journal of Engineering Trends and Technology	July 2023	https://doi.org/10.14445/22315381/IJETT-V71I7P216	https://drive.google.com/file/d/12uDmfXYD4tmkrdoTo6chschrhpDTN4-N/view?usp=drive_link
Dr.Minavathi	IS&E	Multi-objective Sand Cat Swarm Optimization Algorithm for Cluster Head and Routing Path Selection in WSN	International Journal of Intelligent Engineering & Systems	August 2023	DOI: 10.22266/ijies2023.1231.27	https://drive.google.com/file/d/1b5FwRIIR56qW7YEJTOzyzd-_B1mupxnv/view?usp=drive_link
Dr.Minavathi	IS&E	Detection of License Plate If Helmet Not Found	International Journal for Research in Applied Science & Engineering Technology (IJRASET)	Jul-22	ISSN: 2321-9653	https://drive.google.com/file/d/1FX-YDOyJ_1YnAWBiuV5Vbhaf4vuLSMXB/view?usp=sharing
Dr.Minavathi	IS&E	Nuclei Segmentation of Microscopic Images from Multiple Organs using Deep Learning	International Conference on Cognition And Recognition (ICCR)	January 2023	https://doi.org/10.1007/978-3-031-22405-8_23	https://drive.google.com/file/d/1l9msMahmFK1xt0v-24rFVs_k6p0ZZZDz/view?usp=sharing
Bramesh S M	IS&E	Identifying The Paddy Crop Disease In Mobile App Using Image	International Research Journal of Modernization in Engineering Technology and	September-2022	e-ISSN: 2582-5208	https://drive.google.com/file/d/1OJkwskW4Q6Jelf41YlsubwtQOKs2TIST/vie

		Processing And Machine Learning Techniques	Science			w?usp=drive_link
Bramesh S M	IS&E	An Efficient and Scalable Technique for Clustering Comorbidity Patterns of Diabetic Patients from Clinical Datasets	I.J. Modern Education and Computer Science	December-2022	DOI: 10.5815/ijmecs.2022.06.04	https://drive.google.com/file/d/1iTd_-ihodIRypBhZzsgM76MFcRUiqpEh/view?usp=sharing
Bramesh S M	IS&E	An Effective Rule Based Approach For Identification Of Comorbidity Patterns In Diabetic Patients	Indian Journal of Computer Science and Engineering (IJCSE)	Jul-Aug 2022	DOI : 10.21817/indjcse/2022/v13i4/221304054	https://drive.google.com/file/d/1fsU1UeLdfAE71NdxnqTmm1SQ1EREffYU/view?usp=sharing

$$\frac{\text{No. of publications in UGC notified journals during the last year}}{\text{Average No. of full time teachers during the last year}} = \frac{22}{10} = 2.2$$

4. Total number of books and chapters in edited volumes / books published, and papers in national/international conference-proceedings

Annexure – 4.3

Total number of books and chapters in edited volumes / books published, and papers in national/international conference-proceedings

Sl. No.	Name of the teacher	Title of the book/chapter spublished	Title of the paper	Title of the proceedingsof the conference	Name of the conference	National / International	Year of publication	ISBN/ISSN number of the proceeding	Affiliating Institute at the time of publication	Name of the publisher
Since in only Journals' the papers were published there is no books chapter.										

5. Bibliometrics of the publications during the last five years based on average Citation index in Scopus/ Web of Science

Annexure – 4.4

Bibliometrics of the publications during the last five years based on average Citation index in Scopus/ Web of Science

Title of the paper	Name of the author	Title of the journal	Year of publication	Citation Index	Institutional affiliation as mentioned in the publication	Number of citations excluding self-citations
Efficient anomaly detection using deer hunting optimization algorithm via adaptive deep belief neural network in mobile network	Prabhakar T S, Dr.Veena M N	Journal of Ambient Intelligence and Humanized Computing	2022	4	PES College of Engineering, Mandya	3

6. Bibliometrics of the publications during the last year based on Scopus/ Web of Science – h-index of the Institution

Annexure – 4.5

Bibliometrics of the publications during the last year based on Scopus/ Web of Science – h-index of the Institution

Title of the paper	Name of the author	Title of the journal	Year of publication	h-index of Scopus	h-index of Web of Science
Efficient anomaly detection using deer hunting optimization algorithm via adaptive deep belief neural network in mobile network	Prabhakar T S, Dr.Veena M N	Journal of Ambient Intelligence and Humanized Computing	2022	2	

7. Percentage of teachers awarded national / international fellowship for advanced studies/research during the year

Annexure – 4.6

Percentage of teachers awarded national / international fellowship for advanced studies/research during the year

Name of the teacher awarded national/ international fellowship/financial support	Name of the award/fellowship	Year of Award	Awarding Agency
NIL			

Documents:

- e-copies of the award letters of the teachers
- List of teachers and their international fellowship details

8. Percentage of teachers having research projects during the year

Annexure – 4.7

Percentage of teachers having research projects during the year

Name of the Project/ Endowments, Chairs	Name of the Principal Investigator/ Co-Investigator	Name of the Funding agency	Type (Government/ Non-Government)	Department of Principal Investigator/ Co Investigator	Year of Award	Funds provided (INR in lakhs)	Duration of the project
NIL							

Documents

- e-copies of the grant award letters for research projects sponsored by non-government.
- Names of teachers having research projects
- List of research projects and funding details
- Institutional data in prescribed format

9. Research projects funded by government and non-government

One of the faculties from the department has applied for VGST project.

10. Revenue generated from consultancy and corporate training during the last year (INR in Lakhs) and Total amount spent on developing facilities, training teachers and staff for undertaking consultancy during the year

Annexure – 4.8

Revenue generated from consultancy and corporate training during the last year (INR in Lakhs) and Total amount spent on developing facilities, training teachers and staff for undertaking consultancy during the year

Revenue generated from consultancy during the year

Name of the teacher-consultants	Name of the facility anddepartment	Name of consultancy project	Consulting/Sponsoring agency with contact details	Year	Revenue generated (INR in Lakhs)
NIL					

Revenue generated from corporate training during the year

Names of the teacher-consultants/corporate trainers	Title of the corporate training program	Agency seeking training withcontact details	Year	Revenue generated (amount in rupees)	Number of trainees
NIL					

Documents:

- Audited statements of accounts indicating the revenue generated through consultancy
- Institutional data in prescribed format

11. Number of Collaborative activities per year for research/ faculty exchange/ student exchange / internship/ on –the-job training/ project work

Annexure – 4.9

Number of Collaborative activities per year for research/ faculty exchange/ student exchange / internship/ on –the-job training/ project work

Sl No	Title of the collaborative activity	Name of the collaborating agency with contact details	Name of the participant	Year of collaboration	Duration	Nature of theactivity	Link of the relevantdocument
1	Internship	Edu skills	Aravind S C		60 days	Internship	https://drive.google.com/file/d/1CEs5iyUgYKZOuMUMToucxgbhcTnfzgXA/view?usp=sharing
2	Internship	EduSkills foundation	Madhu Chandra S M		60 days	Internship	https://drive.google.com/file/d/1HDYyGnfbyTkLvVVZmz3e8KgRhiTPZtJq/view?usp=sharing
3	Internship	Prinston Smart Engineering	Manoj.H.R		60 days	Internship	https://drive.google.com/file/d/1v7Bl60oq1U7bIy65HlCXAPA6BrnqWa4h/view?usp=sharing
4	Internship	Compsoft Technology	Sarvesh		45 days	Internship	https://drive.google.com/file/d/14dqLOYBYB_MgV7y7J5WmmcXrWeuimKtM/view?usp=sharing
5	Internship	Edu skills	Thanush K Y		90 days	Internship	https://drive.google.com/file/d/1hX8hPLtZKREM_Lz4NzKE23c0OYAFZZcy/view?usp=sharing
6	Internship	Edu skills	Manasa M P		60 days	Internship	https://drive.google.com/file/d/1JwV6iOikyXjhCnrAS_R0-pMtmpFZNm0U/view?usp=sharing
7	Internship	Cranes Varsity	M M Aatifulla Baig		30 days	Internship	https://drive.google.com/file/d/1FxzteBa6FiD8njFVdfpw6Oq2UpwgR_3x/view?usp=sharing
8	Internship	Eduskills	Aishwarya L		10 weeks	Internship	https://drive.google.com/file/d/14Ce2AUG9NwVZRXJzC46bp66VNFy9dwnN/view?usp=sharing
9	Internship	EduSkills	Akhila B K		10 weeks	Internship	https://drive.google.com/file/d/1yoh_NuTjta05DUzOpRRf-H6fhGB7ngNZ/view?usp=sharing
10	Internship	Volley.com	Akshay Kumar		01Year	Internship	https://drive.google.com/file/d/1GIp7Zf-nduOWS5mGpdU6Vww_X4rS_EbT/view?usp=sharing

11	Internship	Edu Skills	Amrita Paul		10 weeks	Internship	https://drive.google.com/file/d/1cOpLvtIfS5Kl_QbDqO1gBKA5rEKgGucZ/view?usp=sharing
12	Internship	Teachnook/ Immensphere	Amruth J Shetty		60 days	Internship	https://drive.google.com/file/d/19UUBIrwDlhlqSGjdujbkB8nZmq2fBEHo/view?usp=sharing
13	Internship	Eduskills	Avida Shetty M S		10 weeks	Internship	https://drive.google.com/file/d/1aGdLMotpsMB22m30wmpRnRrveWcssfFt/view?usp=sharing
14	Internship	Eduskills	Ayush		60 days	Internship	https://drive.google.com/file/d/18xLnQJGzkfpnTYHaWTASiNULl4VF5kdf/view?usp=sharing
15	Internship	Eduskills	Bhavana K		60 days	Internship	https://drive.google.com/file/d/1oG5UJmFpqenJn0ZORStzNsyui0buVjtm/view?usp=sharing
16	Internship	Eduskills	Bhavana R		90 days	Internship	https://drive.google.com/file/d/1vAe3xlmAVz0ud7krkpwdrXPsdQyr9HEM/view?usp=sharing
17	Internship	Eduskills	Bhavani P L		10 Weeks	Internship	https://drive.google.com/file/d/1LSCUcIu3GaykTlaP20Kk_Cju2UE_FUd9/view?usp=sharing
18	Internship	Eduskills	Chaitrashree		70 days	Internship	https://drive.google.com/file/d/1w64nBUWgdHvq1MGS8c2XEz5hTpUOBIVa/view?usp=sharing
19	Internship	Eduskills	Charan C V		70 days	Internship	https://drive.google.com/file/d/1eCFt_AXlfAXmtdyI74nC4tIv6ztI7CaO/view?usp=sharing
20	Internship	Edu Skills	Chitritha K		70 days	Internship	https://drive.google.com/file/d/1DOxMDQ9JB0EOGpdPMsQmbxVp89rQg5-X/view?usp=sharing
22	Internship	Edu Skills	Darshan M		10 Weeks	Internship	https://drive.google.com/file/d/1Bl16TO-189mGbG4Sc6ABGtGhs04FqxEn/view?usp=sharing
23	Internship	Edu Skills	Divya S		60 days	Internship	https://drive.google.com/file/d/1dPrM6F2SaBRu8pkM_WZTR8XVUD1Vt90a/view?usp=sharing
24	Internship	Eduskills	Gagana M P		75 days	Internship	https://drive.google.com/file/d/1r-PnD6OS4uNOVSOEQm2wlqQMDsMJc91O/view?usp=sharing
25	Internship	Eduskills	Ganga C		70 days	Internship	https://drive.google.com/file/d/1XVneMeVdZoohIGcFxBqU4_eFOo1KhfjD/view?usp=sharing
26	Internship	Eduskills	Gayathri S R		50 days	Internship	https://drive.google.com/file/d/1PdUZBuz6-LaV5uLO-CtlCONehzmnnfzQ/view?usp=sharing
27	Internship	EduSkills	H P Manoj		10 weeks	Internship	https://drive.google.com/file/d/1Hwji_GfUo9i40PlZb0614crcuy6u7auW/view?usp=sharing

29	Internship	Eduskills	Kavanachandra_S		58 days	Internship	https://drive.google.com/file/d/1Z9-_stckhiglZdRbhqs4eS4gsaiYImgq/view?usp=sharing
30	Internship	Eduskills	Koushik Kumar M S		52 days	Internship	https://drive.google.com/file/d/105xDTs5d-xJZ5J6gnobPws9kTRcQTvQh/view?usp=sharing
31	Internship	Eduskills	Kruthika M		70 days	Internship	https://drive.google.com/file/d/13t5eCP1-bgxrhMZnsuV55pOTdHwCPEwf/view?usp=sharing
32	Internship	Eduskills	Kushal K		70 days	Internship	https://drive.google.com/file/d/1UD7r5jseB169tyxiC4FppTd9Ag1rYotO/view?usp=sharing
33	Internship	Eduskills	Likhith P		50 days	Internship	https://drive.google.com/file/d/1ydhmxACzVuzmMxEPYJNu5f7d_sw8kUk2/view?usp=sharing
34	Internship	Eduskills	Maneesh gowda M M		60 days	Internship	https://drive.google.com/file/d/1nldWcFLTGrWvTXnnOGMHvlIvswb8zN8t/view?usp=sharing
35	Internship	Ai Variant	MD Aman Alam		273 days	Internship	https://drive.google.com/file/d/16187spaHgMdVQdMdCiDc4jVipYq7j0gz/view?usp=sharing
36	Internship	Eduskills	Meghana R		70 days	Internship	https://drive.google.com/file/d/1MhVVwILHWJ_D9CbDyKLvGuhf6hIG_t1p/view?usp=sharing
37	Internship	Eduskills	Mohammed Farhan M		55 days	Internship	https://drive.google.com/file/d/1ql7Kmqood4tl8vXoWVyL1OnHsDJQP-hi/view?usp=sharing
38	Internship	Eduskills	Mohammed Saquib		75 days	Internship	https://drive.google.com/file/d/1jj2xszooH5bb8NAYyB_hSg1EGPK8epdx/view?usp=sharing
39	Internship	Eduskills	Monish M B K		70 days	Internship	https://drive.google.com/file/d/1PhJoFXx1llMoh-tQAhONHCBYJ3200xhC/view?usp=sharing
41	Internship	Eduskills	Navya prabhu K P		60 days	Internship	https://drive.google.com/file/d/1NaqlW-ToVcI6s_2oZ-gsEH5o5etCqyDp/view?usp=sharing
42	Internship	Eduskills	Nikitha N		70 days	Internship	https://drive.google.com/file/d/1KEkG1kHRCO-1BaSsxcCv3BL7fb_Xg-Fy/view?usp=sharing
43	Internship	Samsung Electro-Mechanics	Nishant Nayan		175 days	Internship	https://drive.google.com/file/d/1ry1ttw2Ooe0BNQuq2vVZCh-HDHEyduiP/view?usp=sharing
44	Internship	Eduskills	Nithin H L		60 days	Internship	https://drive.google.com/file/d/1gjz8R8KZeJWgPOGQ-OWld6Dyj49VUaxZ/view?usp=sharing

45	Internship	Bizdev	R Suryakaran		60 days	Internship	https://drive.google.com/file/d/17O7bK0z9v5Yx_pI8NvjgHnM3dGjmNmw9/view?usp=sharing
46	Internship	Eduskills	Rakesh Sharma K		10weeks	Internship	https://drive.google.com/file/d/1gWHURWZnnBGjyYPyBbhXXWvBalKCdfMV/view?usp=sharing
47	Internship	Eduskills	Rohith RM		10 weeks	Internship	https://drive.google.com/file/d/1h1nsNm7OHB8ygZyika9I7nMEAq2NN3mm/view?usp=sharing
48	Internship	Eduskills	Ruchitha C P		30 days	Internship	https://drive.google.com/file/d/1c-n6V3bLdbRzICBHCeUpIsG61dNWtgpm/view?usp=sharing
49	Internship	Swym Technologies	Samarth U S katti		195 days	Internship	https://drive.google.com/file/d/1Nh-OJ7KJuWQPYOQwLqpfq0LJPT-O67CG/view?usp=sharing
50	Internship	Eduskills	Sangeetha B S		70 days	Internship	https://drive.google.com/file/d/1aEZPUXjDqLL0C-VVXtpEzTrULdnRtJ2a/view?usp=sharing
51	Internship	Eduskills	Shobith M Gowda		70 days	Internship	https://drive.google.com/file/d/1ARI61fDTuKUTema53Djr1u72LOvbBIWQ/view?usp=sharing
52	Internship	Kodnest	Shrey Gupta		60 days	Internship	https://drive.google.com/file/d/14KKAbMdrNRd0JyvAk2ds11huxSxLkQ0_/view?usp=sharing
53	Internship	EduSkills	Sinchana C		70 days	Internship	https://drive.google.com/file/d/1HuYjoJp_EzgWJn8AHyUl7I6zgwzKKKFe/view?usp=sharing
54	Internship	EduSkills	S K Sayantani		70 days	Internship	https://drive.google.com/file/d/1X9KIe7on5ALmruw9qdQjQu7DQazPxuR-/view?usp=sharing
55	Internship	Eduskills	Skanda B K		70 days	Internship	https://drive.google.com/file/d/1OJKHjK25lc3csDkU4DtSD_HYPfza_NYo/view?usp=sharing
56	Internship	Eduskills	Sohan M Singh		70 days	Internship	https://drive.google.com/file/d/12sLpdUJBcg57rvA9t2RJGuTlLFngCX7j/view?usp=sharing
57	Internship	Prinston Smart Engineers	Sushiljogi M		60 days	Internship	https://drive.google.com/file/d/1Q9aW9ZLO1XhG_OIE25BUrWTlQqYq08kv/view?usp=sharing
58	Internship	Eduskills	Thanush R		70 days	Internship	https://drive.google.com/file/d/1FG7wpEz4E4t9vH1uvXtGmrMRooc_sbIZ/view?usp=sharing
59	Internship	Eduskills	Thejeshvar V M		55 days	Internship	https://drive.google.com/file/d/1RnT1vLDbCUejPGPBa6LdhcQu1I_DvmNx/view?usp=sharing
60	Internship	Eduskills	Varshini K N		60 days	Internship	https://drive.google.com/file/d/1WQhJ4POsY5zTAhSGjWO6eS__wCjfh5ei/view?usp=sharing

61	Internship	Eduskills	Varun K		10 weeks	Internship	https://drive.google.com/file/d/1rZib95hxv3t-5D1GSS38Rk1qEyutXYHR/view?usp=sharing
62	Internship	Eduskills	Venugopal B		60 days	Internship	https://drive.google.com/file/d/1ONHqUz91g7GBVnpyB_01ZUGXSzDGC_rQ/view?usp=sharing
63	Internship	Eduskills	Vighnesha Bhakta KP		70 days	Internship	https://drive.google.com/file/d/1Cn5yGfLXwUmR-LLwT-O80JHAbE9ZPq4U/view?usp=sharing
64	Internship	Eduskills	Yashas Raj D		70 days	Internship	https://drive.google.com/file/d/1Zi2RYaOpPvTni2x5jSDwfg9TgaE1Avgr/view?usp=sharing
65	Internship	Eduskills	Yashashwini K V		60 days	Internship	https://drive.google.com/file/d/1Bs2Gh3MZzsT3jxuLty5sW3ds0kogJxms/view?usp=sharing
66	Internship	Eduskills	Harshitha U		10weeks	Internship	https://drive.google.com/file/d/1WqlUP5wPh2ZzSbaEHjAoagT3w2SpoN9g/view?usp=sharing
67	Internship	Eduskills	Kruthika H D		10 weeks	Internship	https://drive.google.com/file/d/1bxpk5RExZG3YG3h9vddBO_2Bjv6jk0Yo/view?usp=sharing
68	Internship	AWS academy	Naveen Kumar P		70 days	Internship	https://drive.google.com/file/d/19WJUd1xYDOVFGO0tPvPF-5TreVQ4R5u1/view?usp=sharing
69	Internship	AWS academy	Sushmitha N		70 days	Internship	https://drive.google.com/file/d/1Q7Unwx7oXD7XLOqNjGWV7iJhCnwtDE2E/view?usp=sharing

Documents:

- Copies of collaboration, cross verify with collaborating institutional website.

12. Number of functional MoUs with institutions of national, international importance, other universities, industries, corporate houses etc. during the current year(only functional MOUs with ongoing activities to be considered)

Number of functional MoUs with institutions of national, international importance, other universities, industries, corporate houses etc. during the current year(only functional MOUs with ongoing activities to be considered)					
Organisation withwhich MoU is signed	**Name of the institution/ industry/ corporate house**	**Year of signing MoU**	**Duration**	**List the actual activitiesunder each MOU year wise**	**Number of students/teachers participated under MoUs**
Srichid Technologies Private Limited, Bangalore	PES College of Engineering, Mandya	August 2019	2Years + 1Year	Placement Assistance, Internship	20
UiPathInc		April 2019	NA	RPA Course	02
EduSkills		Jan 2022	Jan 2025	Internship	50
KIMO		Sep 2022	Jan 2023	Bigdata	00
Documents: • https://drive.google.com/file/d/19yWy5Atv9LRAFC3xtnF9Eu5pHd4ldQHY/view?usp=sharing					

13. No. of Proposals sent for funding agencies - One

14. No. of patents applied/sanctioned till date - Two

V: Students' Performance, Student Support and Progression, Student Support Systems

1. Student Details

Annexure 5.1						
Student Details						
Provide the following details of students enrolled in the college during the last academic year (a)						
Programme		**From the State Where College is Located**	**From Other States of India**	**NRI Students**	**Foreign Students**	**Total**
UG	**Male**	36	02			38
	Female	24				24

Programme		**2022-23**
SC	**Male**	**03**
	Female	**01**
	Others	
ST	**Male**	**01**
	Female	
	Others	
OBC	**Male**	**7**
	Female	**6**
	Others	
General	**Male**	**23**
	Female	**18**
	Others	
Others(SNQ)	**Male**	**03**
	Female	
	Others	
Total		**62**

2. Student admission details

Description	2022-23
Sanctioned intake of the program (*N*)	60
Total number of students admitted in first year *minus* number of students migrated to otherprograms/institutions plus no. of students migrated to this program (*N*1)	62
Number of students admitted in 2nd year in the same batch via lateral entry (*N*2)	6
Separate division students, if applicable (N3)	Nil
Total number of students admitted in the Program (*N*1 + *N*2 + N3)	68

Annexure 5.2(b)

Academic Year: 2022-23

Semester	Students		Total No. of Students
	Boys	Girls	
I	38	24	62
III	54	16	70
V	31	25	56
VII	41	28	69

3. Enrolment Ratio

Enrolment Ratio

Assessment Year	*N*	*N*1	Enrollment Ratio= (□□/□) × □□□
2022-23	60	62	100%
Average(S1)			

4. Number of students who have successfully graduated without backlog in any semester/year of study

Annexure 5.4					
Number of students who have successfully graduated without backlog in any semester/year of study					
Year of entry	***N*1 + *N*2 + N3**	**Number of students who have successfully graduated without backlogs in any semester/year of study**			
		I Year	II Year	III Year	IV Year
2022-23	67	44	40	35	34

5. Number of students who have successfully graduated in stipulated period of study

Annexure 5.5					
Number of students who have successfully graduated in stipulated period of study					
Year of entry	***N*1 + *N*2 + N3**	**Number of students who have successfully graduated with backlogs in any semester/year of study**			
		I Year	II Year	III Year	IV Year
2022-23	67	62	66	66	65

6. Success Rate in the stipulated period of the program

Success Rate in the stipulated period of the program			
Success rate (without backlogs)			
Item	**Latest Year of Graduation, LYG-2021-22 (2018-19)**	**Latest Year of Graduation, LYG-2020-21 (2017-18)**	**Latest Year of Graduation, LYG-2019-20(2016-17)**
Number of students admitted in the corresponding First Year + admitted in 2nd year via lateral entry and separate division, if applicable = A	64	30	37
Number of students who have graduated without backlogs in thestipulated period = B	41	14	21
Success Index (SI) = B/A = S2	0.64	0.466	0.567

Success rate (with backlogs)	
Item	**Latest Year of Graduation, LYG-2022-23**
Number of students admitted in the corresponding First Year + admitted in 2nd year via lateral entry and separate division, if applicable = A	69
Number of students who have graduated in the stipulated period = B	58
Success Index (SI) = B/A=S3	0.84

7. Academic performance in first year

	Annexure –5.7
Academic performance in first year	
Academic Performance	**Year of Admission**
	2022-23
Mean of CGPA or mean percentage of all successful students(X)	7.40
Total Number of successful students(Y)	62
Total Number of students appeared in the examination(Z)	64
API [X*(Y/Z)] = S4	7.16

8. Academic performance in second year

	Annexure –5.8
Academic performance in second year	
Academic Performance	**Year of Admission**
	2022-23
Mean of CGPA or Mean Percentage of all successful students (X)	7.08
Total no. of successful students (Y)	66
Total no. of students appeared in the examination (Z)	67
API = x* (Y/Z) = S5	6.97

9. Placement, higher studies and entrepreneurship details

Placement, higher studies and entrepreneurship details			
Item	Year of Graduation		
	2022-23		
Total No. of Final Year Students (N)	69		
No. of students placed in companies or Government Sector (x)	42		
No. of students admitted to higher studies with valid qualifying scores (GATE or equivalent State or National Level Tests, GRE, GMAT etc.) (y)			
No. of students turned entrepreneur in engineering/technology (z)			
x + y + z =	42		
Placement Index : (x + y + z)/N =	0.61		

Year	Name of student placedand contact details	USN	Name of the employer with contactdetails	Pay package at appointment
2022-23	M M Aatifulla Baig	4PS19IS001	GenC	4 LPA
	Aishwarya L	4PS19IS003	Capgemini	4.25 LPA
	Akhila B k	4PS19IS004	ITC Infotech/GenC/DXC Technology	4.25 LPA/4 LPA/4LPA
	Amrita Paul	4PS19IS006	Accenture/DXC Technology	4.5 LPA/4 LPA
	Avida Shetty M S	4PS19IS009	ITC Infotech/L&T Technology Services Limited	4.25 LPA/4LPA
	Bhavana K	4PS19IS011	Valtech	6 LPA
	Bhavana R	4PS19IS012	ITC Infotech/CMS Computers Limited	4.25 LPA/5.5 LPA
	Bhavani P L	4PS19IS013	Accenture	4.5 LPA
	D. Shriyans Dhruv	4PS19IS017	AXA XL/ITC Infotech/ Capgemini/ 6d Technologies/ Valtech	6.33 LPA/4.25 LPA/4.25 LPA/6 LPA/6 LPA
	Darshan M	4PS19IS018	L&T Technology Services Limited	4 LPA
	Gagana M P	4PS19IS021	TCS Digital/ITC Infotech/GenC	7.6 LPA/4.25 LPA/4 LPA
	Ganga C	4PS19IS022	Accenture	4.5 LPA
	Gayathri S R	4PS19IS023	Accenture	4.5 LPA
	H P Manoj	4PS19IS024	L&T Technology Services Limited	4 LPA
	Jyothi Ram	4PS19IS025	Light & Wonder	8.76LPA
	Kavana Chandra S	4PS19IS026	Capgemini	4.25 LPA
	Kruthika M	4PS19IS028	X-workZ	3 LPA
	Likhith P	4PS19IS030	TCS Digital/tricon Infotech	7.6 LPA/5.5 LPA
	Meghana R	4PS19IS033	Srichid Academy	5 LPA
	Mohammed Farhan M	4PS19IS034	tricon Infotech	6 LPA
	Monish M.B.K	4PS19IS036	Global Logic/Capgemini/ L&T Technology Services Limited/TCS Ninja	5.5 LPA/4.25 LPA/4 LPA/3.36 LPA
	N S Tinu reddy	4PS19is037	Intellipaat/Skolar	9 LPA/6 LPA
	Navya Prabhu KP	4PS19IS038	GenC	4 LPA
	Nikitha N	4PS19IS039	Capgemini/GenC	4.25 LPA/4 LPA
	Nishant Nayan	4PS19IS040	SAMSUNG UI Developer	11 LPA
	Rakesh Sharma K	4PS19IS044	TCS Digital/Cognizant GenC	7.6 LPA/4 LPA
	Rohith R M	4PS19IS045	ACCOLITE DIGTAL	6 LPA

	Ruchitha C P	4PS19IS046	TCS Digital/GenC/Capgemini	7.6 LPA/4 LPA/4.25 LPA
	Samarth Katti	4PS19IS047	SWYM	17 LPA
	Sangeetha B S	4PS19IS048	Capgemini	4.25 LPA
	Shrey Gupta	4PS19IS050	VIATRIS/KodNest	5.0 LPA/3.5 LPA
	Sk Sayantani	4PS19IS052	Brillio /Accenture	8.50 LPA/4.5 LPA
	Skanda B K	4PS19IS053	Capgemini/ DXC Technology	4.25 LPA/ 4 LPA
	Sohan M Singh	4PS19IS054	L&T Technology Services Limited	4 LPA
	Thejeshvar V M	4PS19IS057	RELX/Deloitte	8.1 LPA/8.08 LPA
	Varshini K N	4PS19IS059	Valtech	6 LPA
	Vighnesha Bhakta K P	4PS19IS062	Valtech	6 LPA
	Yashas Raj D	4PS19IS063	Cognizant	4.25 LPA
	Yashaswini K V	4PS19IS064	JOSH Mithra	4 LPA
	Harshitha U	4PS20IS400	Immensphere	3.5 LPA
	Kruthika H D	4PS20IS401	Srichid Academy	5 LPA
	Sushmitha N	4PS20IS403	Immensphere	3.5 LPA

Documents:

- https://drive.google.com/file/d/1xgFKCfwvGYgDIZOSLsLfS7-C5LEqX04n/view?usp=sharing
- https://drive.google.com/file/d/1awRWtmLbiesi7tkrRtSTLi9NYUZeZpVh/view?usp=drive_link

10. Percentage of student progression to higher education

Annexure 5.10(a)			
Percentage of student progression to higher education (previous graduating batch) (After UG)			
Name of student enrolling into higher education	**Program graduated from**	**Name of institution joined**	**Name of programme admitted to**
Since almost 88% of students are get placed and all of them are working in industry.			

Documents:

- Upload supporting data for student/alumni in prescribed format.
- Institutional data in prescribed format.

11. Professional Activities

1) **https://drive.google.com/file/d/1qAe4j5q41BWbPd9is0LdfVFJJup9bO-6/view?usp=sharing**

12. Participation

1) **https://drive.google.com/file/d/1NNUBgnXY2EY2SMSJD6TdAyMfEJRyZHJF/view?usp=sharing**

13. Average percentage of students qualifying in state/ national/ international level examinations during the last five years (eg: IIT/JAM/NET/SLET/GATE/GMAT/CAT/ GRE/TOEFL/Civil Services/State government examinations etc.)

Annexure 5.11														
Average percentage of students qualifying in state/ national/ international level examinations during the last five years (eg: IIT/JAM/NET/SLET/GATE/GMAT/CAT/ GRE/TOEFL/Civil Services/State government examinations etc.)														
Year	**Registration number/roll number forthe exam**	**Number of students selected/ qualifying**												
		NET	IIT	SLET	GATE	GMAT	CAT	GRE	JAM	IELET	TOEFL	Civil Services	State government examinations	Other examinations conducted by the State / Central Government Agencies (Specify)
NIL														
Documents: • Upload supporting data for the same. • Institutional data in prescribed format.														

14. Number of awards/medals for outstanding performance in sports/cultural activities at inter-university / state /national / international events(award for a team event should be counted as one) during the year

Annexure – 5.12

Number of awards/medals for outstanding performance in sports/cultural activities at inter-university / state /national / international events(award for a team event should be counted as one) during the year (10)

Year	Name of the award/ medal	Team / Individual	inter-university / state / National/ International	Name of the event	Name of the student
2022-23		Team	National	National Level Volleyball	Kruthika M
2022-23		Team	State	Cricket	Abhiskek N

15. Scholarship Details (SC/ST and others)

1) **https://docs.google.com/spreadsheets/d/1XckJppvpnmlI252ffvG61awSBG9gTJJp/edit?usp=sharing&ouid=100643837356048439976&rtpof=true&sd=true**

16. AICTE Activity Points- Activity Summary Sheet

1) **https://docs.google.com/spreadsheets/d/1fvXCyGXsQB6uS1lqKOmJIAUwcm4Tu2DK/edit?usp=sharing&ouid=100643837356048439976&rtpof=true&sd=true**

Placement, higher studies and entrepreneurship details

Item	Year of Graduation		
	2022-23		
Total No. of Final Year Students (N)	69		
No. of students placed in companies or Government Sector (x)	42		

No. of students admitted to higher studies with valid qualifying scores (GATE or equivalent State or National Level Tests, GRE, GMAT etc.) (y)			
No. of students turned entrepreneur in engineering/technology (z)			
x + y + z =	42		
Placement Index : (x + y + z)/N =	0.61		

VI: Faculty Information and Contributions

1. Faculty Information

Annexure – 6.1

Faculty Information

Name of the Faculty Member	Qualification			Association with the Institution	Designation	Date on which Designated as Professor/ Associate Professor	Date of Joining the Institution	Department	Specialization	Academic Research			Currently Associated(Y/N) Date of Leaving (In case Currently Associated Is ("No")	Nature of Association (Regular/ Contract)
	Degree (highest degree)	University	Year of attaining higher qualification							Research Paper Publications	Ph. D. Guidance	Faculty Receiving Ph.D. during the Assessment Years		
Dr. Anitha M L	Ph.D.	Mysore	2017	Y	Professor & Head	June 2017	1994	IS & E	Computer Vision	03	04	-	Y	Regular
Dr. Vinay S	Ph.D.	Manipal	2015	Y	Professor	June 2017	22-06-2017	IS & E	Machine Learning	-	-	-	N 22/07/2021	Regular
Dr. Minavathi	Ph.D	Mysore	2014	Y	Professor	2014	24-06-1996	IS & E	Medical Image Processing	-	-	-	N	Regular
M R Suresh	M. Tech	Mysore	1999	Y	Assoc. Prof.	2015	21-09-1998	IS & E	Software Engineering	01	-	-	Y	Regular

Dr. Sanjay H M	Ph.D.	SSAHE	2019	N	Assoc. Prof.	2019	05-02-2012	IS & E	Cloud Computing	-	-	-	N 28/02/2022	-
Dr. Mahesh Kaluti	Ph.D.	DKNMU	2017	Y	Assoc. Prof.	July 2017	Jul 2017	IS & E	Computer Networking	05	04	-	Y	Regular
T M Geethanjali	M. Tech	VTU	2010	Y	Asst. Prof.		26-03-2002	IS & E	Computer Science and Engineering	10	-	-	Y	Regular
T S Prabhakar	M. Tech	VTU	2009	Y	Asst. Prof.		04-12-2004	IS & E	Network Engineering	03	-	-	Y	Regular
Bramesh S M	M. Tech	VTU	2014	Y	Asst. Prof.		20-08-2008	IS & E	Software Engineering	06	-	-	Y	Regular
Rakshith N	M. Tech	VTU	2015	Y	Asst. Prof.		27-02-2017	IS & E	Computer Networks	02	-	-	Y	Regular
B S Puttaswamy	M. Tech	VTU	2015	Y	Asst. Prof.		20-08-2008	IS & E	Software Engineering	04	-	-	Y	Regular
Rakshitha M S	M. Tech	Mysore	2012	N	Asst. Prof.		10-08-2012	IS & E	Computer Science and Technology	-			N 30/04/2022	-
Harshith K S	M. Tech	VTU	2017	Y	Asst. Prof.		18-04-2022	IS & E	Computer Science and Engineering	01	-	-	Y	Regular
Ruchitha K J	M. Tech	VTU	2022	Y	Asst. Prof.		05-12-2022	IS & E	Computer Science and Engineering	01	-	-	Y	Regular

2022-23	**Professor**				**Associate Professor**				**Assistant Professor**			
	Male	**Female**	**Others**	**Total**	**Male**	**Female**	**Others**	**Total**	**Male**	**Female**	**Others**	**Total**
Sanctioned by the Management / Society/or other Authorized Body				01				02			07	10
Recruited				01				02			07	10
Yet to Recruit				00				00			00	00
On Contract												

2. Student-Faculty Ratio

Annexure – 6.2
Student-Faculty Ratio

1. No. of UG Programs in the Department (n):
2. No. of PG Programs in the Department (m):
3. No. of Students in UG 2nd Year= u1
4. No. of Students in UG 3rd Year= u2
5. No. of Students in UG 4th Year= u3
6. No. of Students in PG 1st Year= p1
7. No. of Students in PG 2nd Year= p2

No. of Students = Sanctioned Intake + Actual admitted lateral entry students
(The above data to be provided considering all the UG and PG programs of the department)

- **S=**Number of Students in the Department = UG1+UG2+UG3+PG1+PG2
- **F =** Total Number of Faculty Members in the Department (excluding first year faculty)
- **Student Faculty Ratio (SFR) = S / F**

Note:
All the faculty whether regular or contractual (except Part-Time), will be considered. The contractual faculty (doing away with the terminology of visiting/adjunct faculty, whatsoever) who have taught for 2 consecutive semesters in the corresponding academic year on full time basis shall be considered for the purpose of calculation in the Faculty Student Ratio. However, following will be ensured in case of contractual faculty:

1. Shall have the AICTE prescribed qualifications and experience.
2. Shall be appointed on full time basis and worked for consecutive two semesters during the particular academic year under consideration.
3. Should have gone through an appropriate process of selection and the records of the sameshall be made available

Marks to be given proportionally from a maximum of 10 to a minimum of 5 for average SFR between15:1 to 25:1,and zero for average SFR higher than 25:1

Year	**CAY 2022 - 23**
u1	66
u2	66
u3	64
UG1	**196**
Total No. of Students in the Department **(S)**	**S1 = 196**
No. of Faculty in theDepartment **(F)**	**F1 = 10**
Student Faculty Ration (SFR)	**SFR1 = 19.60**

Annexure – 6.3				
First Year Student-Faculty Ratio				
Year	**Number of students (approvedintake strength)**	**Number of faculty members(considering fractional load)**	**FYSFR**	**Assessment = (5 ×20)/ FYSFR (Limited to Max. 5)**
CAY	**NA**			
CAY*m*1				
CAYm2				
Average (F2)				

Marks to be given proportionally from a maximum of 10 to a minimum of 5 for average SFR between 15:1 to 25:1,and zero for average SFR higher than 25:1

4. Faculty Cadre Proportion

Annexure – 6.4
Faculty Cadre Proportion

a. The reference Faculty cadre proportion is 1(F1):2(F2):6(F3)
b. F1: Number of Professors required = 1/9 x Number of Faculty required to comply with 20:1 Student-Faculty ratio based on no. of students (N) as per Annexure – 6.1
c. F2: Number of Associate Professors required = 2/9 x Number of Faculty required to comply with 20:1Student-Faculty ratio based on no. of students (N) Annexure – 6.1
d. F3: Number of Assistant Professors required = 6/9 x Number of Faculty required to comply with 20:1Student-Faculty ratio based on no. of students (N) Annexure – 6.1
e. If AF1 = AF2= 0 then zero marks
f. Maximum marks to be limited if it exceeds 20

Year	Professors		Associate Professors		Assistant Professors	
	Required F1	Available	Required F2	Available	Required F3	Available
2022-23	01	01	02	01	06	08
Average Numbers	RF1=01	AF1=01	RF2=02	AF2=01	RF3=06	AF3=08

$$\text{Cadre Ratio Marks} = \left[\left[\frac{AF1}{RF1}\right] + \left[\frac{AF2 \times 0.6}{RF2}\right] + \left[\frac{AF3 \times 0.4}{RF3}\right]\right] \times 10 \quad = 18.76$$

5. Faculty Qualification

	Annexure – 6.5
Faculty Qualification	

FQ = 2.0 x [(10X +4Y)/F)] where x is no. of regular faculty with Ph.D., Y is no. of regular faculty with M. Tech., F is no. of regular faculty required to comply 20:1Faculty Student ratio (no. of faculty and no. of students required are to be calculated as per Annexure 6.1)

	X	Y	F	FQ = 2.0 x [(10X +4Y)/F)]
2022-23	02	08	10	10.4

Permanent Teachers										
Highest Qualification	Professor			Associate Professor			Assistant Professor			Total
	Male	Female	Others	Male	Female	Others	Male	Female	Others	
D.sc/D.Litt										
Ph.D.		01		01						02
M.Phil.										
PG							06	02		08

Part Time Teachers										
Highest Qualification	Professor			Associate Professor			Assistant Professor			Total
	Male	Female	Others	Male	Female	Others	Male	Female	Others	
D.sc/D.Litt										
Ph.D.										
M.Phil.										
PG										

Details of Visiting/Guest Faculties				
Number of Visiting/ Guest Faculty engaged With thecollege	Male	Female	Others	Total

6. Qualification of Faculty Teaching First Year Common Courses

Qualification of Faculty Teaching First Year Common Courses **Annexure – 6.6**

Assessment of qualification = (5*x* +3*y*)/*RF*, *x*= Number of Regular Faculty with Ph.D., *y* = Number of Regular Faculty with Post-graduate qualification *RF*= Number offaculty members required as per SFR of 20:1, Faculty definition as defined in Annexure – 6.1

Year	x	Y	RF	Assessment of faculty qualification (5x + 3y)/RF
CAY	**NA**			
CAYm1				
CAYm2				
Average Assessment (F5)				

7. Faculty Retention

Faculty Retention **Annexure – 6.7**

No. of regular faculty members in CAYm1= CAY

Details	**CAYm1 2021 - 22**	**CAY 2022 - 23**
Number of faculty retained	06	06
Total number of faculty	09	09
Faculty retention ratio	67.00	67.00
Average		**67.00**

Item (% of faculty retained during the period of assessment keeping CAYm2 as base year)	Marks
>= 90% of required Faculty members retained during the period of assessment keeping CAY*m2* as base year	10
>=75% of required Faculty members retained during the period of assessment keeping CAY*m2* as base year	08
>= 60% of required Faculty members retained during the period of assessment keeping CAY*m2* as base year	06
>= 50% of required Faculty members retained during the period of assessment keeping CAY*m2* as base year	04
< 50% of required Faculty members retained during the period of assessment keeping CAY*m2* as base year	0

8. Innovations by the Faculty in Teaching and Learning

Innovations by the Faculty in Teaching and Learning **Annexure – 6.8**

Innovations by the Faculty in teaching and learning shall be summarized as per the following description.

Contributions to teaching and learning are activities that contribute to the improvement of student learning. These activities may include innovations not limited to, use of ICT, instruction delivery, instructional methods, assessment, evaluation and inclusive class rooms that lead to effective, efficient and engaging instruction. Any contributions to teaching and learning should satisfy the following criteria:

- The work must be made available on Institute website
- The work must be available for peer review and critique
- The work must be reproducible and developed further by other scholars

The department/institution may set up appropriate processes for making the contributions available to the public, getting them reviewed and for rewarding. These may typically include statement of clear goals, adequate preparation, use of appropriate methods and significance of results, effective presentation and reflective critique

Clear goals and adequate preparation:

The goals of innovative practices in the teaching-learning process are to make the students get insight knowledge, skill sets etc. in the courses, and also to obtain good grades in the examinations.

To achieve this faculty members are consistently taking the following measures:

- Attending Faculty Development Programme
- Delivering lectures in Value Added Courses
- Undergoing Advanced Training Programme
- Self-equipping through Institute – Institute Interaction
- Self-equipping through Institute – Industry Interaction
- Pursuing online courses

This enables the faculty members to get adequate preparation with subject knowledge to achieve the goal in the teaching-learning process.

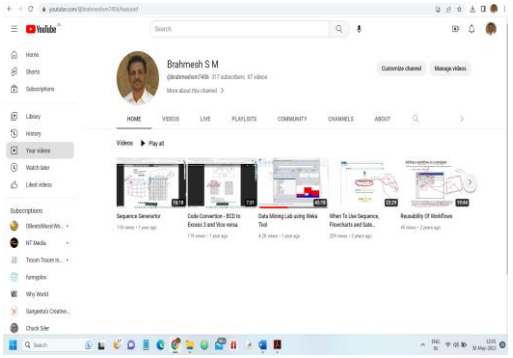
To create interest among students and to make the subject comfortable for them to learn, various innovative practices were adopted in the teaching-learning process.

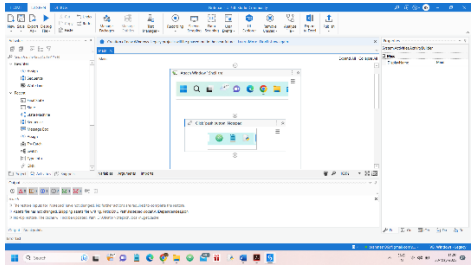
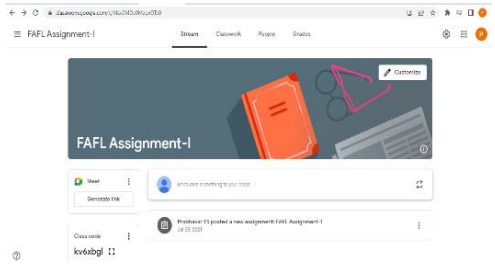
The list of innovative practices followed in teaching-learning processes is listed below:

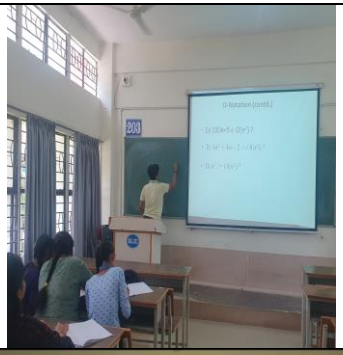
Sl. No.	Innovations by the Faculty in Teaching and Learning
1.	Learning with technology involving creation of YouTube channel
2.	Learning with Course Certifications (NPTEL, Coursera, & Udemy)
3.	Learning through recent Tools
4.	Virtual Teaching - Learning Management System (Google Class Room)
5.	Learning by Industrial Visit

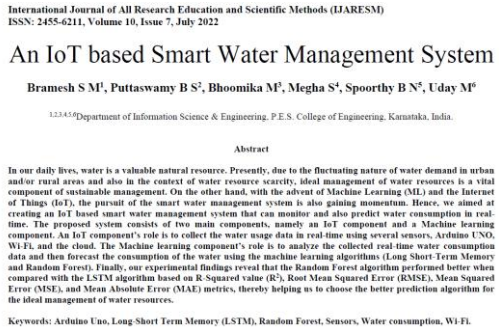
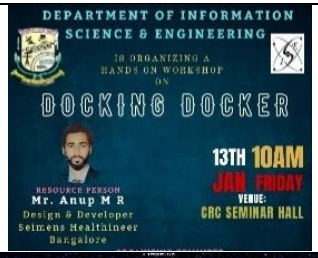
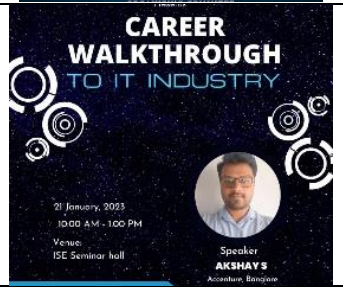
6.	Student Seminars
7.	Project Based Learning
8.	Learning by Doing
9.	Learning by Research Paper
10.	Teaching through Expert Interaction
11.	Teaching through Alumni Interaction
12.	Teaching through Virtual Labs
13.	Social Responsibility
14.	Learning by Technology (Blogs)
15.	Digital Library

Table 5.1 An overview of the Innovation in Teaching and Learning Method

Name of the Faculty - Courses	Type of Innovation in Teaching and Learning Method	The Objective of the Innovation	Significant Results Observed	Template
Prof. Bramesh S M Robotic Process Automation and VHDL Simulation	Learning with Technology - YouTube channel	To make it easier and more convenient for teachers to pass knowledge to students. With video lectures it encourages a level of familiarity that helps with building a community and knowledge that is always available and accessible, irrespective of teacher's and student's location.	The students were able to attend lectures at any place and at any time. Also, they would explore and learn from more lectures available for all the new technologies and frameworks.	 https://www.youtube.com/@brahmeshsm7456

For some selected courses like Java, DBMS and so on	Learning with Course Certifications (NPTEL, Course ra, & so on)	To continuously encourage and guide students and to act as a mentor in solving NPTEL, Coursera etc. assignments.	This experience gives exposure to ideas and approaches outside their comfort zone. In addition, they are being able to think outside their experience which is an ingredient of leadership.	
Prof. Bramesh and Prof. B S Puttaswamy Robotic Process Automation	Learning with tools like UiPath	To help students in boosting their task by creating software robots using recent tools like UiPath.	Students got better understanding of concepts and as well as got knowledge of how to use tool for creating software robots.	
Prof. T M Geethanjali and Prof T S Prabhakar Computer Organization and FAFL	Virtual Teaching - Learning Management System (LMS) (Google Class Room)	To make it easier and more convenient for teachers to pass knowledge to students in ways that were never possible in the past. i.e., to bring back the classroom back to the students with the click of a mouse.	Allows students to learn at a time, place and pace that they are comfortable with.	

Dr. Mahesh Kaluti, Prof. M R Suresh, Prof. B S Puttaswamy, Prof. Harshith K S Software Engineering	Learning by Industrial Visit	In order to overcome the gap between the theoretical knowledge and Practical knowledge, this teaching technique is very helpful.	The students were very involved and learned how the industry works, what practices are followed there and how to prepare for working in the IT field.	
For some selected topics	Student Seminars	To make students develop communication skills and reduce the stage fear in them.	Bringing out the communication skills of students	
All Faculty – Project Work	Project Based Learning	To integrate knowledge and skills	The students were very involved and learned how to develop applications.	
All Faculty – Lab Courses	Learning by Doing	The primary aim of arranging laboratory learning for students is to develop the practical competence often within their area of specialization.	Allows students to relate and reinforce the theoretical concepts taught in class.	

All Faculty – Project Work	Learning by Research Paper	In order to encourage the students to get acquainted with reading and understanding research papers and technical terms given in quality literature and understand its implementation in emerging technologies and recent advancement.	The students developed their habit to refer research papers from reputed journals. They developed their understanding over the recent advancement in the field; knew the peer community and got familiar with technical way of documentation.	 International Journal of All Research Education and Scientific Methods (IJARESM) ISSN: 2455-6211, Volume 10, Issue 7, July 2022 An IoT based Smart Water Management System Bramesh S M[1], Puttaswamy B S[2], Bhoomika M[3], Megha S[4], Spoorthy B N[5], Uday M[6] [1,2,3,4,5,6]Department of Information Science & Engineering, P.E.S. College of Engineering, Karnataka, India. Abstract In our daily lives, water is a valuable natural resource. Presently, due to the fluctuating nature of water demand in urban and/or rural areas and also in the context of water resource scarcity, ideal management of water resources is a vital component of sustainable management. On the other hand, with the advent of Machine Learning (ML) and the Internet of Things (IoT), the pursuit of the smart water management system is also gaining momentum. Hence, we aimed at creating an IoT based smart water management system that can monitor and also predict water consumption in real-time. The proposed system consists of two main components, namely an IoT component and a Machine learning component. An IoT component's role is to collect the water usage data in real-time using several sensors, Arduino UNO, Wi-Fi, and the cloud. The Machine learning component's role is to analyze the collected real-time water consumption data and then forecast the consumption of the water using the machine learning algorithms (Long Short-Term Memory and Random Forest). Finally, our experimental findings reveal that the Random Forest algorithm performed better when compared with the LSTM algorithm based on R-Squared value (R^2), Root Mean Squared Error (RMSE), Mean Squared Error (MSE), and Mean Absolute Error (MAE) metrics, thereby helping us to choose the better prediction algorithm for the ideal management of water resources. Keywords: Arduino Uno, Long-Short Term Memory (LSTM), Random Forest, Sensors, Water consumption, Wi-Fi.
Dr. Anitha M L, Prof. T M Geethanjali and Prof. Harshith K S	Teaching through Expert Interaction	It involves sharing knowledge by subject experts for providing knowledge beyond the curriculum.	The students were very involved and learned the concepts	
Dr. Anitha M L and Prof. B S Puttaswamy	Teaching through Alumni Interaction	It involves sharing knowledge by alumni working as a software engineer in IT Industry with their juniors on practical grounds.	Students learned how the concepts learned in theory classes are used while developing a product.	
For some selected courses	Teaching through Virtual Labs	Virtual Labs do not require any additional infrastructural setup for conducting	Students can benefit from the content and related teaching resources	https://www.vlab.co.in/broad-area-computer-science-and-engineering

		experiments at user premises. The simulations-based experiments can be accessed remotely via internet.		
Prof. B S Puttaswamy and NSS Programme Officer	Social Responsibility	To inculcate the social responsibility by participating students in NSS and or AICTE Activity Points programmes.	Bringing out the Social responsibility by creative thoughts of students.	
All Faculty - All Courses	Learning by Technology (Blogs)	The department has its own blog for providing study materials for students. These materials can openly be accessed by all students.	The students were able to access study materials at any place and at any time. Also, they can comment and share for its further improvement	https://isepesce.blogspot.com/
All Courses	Digital Library	To help Faculty and students by providing access to the video lectures, previous year question papers, E-books and E-journals.	Students were able learn by themselves.	https://pescemandya.org/library/library-e-resources.php http://61.1.175.66:8080/jspui/ http://61.1.175.66:8001/

9. Faculty as participants in FDP

Faculty as participants in Faculty development/training activities/STTPs	**Annexure – 6.9**

- A Faculty scores maximum five points for participation
- Participation in 2 to 5 days Faculty/ Faculty development program: 3 Points
- Participation >5 days Faculty/ Faculty development program: 5 points

Name of the Faculty	**Max. 5 per Faculty**		
	CAYm1 2022-23	**CAYm2**	**CAYm3**
Dr. Anitha M L	01		
Dr. Mahesh Kaluti	04		
Geethanjali T M	03		
Bramesh S M	03		
Puttaswamy B S	05		
Harshith K S	03		
T S Prabhakar	02		
Sum	**21**		
***RF*= Number of Faculty required to comply with 20:1 Student-Faculty ratio as per Annexure – 6.1**			
Assessment = 3 × (Sum/0.5 RF) **(Marks limited to 10)**	3*(21/0.5*19.6)= **6.42**		
Average assessment over last three years (Marks limited to 10) = F5			

10. Average percentage of teachers undergoing online/ face-to-face Faculty Development Programmes during the last years(ProfessionalDevelopment Programmes, Orientation / Induction Programmes, Refresher Course, Short Term Course etc.,)

Annexure – 6.10

Average percentage of teachers undergoing online/ face-to-face Faculty Development Programmes during the last years(Professional Development Programmes, Orientation / Induction Programmes, Refresher Course, Short Term Course etc.,)

Name of teacher who attended	Title of the Program	Duration (from – to) (DD-MM-YYYY)
Dr. Anitha M L	40 hour online faculty development programme on “Computational Statistics”	1-08-202 to 10-08-2022
Dr. Mahesh Kaluti	Webinar on “Effective Implementation of NBA guidelines”	26-4-2023
	“FDP on using IEEE eResource for doing effective Academic and Research work”	19-7-2022
	FDP on “Research Avenues in DS and ML”.	2-1-2023 to 6-1-2023
	One week online teachers training program on “Introduction to cyber security”	22-5-2023 to 26-5-2023
Geethanjali T M	Two-Day FDP on “AI in IoT & Computer Vision”	29-07-2022 To 30-07-2022
	40-hour online FDP on “Computational Statistics”	01-08-2022 To10-08-2022
	One week National Level workshop on “Data Analytic and Learning”	5/9/2022 to 10/9/2022
Bramesh S M	FDP on “Artificial Intelligence”	19-12-2022 to 23-12-2022
	One week online teachers training program on “Introduction to cyber security”	22-5-2023 to 26-5-2023
	One week teachers training program on “Introduction to Python Programming and its application”	19-6-2023 to 23-6-2023
Puttaswamy B S	One week Faculty Development Program on "Amazon Web Services"	22-07-2022 To 27-07-2022
	One week National level Workshop on "Data Analytic and Learning"	05-09-2022 To 10-09-2022
	5 day Faculty Development Programme on "Art of Research Paper Writing And IPR-Level 2"	20-09-2022 To 24-09-2022
	Three day Faculty Development Programme on "Object Oriented Programming with JAVA	27-10-2022 to 29-10-

	Laboratory"	2022
	Faculty Development Programme on Research Avenues in DS and ML	02-01-2023 To 06-01-2023
Harshith K S	One week online teachers training program on “Introduction to cyber security”	VTU centre for PG studies, Chikkaballapur
	Two-Day FDP on “AI in IoT & Computer Vision”	Vidyavardhaka College of Engineering, Mysuru
	One week teachers training program on “Fundamentals of Data Science & Analytics”	VTU centre for PG studies, Chikkaballapur
T S Prabhakar	Research Avenues in DS and ML	2nd to 6th Jan 2023
	Introduction to Cyber Security	22nd to 26th May2023
Documents**:** • https://drive.google.com/file/d/1T18BFBL1rc5ZppWB9gGqXPhCTdL94eAO/view?usp=sharing • https://drive.google.com/file/d/1KeAbUZVm8pjNmqLIkrSMBxKV5LgqkAQC/view		

11. Visiting/Adjunct/Emeritus Faculty etc. (if applicable) NIL

Visiting/Adjunct/Emeritus Faculty etc. (if applicable)	**Annexure – 6.11**

Adjunct faculty also includes Industry experts. Provide details of participation and contributions in teaching and learning and /or research by visiting/adjunct/Emeritus faculty etc. for all the assessment years:

- Provision of visiting/adjunct faculty (1)
- Minimum 50 hours per year interaction with adjunct faculty from industry/retired professors etc.

12. Technical Staff Details

Annexure – 6.12

Technical Staff Details

Annexure – 6.12(a)

Academic Qualifications

Sl. No.	Name of the Staff	Examination	Name of Board / University	Year of Passing	% of Marks Obtained / CGPA	Division / Class/ Grade	Major Subjects
1.	Kumar Gowda B K	M. Tech	Karnataka State Open University	2012	85%	Distinction	Information Technology
2	Sumalatha K C	MSc(IT)	Karnataka State Open University	2010	76%	Distinction	Information Technology
3	Mahesha M S	Diploma in CS	Department of Technical Education	2002	56%	2nd Class	Computer Science
4	S M S Kumar	BA	Kuvempu University	2019	55%	2nd Class	History
5	Syeeda Meharaj	B.Com	Indiragandhi Open University	Persuing			
6	Somavathi	SSLC	Karnataka Secondary Education Examination Board	1996	35%	Pass	
7	Nandeesha M N	SSLC	Karnataka Secondary Education Examination Board	1996	43%	Pass	

Annexure – 6.12(b)

Appointments held prior to Joining this Institution

Sl. No.	Name of the Staff	Employer Details (Name, Place)	Designation	Date of Joining	Date of leaving	Experience in Years
1.	T S Prabhakar	Software Paradigm	Junior Software Engineer	5/01/2004	3/12/2004	1 year

Annexure – 6.12(c)

Posts held after Appointment to this Institution

Sl. No.	Name of the Staff	Designation	Department	From	To	Experience in Years
1.	T S Prabhakar	Asst. Prof	IS&E	04/12/2004	Till Date	19 years
2.	Dr Mahesh Kaluti	Associate Professor	IS&E	18/07/2017	Till Date	15 years

Annexure – 6.12(d)

Technical Staff Details

	Male	Female	Others	Total
Sanctioned by the UGC/ institution/ State Government				
Recruited				
Yet to Recruit				
Sanctioned by the Management / Society/or other Authorised Body				
Recruit	04	03		07
Yet to Recruit	00	00		00

13. Distribution of Teaching load in 2022-23

Annexure – 6.14(a)

Workload Details

UG/PG Workload Details (2022-23 Even Sem)

Sl. No.	Name of the Faculty	Theory Subjects				Labs				Seminar Batches				Project Batches				Total
		Number		Units Assigned		Number		Units Assigned		Number		Units Assigned		Number		Units Assigned		
		UG	PG	UG	PG	UG	PG	UG	PG	UG	PG	UG	PG	UG	PG	UG	PG	
1	Dr. Anitha M L	02				04				03				03				
2	Dr. Mahesh Kalluti	03				09				03				03				
3	M R Suresh	03				07				03				03				
4	T M Geethanjali	03				10				02				02				
5	T S Prabhakar	03				10				02				02				
6	Rakshith N	04				08				02				02				
7	S M Bramesh	04				08				02				02				
8	B S Puttaswamy	04				09				01				01				
9	Harshith K S	05				09												
10	Ruchitha K J	04				15												

14. Workload & Committees Membership Details

Annexure – 6.14(b)

Committees Membership Details

Committees Membership Details (2022-23 Even Sem)

Sl. No.	Name of the Faculty	College Level Committees				Dept. Level Committees				Total
		No. of Committees Coordinator	Specify Committee details	No. of Committees Member	Specify Committee details	No. of Committees Coordinator	Specify Committee details	No. of Committees Member	Specify Committee details	
1	Dr. Mahesh Kalluti	05	NBA AISHE NAAC-2 BOE BOS	05	NAAC-2 BOE BOS	03	Coordinator NBA & PTM, IQAC BOS BOE DUGC BOS BOE DUGC		BOS BOE DUGC	08
2	T M Geethanjali		BOE BOS Assistant IQAC coordinator Research Co-ordinator		BOS BOE	03	BOS BOE CIE Paper scrutiny co-ordinator Project Co-ordinator Internship Co-ordinator Criteria 2 co-ordinator			09

3	T S Prabhakar	01	Placement Committee	09	Placement coordinator	01	Weaker section Committee	03	Identify weaker student	02
4	Rakshith N	01	IIC	09	Industry Innovation Committee	01	BOS	07	Board of studies	02
5	B S Puttaswamy	01	IIIC committee, AICTE Activity Point Programme Committee, MOOC Committee		IIIC Coordinator, AICTE activity coordinator, MOOC or NPTEL coordinator	01	DUGC	07	Grievance Committee	02
6	Harshith K S					01	CIE Coordinator	02	CIE Coordinator	01

1) https://drive.google.com/file/d/19l1YWOW2FgB3fNi7V-1oaDbbFFBYFcks/view?usp=sharing