



The Department as a part of Curriculum Development has several surveys conducted to improve the quality of the program curriculum and course contents. The participants for the survey are the stakeholders- Faculty, Industry/Employers, Students, Alumni and Parents. Several Actions taken based on their feedback for the academic year 2016-17 to 2021-22. Department Advisory Board (DAB) / Board of studies(BOS) / Academic Council (AC) / Governing Body meeting held on 28/6/2021, the committee consisting of Industry representatives, Alumni and Faculty from universities of the E & TC department, after having discussions with the above members, their suggestions / recommendations and actions taken are reported as follows :

**Action Taken Report for B. Tech Curriculum 2020 Pattern**

Recommendations	Action Taken
<b>Faculty Feedback</b>	
Different Innovative teaching ideas should be considered while framing and teaching the course.	Innovative teaching ideas like Google Quiz, Flipped Classroom, Animated Videos, Animated PPT were used by the faculty members to teach their courses more effectively.
Engineering applications should be discussed in Mathematics course.	Regarding this issue a common meeting of course faculty like Engineering Mathematics III and Control System was held. Based on the pre-requisites of the courses, appropriate teaching sequence was decided and Engineering applications were included in Mathematics course.
Project based learning (PBL) should be included for better understanding of the course.	Project based learning (PBL) was introduced in the Second Year (SY) courses in Electronic Circuit Analysis (ECA) and Embedded Systems. In Third Year (TY) PBL was conducted in Digital Signal Processing (DSP) and Advanced Processor (AP). In DSP PBL was conducted in the form of In-semester assessment as T1 examination with proper rubrics defined.
While designing the COs of particular course syllabus of standard Institutes should be referred.	While designing the new courses in the new autonomy cycle 2020-24, syllabus of IITs, NITs and standard universities was referred.
Suggested the course titled 'Fundamentals of Machine learning' title should be modified as 'Machine Learning in python'.	The course title 'Fundamentals of Machine learning' title was modified as 'Machine Learning in python'.
From the course 'Analog and digital communication' which is in the second year 4 <sup>th</sup> semester, one unit should be completely removed i.e; 'Introduction to Information Theory and Data Compaction'.	As per the suggestion that unit is removed from the course 'Analog and digital communication' and is included in the new course 'Information Theory and Coding Techniques'.
Title of the course 'Error Correcting codes' should be modified as 'Information Theory and Coding Techniques'	Title was modified as 'Information Theory and Coding Techniques'
Add text book of "Modern Digital and Analog Communication Systems" by B. P. Lathi in the course 'Analog and digital communication'.	Text book was included.
<b>Industry Feedback</b>	
For the Open Elective courses of T.Y. B.Tech. Sem-II Numerical Techniques course can be replaced by subject like E-business and commerce, Multimedia, Optimization	Numerical Techniques subject was removed from the list of Open Electives.



Techniques etc.	
Internship/ Project should be at least of 6 months.	Internship/ Project is included for about 6 months in semester-I of final year B. Tech.
No. of Open Elective courses in the program should be increased.	There are total 4 Open Elective courses in the structure of program, 2 in TY & 2 in final year. Earlier in 2016 course pattern there were 3.
In final year open elective courses, one should be from Electronics domain and other courses from other branches so as to get a multidisciplinary approach.	As per the suggestion, following Open Electives (OE) are offered: 20OE801 OE-III: Cyber Physical Systems, Quantum Computing & 20OE802 IV: Wireless Networks, Autonomous Robots are added in final year. While designing the course on the CV syllabus of ML was considered. CV is included in TY semester II as an open elective II. A course 'Automotive Electronics' is added as Open Elective II in TY Sem II. 'Automotive Communication Protocols' are included in this course.
Based on the latest trends in Industry courses should be included in the syllabus.	Different IITs, NITs, Autonomous government engineering colleges, and university structure, syllabus was referred by faculty members for designing honour degree courses. Honors and Minors courses are included as per the industry trends. In the course 'Embedded Systems' for the entire lab students will work in 'Embedded C' & GPU is also added.
The course Deep Learning from Data Science honors program should include basic concepts of machine learning.	Basic concepts of Machine Learning are included in Second Year semester-4 course 20EC403 Machine Learning with Python.
<b>Alumni Feedback</b>	
Students need to develop programming skill	In order to develop programming skills of students courses like Data Structure, Object-Oriented Programming and Machine Learning are now in the second year.
More focus should be given on the latest trends like Data Science, Data Analysis, Data Visualization, Machine learning, Deep learning, Automation and Control	In order to focus on the latest trends in the curriculum, meetings were conducted with industry experts from various domains. As per their suggestions, a new course in SY Machine Learning with Python is included. Previous course contents were also modified. Honor courses in the field of VLSI, Wireless Communication, Data Science are included in the new cycle of Autonomy.
More number of electives should be offered to cater to the advancement in the industry.	As per this feedback, more no. of Program Electives (PE) are added. PE-I 20PEEC501 with Lab in TY sem-5: 1. Information Theory and Coding Techniques, 2. Mechatronics 3. Digital Image Processing 4. Introduction to Internet of Things PE-II 20PEEC502:- NPTEL courses in TY sem-5 Students can select any course offered by NPTEL



	<p>PE-III 20PEEC601 with Lab in TY sem-6:-</p> <ol style="list-style-type: none"> <li>1. Robotics</li> <li>2. Biomedical Electronics</li> <li>3. Power Electronics</li> <li>4. Deep Learning</li> </ol> <p>PE IV 20PEEC801 with Lab in Final Year sem-8:-</p> <ol style="list-style-type: none"> <li>1. Microwave and Radar Engineering</li> <li>2. Remote Sensing</li> <li>3. Industrial Automation</li> <li>4. Embedded RTOS</li> </ol> <p>PE-V 20PEEC802 in Final Year Sem-8:-</p> <ol style="list-style-type: none"> <li>1. Advanced VLSI Design</li> <li>2. Artificial Intelligence</li> <li>3. Statistical Signal Processing</li> <li>4. Mobile Communication</li> </ol>
Add Industry oriented courses in the curriculum.	In order to improve the relevance of the curriculum with respect to industry needs meetings were conducted with industry experts from the various domains. As per their suggestions, new courses are included. Previous course contents were also modified.
As per the Alumni feedback effectiveness of the courses is moderate from a latest Industry point of view, more for higher studies & less for entrepreneurship.	VLSI and Computer Networks are now in their third year so that students are well aware of these courses till the placement. In order to focus on entrepreneurship Open electives like Entrepreneurship Development, Intellectual Property Rights, Project Management, Law for Engineers are added to the curriculum. Minor Degree Programme in Entrepreneurship is also added.
More than 60% of Alumni want Internship should be of 6 months.	As per the new autonomy cycle in the Final year, B. Tech sem-7 has Full 6 months of internship or Full 6 months of project or Combination of Internship of 2 to 6 Months duration + Project from 1 to 6 Months Duration
<b>Students Feedback</b>	
Multidisciplinary Courses should be included as open electives.	Students were satisfied to get an opportunity for selecting Multidisciplinary subjects as open electives are added in 2020 pattern.
Internship should be at least of 6 months.	Students are interested in having internship for about 6 months and 90% students are interested to do internship in industry. Internship of full 6 months added in Final Year B.Tech sem-7.
Audit courses should be added to all years.	Students were satisfied with the audit courses included in syllabus and 95% of students said the audit course helps them. Total 3 Audit course added in 2020 pattern, 2 in SY sem-3 and sem-4 respectively and 1 in TY sem-5.
Students suggested that some of the courses like electronic circuit design, simulation software and PCB designing should be included in the curriculum.	Students will be trained to use Simulation software like Multisim in SY sem-3 Electronics Circuits and Application Lab and Proteus in SY sem-4 embedded system Lab course, and small mini projects.
Students also feel that project should be included in curriculum at second year.	Open ended assignment is included in courses from SY in Electronics Circuits and Application, Machine Learning with Python, Object Oriented Programming



More focus should be given on coding skills.	and Analog and Digital Communication courses. Courses like DSA, OOP and ML. are in SY which will improve teaching skills of students.
<b>Parents Feedback</b>	
Project based learning (PBL) should be introduced for at least one course in every semester.	The project based learning (PBL) for the course Signal Processing was appreciated and also suggested to include the same in a few more courses.
More interactive sessions, more external and industry exposure since 2 <sup>nd</sup> year should be there and parents Internship to be mandatory in industry.	Industry exposure will be given to the students through industrial visit, guest lectures and 6 months internship in industry.

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**Summary of Syllabus revisions**

	A. Y. 2021-22	Revisions / Remarks	
		Minor	Major
<b>FY</b>			
<b>SY</b>		1. Contents of the following courses are modified: 20EC 302 Signal and Systems (SS), 20EC 401 Digital Electronics (DE) and Object Oriented Programming (OOP)	1. New Course on universal human values 20HS301 Universal Human Values II is introduced. 2. New course 20EC 301 Electronics Circuits and Applications (ECA) which is combination of two courses Electronic Devices and Circuits (EDC) & Integrated Circuits and Applications (ICA) is introduced. 3. New course 20BSEC 301 Calculus and probability is introduced which is modified from Mathematics III of old syllabus is modified. 4. New course 20EC303 Data Structure and Algorithms (DSA) is introduced which is extension from DS of old syllabus. 5. A new course 20EC 402 Analog and Digital Communication is introduced which is combination of two courses Analog communication & Digital Communication (ADC). 6. New course 20EC 403 Machine Learning with Python is introduced (MLP). 7. A new course 20EC 404 Embedded Systems (ES) is introduced.
<b>TY</b>		Content of the following Courses are modified: 1. 20EC501 Digital Signal Processing- Z transform is shifted to SY signals and System. Inclusion of Multirate signal Processing. 2. 20EC3202 Advance	Following New Courses are introduced: 1. 20EC502 VLSI in TY sem-5. 2. 20PEEC Internet of Things in sem-5 in programme elective-I. 3. 20OEH501D Law for Engineers and 20OEH501E Organizational Behaviour in sem-5 as open elective-I(Humanities) 4. 20EC601 Wave Theory and Antenna in sem-6



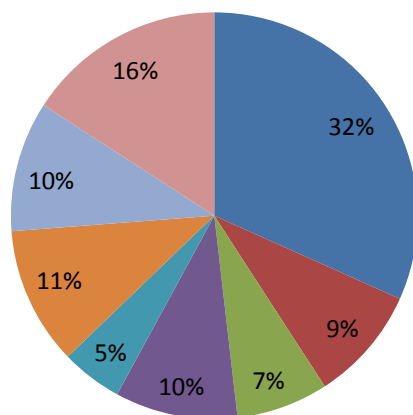
		<p>Processor- Change in Unit-VI from Raspberry-Pi Development Board to ARM Cortex based development Board</p> <p>3. Mechatronics- Driving circuit for electrical actuator and interfacing with Microcontroller added in unit-V</p> <p>4. 20PEEC501C Digital Image Processing:- Types of classification algorithms, K-Nearest Neighbours, K-means, and Decision Tree added in Unit-IV. Unit-V Morphological Image Processing and Applications of Image processing is replace by Image Restoration and Applications of Image Processing.</p> <p>5. 20EC603 Control System- Laplace Transform and its application is removed and Introduction to controllers(P, D, I and PID) is added as Unit-VI</p> <p>6.20PEEC601A Robotics- Robot Navigation, Path planning algorithms based on SLAM algorithm added in Unit-V</p> <p>7.20PEEC601B Biomedical Electronics- Applications of AI and ML Techniques added in Biomedical Field as Unit-VI</p> <p>8. 20PEEC601C Power Electronics- Introduction to Motor added as Unit-II.</p>	<p>which is combination of Electromagnetic Field and Antenna and Wave Propagation.</p> <p>5. 20EC602 Computer Networks and Security.</p> <p>6. 20PEEC601D Deep Learning with Lab in programming elective-III</p> <p>7. 20PEEC601LB Biomedical Electronics Lab</p> <p>8. 20OE601B Automotive Electronics, 20OE601E Computer Vision and 20OE601K Multimedia System as Open Elective-II in sem-6 which can be opted by other Branches students.</p>
<b>Final Yr.</b>		<p>Content of the following Courses are modified</p> <p>1 20EC801 Broadband Communication Systems- New Units added are Unit -III WDM Network Design, Unit-IV Multiprotocol Label Switching Networking and Unit-VI Next Generation Internet Over Satellite.</p>	<p>Following new Courses are introduced:-</p> <p>1. 20EC701 Internship/Project or combination of Internship with Project with 15 credit in sem-7</p> <p>2. 20HS702 Economics and Personal Finance with will be conducted online for 2 credits in sem-7.</p> <p>3. 20PEEC801B Remote Sensing with Lab in sem-8 as programme elective-IV.</p> <p>4. 20PEEC802A Advanced VLSI in sem-8 as programme elective-V.</p> <p>5. 20OE801B Cyber Physical System and 20OE801H Quantum Computing in sem-8 as open elective-III.</p> <p>6. 20OE802C Autonomous Robot and 20OE802J Wireless Network as open elective-VI which are offered to other than Electronics and Telecommunication Engineering students.</p>

**Distribution of course types From F.Y. to Final Yr.**

Types of Courses		FY	SY	TY	Final Yr.	Total Credits
Program Core Courses	<b>PC</b>	0	28	21	3	<b>52</b>
Programme Electives	<b>PE</b>	0	0	9	6	<b>15</b>
Open Electives	<b>OE</b>	0	0	6	6	<b>12</b>
Internship/Project	<b>I/ PE</b>	0	0	1	15	<b>16</b>
Humanity Science Courses	<b>HS</b>	0	3	3	2	<b>8</b>
Basic Sciences Courses	<b>BS</b>	14	4	0	0	<b>18</b>
Engineering Sciences Courses	<b>ES</b>	17	0	0	0	<b>17</b>
Labs	<b>L</b>	8	9	7	2	<b>26</b>
<b>Total Credits</b>		<b>39</b>	<b>44</b>	<b>47</b>	<b>34</b>	<b>164</b>

**Courses Wise Credit Distridution From F.Y to Final Year**

■ PC 
 ■ PE 
 ■ OE 
 ■ I/PE 
 ■ HS 
 ■ BS 
 ■ ES 
 ■ L





The Department as a part of Curriculum Development has several surveys conducted to improve the quality of the program curriculum and course contents. The participants for the survey are the stakeholders- Faculty, Industry/Employers, Students, Alumni and Parents. Several Actions taken based on their feedback for syllabus revision of 2020 Pattern. DAB / Board of studies / Academic Council / Governing Body meeting held on 28/6/2021, the committee consisting of Industry representatives, Alumni and Faculty from universities of the department, after having discussions with the above members, their suggestions / recommendations and actions taken are reported as follows :

**Action Taken Report for B. Tech Curriculum 2020 Pattern**

Recommendations	Action Taken
<b>Faculty Feedback</b>	
Subjects focusing on current Trends / Domains should be included	<b>More elective subjects are offered like</b> <ul style="list-style-type: none"><li>→ Introduction to Blockchain</li><li>→ Devops Fundamentals</li><li>→ User Experience Design (UX/UI)</li><li>→ Artificial Intelligence</li><li>→ Internet of Things</li><li>→ Distributed Systems</li><li>→ Information Retrieval</li><li>→ Introduction to Blockchain</li><li>→ Geographical Information System</li><li>→ Gamification</li><li>→ Data Science using Python</li><li>→ Data Analysis and Visualization</li><li>→ MOOC Courses</li></ul>
Cloud computing can be core courses	Cloud Computing is added as Core course
For JFST course Laboratory should be added	Laboratory is introduced for JFST
Course related to societal awareness should be offered	New HS course offered by department: Professional and Societal Awareness for Engineers. UHV Course
<b>Industry Feedback</b>	
Latest trends/Courses should be included such as User Experience Design (UX/UI) Blockchain, Devops	<b>Elective Courses with latest trends are offered like</b> <ul style="list-style-type: none"><li>→ Introduction to Blockchain</li><li>→ Devops Fundamentals</li><li>→ User Experience Design (UX/UI)</li><li>→ Artificial Intelligence</li><li>→ Internet of Things</li><li>→ Distributed Systems</li><li>→ Information Retrieval</li><li>→ Introduction to Blockchain</li><li>→ Geographical Information System</li></ul>

	<ul style="list-style-type: none"> <li>→ Gamification</li> <li>→ Data Science using Python</li> <li>→ Data Analysis and Visualization</li> <li>→ MOOC Courses: Software Testing and Reinforcement Learning</li> </ul>
JFST and Cloud computing can be core courses	Cloud Computing is added as Core course
Courses related to Finance and Economics should be part of the curriculum	Curriculum offers Humanities courses: Economics and personal Finance.
Data science courses can be added and statistics can be considered as a prerequisite to these courses	Open Electives like GIS, Gamification and Data Science using Python are introduced.
Subjects focusing on current Trends / Domains should be included	Program Electives are offered like Blockchain, UI/UX, DevOps and MOOC courses
More focus should be given on hands-on experience	More Hands-on Experience is added by providing dedicated time for internship/project (6 Months), New laboratory course is introduced at SY as Programming Skill Development Laboratory-I.
<b>Alumni Feedback</b>	
Hands-on experience to latest tools and technologies useful for industry should be provided	More Hands-on Experience is added by providing dedicated time for internship/project (6 Months), New laboratory course is introduced at SY as Programming Skill Development Laboratory-I.
Practical and hands-on knowledge on different technologies like web development , Springboot framework, etc. should be included	Laboratory is introduced for the Java Full Stack Technology course.
Students should get credit for the Internships	Internship duration is increased from 2 months to 6 months. Credits are offered for the internship.
<b>Students Feedback</b>	
Internship period should be of at least 6 months	Internship duration is increased from 2 months to 6 months. Credits are offered for the internship.
Courses related to latest trends and technologies should be included	Program Electives with latest trends are offered like Blockchain, UI/UX, DevOps and MOOC courses
Industry driven program electives should be introduced at third year level	Industry Supported Courses are offered as electives. Course Data Management, Protection and Governance by Veritas, Technologies
Courses like DBMS (at second year), DevOps and Finance	The DBMS course is introduced at SY.



should be included	Curriculum offers Humanities courses: Economics and personal Finance.
Inclusion of MOOC courses should be introduced at third year for self learning	One Programme elective dedicated to MOOCs (Software Testing and Reinforcement Learning)
<b>Parents Feedback</b>	
More stress on practical work and logical thinking should be provided	More Hands-on Experience is added by providing dedicated time for internship/project (6 Months), New laboratory course is introduced at SY as Programming Skill Development Laboratory-I.
Syllabus should include subjects like Blockchain, Automation, etc.	Program Electives with latest trends are offered like Blockchain, UI/UX, DevOps and MOOC courses
6 months internship should be provided	Internship duration is increased from 2 months to 6 months. Credits are offered for the internship.
Banking / Finance related subjects should be introduced in the curriculum	Curriculum offers Humanities course: Economics and personal Finance.

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**Action Taken Report for B. Tech Curriculum 2020 Pattern**

Recommendations	Action Taken
<b>Faculty Feedback</b>	
1. Inclusion of Safety related course	1. Certain safety related topics were introduced in a few Core courses
2. Converting certain Elective courses to Core courses looking at the latest trends	2. Elective courses like - IoT, PED, SEM which were Elective courses in the 2016 pattern were included as Core courses in the 2020 pattern
3. Introduction of Honor program was appreciated	3. In the 2020 pattern, an Honor course on 'Industrial Measurement and Automation' was introduced
4. Inclusion of various Best practices and Pedagogy Tools was well admired	4. Majority of the teaching faculty incorporate the various best practices like - Role play, Think-Pair-Share, Word puzzle, Quiz, etc...
<b>Industry Feedback</b>	
1. Continue with curriculum design by considering the recent trends in Automation	1. The curriculum is designed taking into consideration the latest trends in Automation
2. Increase duration of Internship	2. The internship duration is increased from 2 months to 6 months
3. More number of choice based courses	3. The number of Programme Electives and Open Electives are more
<b>Alumni Feedback</b>	
1. Inclusion of Courses based on emerging trends like IoT, System Engineering and Management	1. The courses like IoT, SEM were included as Core courses from Elective courses
2. Increase duration of Internship	2. The internship duration is increased from 2 months to 6 months
3. More stress on programming skills in Python and Java	3. A Theory plus lab course based on Java is included in the First year and a Lab courses based on Python was introduced in the Second Year
<b>Students Feedback</b>	
1. The tutorial and hands-on sessions for the various courses should be retained	1. The hands-on sessions and certain tutorial heads are retained considering its usefulness in the effective learning process for the students
2. More stress on Programming skills based on need of the hour	2. Programming Practice course based on Python is included at Second Year level
3. Considering the usefulness of Internship, its duration should be increased	3. The internship duration is increased from 2 months to 6 months
4. Students were satisfied with the shared teaching material and library resources	4. Sufficient teaching material and various resources along with the designing of various best practices



	helps to make the teaching-learning practice more effective and interesting for the students
5. Majority students appreciated the support and motivation provided for participation in co-curricular and extra curricular activities	5. The students are motivated and mentored into active participation in co-curricular and extra curricular activities
<b>Parents Feedback</b>	
1. Related to the Internship duration	1. The internship duration is increased from 2 months to 6 months
2. Appreciated the boosting for Industry sponsored projects	2. Industry sponsored projects are always promoted for the effective overall growth of the student
3. Acknowledged the support provided with preparation for placement process and Career guidance	3. Continuous support and guidance is provided to the students for the placement process and post graduation career options

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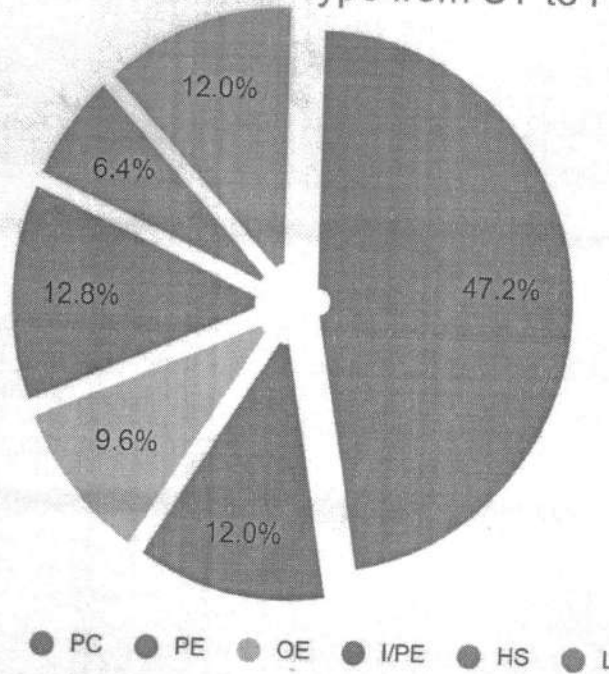
**Summary of Syllabus revisions**

	A. Y. 2021-22	Revisions / Remarks	
		Minor	Major
FY			
SY		Certain changes in contents of few courses	1. Combining of certain core courses from the 2016 pattern 2. Introduction of lab session for Python
TY		Reframing of the number of Tutorials for certain courses	1. Inclusion of more number of program and open electives 2. Conversion of certain Elective courses to Core courses 3. Introduction of Honor program from semester 5
Final Yr.			1. Internship of 6 month duration introduced in semester 7 2. Introduction of more number of Program and Open Electives

**Distribution of course types From F.Y. to Final Yr.**

Types of Courses		FY	SY	TY	Final Yr.	Total Credits
Program Core Courses	PC		34	22	3	59
Programme Electives	PE		0	9	6	15
Open Electives	OE		0	6	6	12
Internship/Project	I / PE		0	1	15	16
Humanity Science Courses	HS		3	3	2	8
Labs	L		7	6	2	15
<b>Total Credits</b>			<b>44</b>	<b>47</b>	<b>34</b>	

**Distribution of course Type from SY to Final Year**





## Department of Information Technology

The Department as a part of Curriculum Development has several surveys conducted to improve the quality of the program curriculum and course contents. The participants for the survey are stake holders - Faculty, Industry / Employers, Students, Alumnae and Parents. Several Actions taken based on their feedback from the academic year 2017-18 to 2021- 22. Department Advisory Board / Board of Studies / Academic Council / Governing Body committees consist of Industry representatives, Alumnae and Faculty from SPPU and other universities of the department. After having discussions with the above members, their suggestions / recommendations and actions taken are reported as follows:

### Action Taken Report for B. Tech Curriculum 2020 Pattern

Recommendations	Action Taken
<b>Faculty Feedback</b>	
Introduce parallel programming / algorithms in Design and Analysis of Algorithms	Topics such as Parallel programming, Optimization are added
Introduce new tools like Figma, Justinmind etc in Full Stack Development	Various tools will be explored and introduced to the students
<b>Industry Feedback</b>	
A course with an introduction to finance and economics can be part of curriculum.	The course 'Economics and Personal Finance' has been introduced
Students should be offered more hands on sessions.	Many courses have practical. Internships will also help in getting hands-on
Students should have more laboratory practice, industrial visits, monthly small-medium projects with good guidance	Some courses have mini-projects.
Students should have internship in a small but core industry	The students will have 2-6 month internship with a project for remaining period (Except for 6 month internship)
Introduction to MLOps, DevSecOps and similar advanced concepts	GitOps, MLOps, AIOps, DataOps, DevSecOps are introduced in DevOps
<b>Alumni Feedback</b>	
Introduction to GitHub, Docker, DevOps, Kubernetes in the curriculum	A course on DevOps is introduced in the curriculum.
The laboratories should have a larger extent of problem solving approach. The students should be introduced with competitive programming.	Students are introduced to competitive programming during the lectures
Give focus on Java and Python in place of C/C++.	The laboratory courses are Java based or Python based.
Design Analysis of Algorithms course should be in semester four.	Design Analysis of Algorithms course is introduced in semester five.
The internship should be for six months	The students will have six month internship
<b>Students Feedback</b>	
The laboratory of data structures should be done	The laboratory of data structures is conducted



in Java	in Java
Incorporate Operating systems in second year	Operating system is offered in semester four
The quantitative aptitude course should be introduced in second year	Done
There should be internship in the last semester so that it exposes the students to good opportunities to learn from mistakes and provides considerable corporate experience before turning into employees	The internship is offered in semester seven
Focus on Java and OOP concepts because one course does not provide enough practice or scope to understand use cases of Java in corporate codes.	The OOP concepts are covered in two courses. Java introduced in first year
Design and analysis of algorithm course should be in the second year	Design Analysis of Algorithms course is introduced in semester five.
It would be great if we could add some sessions about money management, taxes, investment etc.	The course 'Economics and Personal Finance' has been introduced
More hands-on approach needs to be promoted and some courses/alternatives related to full stack development should be offered.	A major degree course in Full stack development is offered
<b>Parents Feedback</b>	
Bring more transparency in evaluation	T1, T2 and ESE papers are shown to the students
The internship should not be made mandatory	Students have an option to work on a 6-month project under a faculty

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**Summary of Syllabus revisions**

	A. Y. 2021-22	Revisions / Remarks	
		Minor	Major
<b>FY</b>			
<b>SY</b>		1. Data Structure I & II combined as 1 Course. 2. Digital Systems and Computer Organization and Architecture combined as 1 course.	1. Universal Human Values - 2 is newly introduced.
<b>TY</b>		Minor changes in Theory and Lab courses of 1. Machine Learning, 2. Business Intelligence, 3. Natural Language Processing	1. Design and Analysis of Algorithms Lab newly introduced 2. Design Thinking added as a new Open Elective course
<b>Final Yr.</b>		Minor changes in Theory and Lab courses of 1. Advanced Machine Learning	1. Economics and Personal Finance (EFT) - (Online) Recorded is newly introduced 2. Internships/Projects duration of Six Months 3. Introduction to DevOps along with its Lab is a newly introduced Program Elective

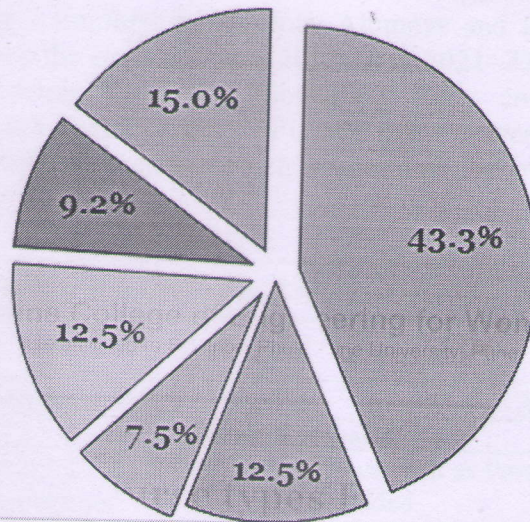
**Distribution of course types From F.Y. to Final Yr.**

Types of Courses		FY	SY	TY	Final Yr.	Total Credits
Program Core Courses	PC		27	22	3	52
Programme Electives	PE		0	9	6	15
Open Electives	OE		0	3	6	9
Internship/Project	I/PE		0	0	15	15
Humanity Science Courses	HS		3	3+3 (OEHS)	2	11
Labs	L		10 (Core)	4 (Core) + 2 (PE)	1 (Core) + 1 (PE)	18
<b>Total Credits</b>			<b>40</b>	<b>46</b>	<b>34</b>	<b>120</b>



**Distribution of course types From S.Y. to Final Yr.**

● PC ● PE ● OE ● I/PE ● HS ● L



*Signature*





The Department as a part of Curriculum Development has several surveys conducted to improve the quality of the program curriculum and course contents. The participants for the survey are the stake holders- Faculty, Industry/Employers, Students, Alumni and Parents. Several Actions taken based on their feedback for the academic year 2021-22. DAB / Board of studies / Academic Council / Governing Body meeting held on 28/6/2021, the committee consisting of Industry representatives, Alumni and Faculty from universities of the department, after having discussions with the above members, their suggestions / recommendations and actions taken are reported as follows :

**Action Taken Report for B. Tech Curriculum 2020 Pattern**

<b>Recommendations</b>	<b>Action Taken</b>
<b>Faculty Feedback</b>	
Feedback about teaching learning process is given by the students.	Recommendations for the improvement/revision is suggested by the HoD, Dean academics and Principal and conveyed to the faculty
<b>Industry Feedback</b>	
More exposure to hands on skills is required	More Number of courses with practical are included in the curriculum
Number of choice based courses should be more	More number of choice based courses are introduced
Number of interdisciplinary courses should be more courses should be more	Major in Electric vehicle and Minor degree in Engineering management is introduced
Internship should be a mandatory part of the curriculum	A student has to undergo internship of six months at Seventh semester in the revised structure
<b>Alumni Feedback</b>	
More industry Exposure	Number if industry visits and guest lectures are augmented and introduced as part of the curriculum
More number of program electives to be offered	Choice based courses are introduced from the sixth semester
Courses on Finance are required	A course on personal finance is introduced at the seventh semester



<b>Students Feedback</b>	
<b>Recommendations</b>	<b>Action Taken</b>
More number of Audit Courses to be offered	Request of more number of audit courses is conveyed to the Dean Academics
Industrial Visits and Expert Lecture Should be more frequent	More industrial visits have been arranged for students.
Internships Should at least 6 months	Provision for six months internship is made in revised curriculum
More efforts should be taken for Mental Health and Social Awareness of the Students	Student's Councilor is appointed by the college
Shifting from Conventional Teaching Learning	Teachers are adopting new pedagogical practices for teaching
Guidance for Higher Studies in India and abroad should be more	A career guidance cell is setup by the college. Expert lectures are arranged on higher studies through this cell
Practical subjects should be in syllabus about Finance	A subject on personal finance is introduced in the seventh semester in revised curriculum.

Dr. Gautam Chandekar  
Head,  
Dept. of Mechanical Engg.



Dr. Madhuri Khambete  
Principal