VIGNAN'S
Foundation for Science, Technology & Research
(Deemed to be University)
-Estd. u/s 3 of UGC Act 1956

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Action Taken Report on B. Tech ECE Program R 19 Feedback
Implemented in R21 introduced in the AY 2021 - 22

Action taken based on the suggestions from Students:

Q1. Course Contents of Curriculum are in tune with the Program Outcomes.

Q2. The depth of the course content is adequate to have significant learning outcomes

Q3. Curriculum is sufficient to bridge the gap between industry standards /current global scenarios and academics.

Q4. The practical's enable to develop experimental, design, problem solving and analysis skills of the students.

Q5. The timely coverage of syllabus is possible in the mentioned number of hours.

Q6. The Curriculum providing opportunity towards self-learning to realize the expectations.

Q7. Rate the capability of the curriculum for improving ethical values in students

Q8. The number of theoretical courses and laboratory sessions sufficient to improve the technical skills of students

Q9. Electives enable the passion to learn new technologies in emerging area

TABLE 1 Analysis of Overall Feedback given by the Students on R 19

	Strongly Agree	Agree	Moderate	Disagree	Strongly Disagree	Avg. Rating	Grade
Q1	96.3	0.9	2	0.4	0.2	4.921	Excellent
Q2	96.2	1.1	1.5	0.5	0.5	4.914	Excellent
Q3	96.2	1.1	1.5	0.5	0.5	4.914	Excellent
Q4	96.3	1.1	1.6	0.5	0.2	4.919	Excellent
Q5	96.2	1.1	0.9	0.7	0.9	4.904	Excellent
Q6	96.7	0.5	1.3	0.5	0.7	4.911	Excellent
Q7	97.1	1.1	1.3	0	0.4	4.942	Excellent
Q8	96.5	1.1	1.1	0.4	0.7	4.917	Excellent
Q9	96.5	1.1	1.1	0.7	0.4	4.92	Excellent

Itemized responses given to the Suggestions of Students

Suggestion: More number of computer courses need to add as per the industry needs.

Action Taken: in every semester one or two computer related programming courses are incorporated in R-21 curriculum, in addition to this competitive coding and minor project on coding is also embedded in the curriculum. If student is more interested in the computer related courses they can also opt the additional courses from the IT elective pool.

Suggestion: Computer architecture and organization (CAO) is to discuss before microcontrollers to cover computer basics as core subject.

Action Taken: The basic concepts of CAO are included in Computer architecture and microprocessor course to cover the computer basics.

Suggestion Probability theory and stochastic process (PTSP) and Analog Circuits syllabus to be reduced

Action Taken: PTSP and Analog Circuits are the important core courses for ECE students by keeping this point in view we have reduced contents up to 20% in PTSP and 25% in Analog Circuits.

Suggestion: In the course Microcontrollers at least one unit Concepts of 8051 controller need to add for a better understanding of ARM controllers.

Action Taken: The course Microcontrollers, contents are starting with 8051 controller concepts and followed by advanced controllers like ARM.

Suggestion: In first year it self some of the basic professional core courses need to add to study more advanced courses from the second year onwards.

Action Taken: In first year first semester Network theory course is introduced under basic engineering and in second semester EDC and Digital electronics courses are introduced under Professional core.

Suggestion: Laboratory components are not needed for the mathematics courses and engineering chemistry should be removed from the ECE curriculum as it is not useful even for gate and other competitive exams.

Action Taken: The laboratory components for mathematics I and II courses removed in R-21 curriculum. More brain storming sessions conducted while removing the engineering chemistry from the curriculum and even BoS members also suggested the same.

Suggestion: The course BEEE from first year should be revised as the contents are repeated in the other subjects

Action Taken: The contents in BEEE are repeated in the NT and EDC courses but for the electrical machines and other electrical components are not covered hence the course electrical technology is introduced in the curriculum in place of BEEE.

Suggestion: Fourier transforms and Fourier series is covered in mathematics as well as in signals and systems, remove the contents from the mathematics as it is useful for the students learning in the signals and systems itself.

Action Taken: The concepts of Fourier series and Transforms are removed from the Mathematics.

Suggestion: Artificial intelligence (AI) and Machine Learning (ML) courses need to add in the curriculum.

Action Taken: The courses AI and ML are included in one of the elective pool.

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Action Taken: The courses AI and ML are included in one of the elective pool.

Action taken based on the suggestions from Alumni:

Q1. Curriculum has paved a good foundation in understanding the basic engineering concepts

Q2. Course Contents of Curriculum are in tune with the Program Outcomes

Q3. Curriculum imparted all the required Job Oriented Skills

Q4. The offering of the electives in relation to the Technological advancements and serve the needed in the industry

Q5. Tools and Technologies learnt during laboratory sessions has enriched the skills

Q6. Ability to compete with your peers from other Universities

Q7. The curriculum relevant to job and future aspirations

TABLE 2 Analysis of Overall Feedback given by the Alumni on R 19

Parameters	Strongly Agree	Agree	Moderate	Disagree	Strongly Disagree	Avg. Rating	Grade
Q1	90.4	8.3	1.3	0	0	4.891	Excellent
Q2	94.9	4.5	0.6	0	0	4.943	Excellent
Q3	90.4	8.3	0	1.3	0	4.878	Excellent
Q4	94.2	4.5	0.6	0.6	0	4.92	Excellent
Q5	90.4	9.6	0	0	0	4.904	Excellent
Q6	90.4	9.6	0	0	0	4.904	Excellent
Q7	91.7	7.1	0	0.6	0.6	4.887	Excellent

Itemized responses given to the suggestions of Alumni

Suggestion: Coding Skills should acquire by the student, to get good placements

Action Taken: to incorporate the coding skills among the students competitive coding and minor project (coding) is included in the new curriculum along with the computer courses.

Suggestion: The courses on information technology is less try to add few courses on IT related

Action Taken: One or two computer related programming courses are included in every semester, in addition to this competitive coding and minor project on coding is also embedded in the curriculum. If student is more interested in the computer related courses they can also opt the additional courses from the IT elective pool.

Suggestion: Electives should not be offered as a bunch, instead offer as a specialized areas to improve the knowledge in that domain.

Action Taken: In R-21 curriculum five elective pools are introduced instead of elective bunch.

Suggestion: IoT, AI, ML and deep learning are the current areas which student need training in the organization.

Action Taken: Modular courses are offered as a one-credit course and every student must undergo at least one modular course. The primary objective of modular courses is to have the hands-on knowledge in emerging technologies used in industry, the advanced courses related to IoT, AI and ML are included in the professional elective pools.

Action taken based on the suggestions from Faculty:

Q1. Curriculum designed is in tune with program Vision and Mission

Q2. Course Contents of Curriculum in tune with the Program Outcomes

Q3. The depth of the course content is adequate to have significant learning outcomes.

Q4. Contact Hour Distribution among the various Course Components (LTP) is Justifiable

Q5. Electives indulge the passion to learn new technologies in emerging areas

TABLE 3 Analysis of Overall Feedback given by the Faculty on R 19

Parameters	Strongly Agree	Agree	Moderate	Disagree	Strongly Disagree	Avg. Rating	Grade
Q1	58.9	40	0	0	0	4.545	Excellent
Q2	56.7	41.1	1.1	0	0	4.512	Excellent
Q3	54.4	44.4	0	0	0	4.496	Excellent
Q4	52.2	44.4	1.1	0	1.1	4.43	Excellent
Q5	52.2	46.7	0	0	0	4.478	Excellent

Itemized responses given to the suggestions of Faculty

Suggestion: Professional elective should be offered in specialized areas to enhance the students' knowledge in vertical domains.

Action Taken: In R-21 curriculum, Communication Systems and Networking, VLSI, Embedded Systems and IoT, AI and ML and IT elective pools are introduced in the emerging areas.

Suggestion: Computer architecture and Microprocessor concepts can be merge such that another course can offer on microcontrollers.

Action Taken: The two courses Computer architecture and Microprocessor are merged and included in curriculum as professional core.

Suggestion: The contents in the internet of things, DCCN. Courses can be update as per the industry need.

Action Taken: Data Communications and Computer Networks (DCCN) and Internet of Things courses are modified.

Suggestion: LTE contents need to add in cellular and mobile communication course.

Action Taken: Revised Cellular and Mobile communication Systems course and included basic LTE contents.

Suggestion: Industry relevant Embedded and IoT, AI and ML courses need to offer in elective pool.

Action Taken: Five different Elective pools offered in R-21 Curriculum, Communication Systems and Networking, VLSI, Embedded Systems and IoT, AI and ML and IT elective pools are introduced.

Action taken based on the suggestions from Employers:

Q1.Course Content of Curriculum is in tune with the Program Outcomes

Q2.Curriculum provides the scope for improving the skills required by IT and IT enabled Industries.

Q3. Professional and Open Electives are fulfilling the ever- evolving needs of IT industries

Q4.Tools and technologies described in the curriculum are enough to design and develop new applications of IT Industry.

Q5.Problem Solving and Soft Skills acquired by the students through the curriculum will enable them to be placed in IT Industry.

TABLE 4 Analysis of Overall Feedback given by the Employers on R 19

Parameters	Strongly Agree	Agree	Moderate	Disagree	Strongly Disagree	Avg. Rating	Grade
Q1	58.9	40	0	0	0	4.545	Excellent
Q2	56.7	41.1	1.1	0	0	4.512	Excellent
Q3	54.4	44.4	0	0	0	4.496	Excellent
Q4	52.2	44.4	1.1	0	1.1	4.43	Excellent
Q5	52.2	46.7	0	0	0	4.478	Excellent

Itemized responses given to the suggestions of Employers

Suggestion: More programing courses are required in the curriculum to get into the software firms.

Action Taken: More than eight computer related courses are introduced in the new curriculum.

Suggestion: Instead of engineering chemistry and BEPS offer IT related courses.

Action Taken: instead of engineering chemistry, offered one programming course. As already more programming courses added in the curriculum the course BEPS replaced with the professional core subject.

Suggestion: In every semester students have to undergone to the one programming course

Action Taken: From the first year first semester students will undergone through one or more programing courses in each semester.

Suggestion: Students should study the advanced courses so that acquisition of knowledge is easier in the industry.

Action Taken: The following courses, IoT, ARM Microcontrollers, Sensors and Instrumentation and other advanced courses are included in professional core. However stream wise advanced courses are included in Professional elective.

HoD, ECE

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