



VIGNAN'S

Foundation for Science, Technology & Research.

-Estd. u/s of UGC Act 1956

DEPARTMENT OF INFORMATION TECHNOLOGY

Action Taken Report on B. Tech IT Program R 13 Feedback Implemented in R16 introduced in the AY 2016 - 17

Action taken based on the suggestions from Students:

- Q1. Course Contents of Curriculum are in tune with the Program Outcomes
- Q2. Course Contents are designed to enable Problem Solving Skills and Core competencies
- Q3. Courses placed in the curriculum serves the needs of both advanced and slow learners
- Q4. Contact Hour Distribution among the various Course Components (LTP) is Satisfiable
- Q5. Electives have enabled the passion to learn new technologies in emerging areas
- Q6. Curriculum is providing opportunity towards Self learning to realize the expectations
- Q7. Composition of Basic Sciences, Engineering, Humanities and Management Courses is a right mix and satisfiable
- Q8. Laboratory sessions are sufficient to improve the technical skills of students
- Q9. Inclusion of Minor Project/ Mini Projects improved the technical competency and leadership skills among the students

Analysis of Overall Feedback given by the Students on R13

Parameters	Strongly Agree	Agree	Moderate	Disagree	Strongly Disagree	Avg. Rating	Grade
Q1	47	37.5	9.3	3.1	2.6	4.217	Excellent
Q2	44	36	10.5	4.4	5.1	4.094	Excellent
Q3	28.5	44.7	17.2	5.9	3.6	3.883	Very Good
Q4	28	33.7	23.7	3.9	10.8	3.645	Very Good
Q5	30.6	37.8	22.1	3.9	5.7	3.84	Very Good
Q6	22.6	43.2	24.2	4.9	5.1	3.733	Very Good
Q7	35.2	42.7	15.7	2.8	3.6	4.031	Excellent
Q8	27.2	51.2	13.1	4.9	3.6	3.935	Very Good
Q9	30.1	36.5	21.9	4.9	6.7	3.787	Very Good

Itemized responses to the Suggestions of Students

Suggestion: Add courses focused on industry and include add-on courses on new technology

Action Taken: Modular courses are introduced to have hands-on knowledge in emerging technologies used in industry like data visualization tools, rapid web development tools, and design & analysis tools for software development

Suggestion: Add employability courses like the internet of things, scripting languages, and cloud computing, etc.

Action Taken: Courses like a scripting language, Internet of things, Artificial intelligence, Optimized techniques, Soft computing, and Agent technologies were introduced as professional electives

Suggestion: Add more laboratory hours to the curriculum

Action Taken: Increased number of laboratory hours by integrating theory with laboratory courses

Suggestion: Freedom to select interdisciplinary courses from a large pool of electives courses

Action Taken: Open electives courses in the field of robotics, bioinformatics, management, humanities are introduced to get the interdisciplinary courses

Suggestion: Improve the project-based learning in the curriculum

Action Taken: Minor projects in core courses are introduced to make the student's industry ready

Suggestion: Improve the skill development courses in the curriculum

Action Taken: Introduced employability and skill-based courses in every semester to make the student's industry ready

Suggestion: Include more importance in problem-solving skills in curriculum

Action Taken: Introduced skills and activities for each course to get the real-time/industry usage of each course

Suggestion: Introduction of emerging courses like blockchain technologies, mobile application development, multimedia computing, etc and more focus on practical learning

Action Taken: Introduced mobile application development as a core course in 4th year I semester

Suggestion: It is better to introduce a course-based project to get more exposure to the real-time scenario of the course

Action Taken: An honors degree is introduced for advanced learners to have advanced courses in the field of information technology

Suggestion: Software development frameworks and tools better to offer from 2nd year onwards in the curriculum

Action Taken: Introduced theory and laboratory integrated courses to improve the practical exposure along with theoretical concepts of course. Further, add a greater number of activities and lab experiments in programming courses like problem-solving through c, OOP through JAVA, Scripting language, and Web technologies

Suggestion: Strengthen programming skills in C, JAVA, Python, and Web Technologies courses

Action Taken: In keeping view of diversified students and to meet their expectations, 4 streams were introduced in R16 regulations and each stream consists of four courses which have been replaced by 4 department elective courses of R13 regulations

Suggestion: The curriculum must be suitable for writing national competitive examinations and industry needs

Action Taken: Offered Credits for MOOC Courses (NPTL, Swayam, Coursera, FDX) to inculcate life learning skills over the students

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. Professional and Open Electives of Curriculum served the technical advancements needed to serve in the industry

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

Q6. Ability to compete with your peers from other Universities

Q7. Current Curriculum is superior to your studied Curriculum

Analysis of Overall Feedback given by the Alumni on R 13

Parameters	Strongly Agree	Agree	Moderate	Disagree	Strongly Disagree	Avg. Rating	Grade
Q1	78.4	16.2	5.4	0	0	4.73	Excellent
Q2	78.4	8.1	13.5	0	0	4.649	Excellent
Q3	73	10.8	8.1	5.4	2.7	4.46	Excellent
Q4	78.4	5.4	10.8	5.4	0	4.568	Excellent
Q5	64.9	21.6	2.7	8.1	2.7	4.379	Excellent
Q6	70.3	13.5	8.1	2.7	5.4	4.406	Excellent
Q7	75.7	16.2	5.4	0	2.7	4.622	Excellent

Itemized responses to the suggestions of Alumni

Suggestion: Advanced Programming Languages (like python, R, PHP, etc) can be included from the 2nd year onwards to implement projects in various advanced areas.

Action Taken: Scripting language (python programming), R Programming, open sources for web technologies (PHP and MYSQL) were introduced as a professional elective (2nd year II

semester), open elective (3rd year I semester), and professional elective (3rd year I semester) respectively.

Suggestion: Courses like Cloud Computing, Big data analytics, machine learning, and the internet of things can be made as a core category

Action Taken: Cloud computing, Big data analytics, and the Internet of things were introduced as a professional elective, core course, and professional elective course respectively.

Suggestion: Include Artificial Intelligence and Neural Networks as professional electives

Action Taken: Introduced Artificial Intelligence as a professional elective

Suggestion: Include Problem-solving Techniques and approaches in 3rd year to attend the campus drives of various software industries

Action Taken: Introduced employability and skill-based courses in every semester to make the students comfortable in the coding skills

Suggestion: It is better to introduce the fundamental concepts of Data Science and Data Analytics courses in the curriculum to get the basic information about cutting edge technologies

Action Taken: Statistics using python and Data science using python were introduced as open elective courses

Suggestion: Include more courses on Web technologies and rapid software development tools

Action Taken: Introduced web technologies stream of courses that contains web technologies, opens systems of web technologies, middleware technologies, and enterprise computing as professional electives.

Suggestion: Include add on value courses during the semester back time to get exposure towards industry-related technologies

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 like data visualization tools, rapid web development tools, and design & analysis tools for software development

Suggestion: Strengthen the coding skills by allocating at least 50% of course to laboratories in the curriculum

Action Taken: Introduced integrated theory and laboratory courses. More than 50% of core courses are designed in this mode

Action taken based on the suggestions from Faculty:

- Q1. Course Contents of Curriculum are in tune with the Program Outcomes
- Q2. Course Contents enhance the Problem-Solving Skills and Core competencies
- Q3. Allocation of Credits to the Courses are satisfiable
- Q4. Contact Hour Distribution among the various Course Components (LTP) is Justifiable
- Q5. Electives enable the passion to learn new technologies in emerging areas
- Q6. Curriculum is providing opportunity towards Self learning
- Q7. Composition of Basic Sciences, Engineering, Humanities and Management Courses is satisfiable
- Q8. Courses with laboratory sessions are sufficient to improve the technical skills of students
- Q9. Inclusion of Minor/ Mini Projects improved the technical competency and leadership skills among the students

Analysis of Overall Feedback given by the Faculty on R 13

Parameters	Strongly Agree	Agree	Moderate	Disagree	Strongly Disagree	Avg. Rating	Grade
Q1	54.5	36.4	9.1	0	0	4.454	Excellent
Q2	40.9	50	4.5	4.5	0	4.27	Excellent
Q3	63.6	31.8	0	0	4.5	4.497	Excellent
Q4	59.1	22.7	18.2	0	0	4.409	Excellent
Q5	68.2	22.7	9.1	0	0	4.591	Excellent
Q6	54.5	27.3	9.1	4.5	4.5	4.225	Excellent
Q7	59.1	22.7	18.2	0	0	4.409	Excellent
Q8	63.6	22.7	9.1	0	4.5	4.406	Excellent
Q9	59.1	27.3	9.1	4.5	0	4.41	Excellent

Itemized responses to the suggestions of Faculty

Suggestion: It is better to include more practical oriented topics from the 2nd Unit onwards instead of theoretical issues in the Big Data Analytics course. Further, it is also advised to introduce statistical analysis using functional languages from 2nd year itself.

Action Taken: Big data analytics course is revised based on given suggestions and introduced laboratory experiments & minor projects

Suggestion: It is better to remove the number systems and introduction to computer issues from Unit-I and better to add programming issues and problem-solving techniques in Problem-solving and Computer Programming course.

Action Taken: Revised the problem solving and computer programming and renamed as computer programming. Strengthen computer programming with a greater number of activities and minor projects

Suggestion: It is useful to include the basics of the cloud and various case studies on cloud technologies in the first two units. From the 3rd unit, it is useful to add practical concepts relating to anyone cloud technology.

Action Taken: Revised the cloud computing course in practical exposure and introduced AWS (Amazon Web Services) in the part of course to conduct experiments.

Suggestion: Suggested to have courses for exclusive IoT technologies related courses from V semester onwards like network programming, embedded systems, IoT with cloud and IoT with web

Action Taken: Introduced IoT course with python programming to develop real-time projects as a professional elective course

Suggestion: Suggested that it is essential to include the primitive operations on Queue in Unit-I. Better to remove searching techniques from this course and include them in any basic programming language course.

Action Taken: Revised the Data Structure course with many activities and case studies

Suggestion: It is better to include a case study on Unix/Linux operating system in CPU Scheduling, deadlocks, and analytical explanation on memory management techniques. R and Python programming skills are essential to meet the requirements of the Data Science course. Data Science and machine learning courses are deadily required for B.Tech. IT Programme

Action Taken: Introduced Linux/Unix case study in the CPU scheduling concept in Operating Systems and gave more exploration in memory management issues in the course. Python programming (Scripting language), R programming, Data Science using python were included as professional and open elective courses

Suggestion: It is better to include basic issues on data analytics in the first and second units of Data mining and data analytics course. From 3rd units, data analytics issues and practical exposure to various data analytics algorithms are more appropriate for IT students

Action Taken: Revised the data mining and data analytics course in industrial perspective and introduced a weka tool to carry out laboratory experiments and minor projects of the course.

Suggestion: It is more appropriate to introduce discrete mathematical structures with computer applications than just discrete mathematical structures. This is to be designed as a pre-requisite for many-core courses of information technology programme.

Action Taken: Revised the discrete mathematical structures course in computer application point of view

Action taken based on the suggestions from Employers:

- Q1. Course Contents of Curriculum are in tune with the Program Outcomes
- Q2. Curriculum provides the scope for improving the required skills of IT and IT enabled Industry Demands
- 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.

Analysis of Overall Feedback given by the Employers on R 13

Parameters	Strongly Agree	Agree	Moderate	Disagree	Strongly Disagree	Avg. Rating	Grade
Q1	72.4	17.2	0	10.3	0	4.514	Excellent
Q2	55.2	24.1	20.7	0	0	4.345	Excellent
Q3	69	6.9	13.8	0	10.3	4.243	Excellent
Q4	41.4	44.8	10.3	3.4	0	4.239	Excellent
Q5	48.3	31	20.7	0	0	4.276	Excellent

Itemized responses to the suggestions of Employers

Suggestion: It is better to include the design and analysis of algorithms in detail. Further, introduce the same course in two semesters to get to understand every problem-solving technique and case studies in design

Action Taken: Included minor projects in the Design and Analysis of Algorithms course to strengthen the course content and to improve the problem-solving skills. Introduced Advanced Data Structures course to have advanced concepts in Data Structures

Suggestion: It is essential to include functional and scripting languages for the students very early in the programme and also include the various case studies on programming knowledge.

Action Taken: Introduced python programming, R programming, and PHP languages in the curriculum as professional electives

Suggestion: Database design, data retrieval, and backup related issues need to discuss in the courses. Many industries are concentrating on database operations and backup issues.

Action Taken: Added a greater number of case studies in Database Management System course in line with database design, data retrieval issues, and backup strategies, and those case studies can be implemented as minor projects

Suggestion: Better to Include Embedded Systems and IoT related fundamental courses may include in the curriculum. Thereby students can understand the internal architecture of microprocessors and microcontrollers.

Action Taken: Introduced Embedded Systems and Internet of Things as professional elective courses

Suggestion: IT students need to study Computer Vision and machine learning related courses to understand virtual reality projects and processing medical images.

Action Taken: Included computer graphics, fundamental of digital image processing, and virtual reality as professional elective courses in the curriculum

Suggestion: It is very essential to teach security issues in web and information. Introduce case studies related to security in the database, cloud, and IoT technologies.

Action Taken: The information security course was revised by 30% to introduce various security threats in web technologies and information retravel systems.

Suggestion: Better to include some content related to mobile application development and simulation & modeling. In today's scenario students need to focus on simulation tools also.

Action Taken: Offered Mobile application development course as a core course and optimization techniques as a professional course

Action taken based on the suggestions from Parents:

- Q1. Curriculum enhances the intellectual aptitude of your ward
 Q2. Curriculum realizes the personality development and technical skilling of your ward
 Q3. Satisfaction about the Academic, Emotional Progression of your ward
 Q4. Competency of your ward is on par with the students from other Universities/Institutes
 Q5. Course Curriculum is of the global standard and is in tune with the needs of IT and IT enabled industries

Analysis of Overall Feedback given by the Parents on R 13

Parameters	Strongly Agree	Agree	Moderate	Disagree	Strongly Disagree	Avg. Rating	Grade
Q1	34.3	48.6	17.1	0	0	4.172	Excellent
Q2	34.3	42.9	17.1	5.7	0	4.058	Excellent
Q3	17.1	65.7	11.4	0	5.7	3.882	Very Good
Q4	34.3	48.6	11.4	0	5.7	4.058	Excellent
Q5	34.3	48.6	11.4	5.7	0	4.115	Excellent

Itemized responses to the suggestions of Parents

Suggestion: Add employability courses in curriculum

Action Taken: Introduced employability and skill-based courses in every semester to make the student's industry ready

Suggestion: Add more courses related to IT company

Action Taken: Advanced Programming Languages (like python, R, PHP, etc) can be included from the 2nd year onwards to implement projects in various advanced areas

Suggestion: In depth knowledge in core courses required to write the national level examinations

Action Taken: Offered GATE/NET examination syllabus as core courses in the curriculum

Suggestion: Include more importance in problem solving skills in curriculum

Action Taken: Introduced skills and activities for each course to get the real-time/industry usage of each course. An honors degree is introduced for advanced learners to have advanced courses in the field of information technology

Suggestion: It must support for higher education

Action Taken: Final examination question papers were drawn from premier institutions like IITs/NITs/Central Universities/IIITs to make our student to attempt written tests of higher education programmes like M.Tech/MS/integrated M.Tech and Ph.D.

Suggestion: Minimize the number of evaluation schemes and include the courses based on the feedback from industry experts

Action Taken: Our employers are also one of the stakeholders to design the curriculum and department BOS committee must contain at least 30% of members from industry

Suggestion: Practical oriented courses need to be added

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 like data visualization tools, rapid web development tools, and design & analysis tools for software development

Suggestion: The curriculum must improve the placements of the department

Action Taken: Increased number of laboratory hours by integrating theory with laboratory courses. Also, minor projects in core courses are introduced to make the student's industry ready

Suggestion: The curriculum will be more practical oriented than theory and suitable for project-oriented learning

Action Taken: Add a greater number of activities and lab experiments in programming courses like problem-solving through C, OOP through JAVA, Scripting language, and Web technologies to make student ready for placement drives


HOD, IT