



**DEPARTMENT OF INFORMATION TECHNOLOGY**

**Action Taken Report on MCA Program R 15 Feedback  
Implemented in R18 introduced in the AY 2018 - 19**

**Action taken based on the suggestions from Students:**

- Q1.Course Contents of Curriculum are in tune with the Program Outcomes  
Q2.Course Contents are well designed to enable Problem Solving Skills and Core competencies  
Q3.Courses placed in the curriculum serve 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.Courses with laboratory sessions are sufficient to improve the technical skills  
Q8.Research Projects improved the technical competency and leadership skills  
Q9.Tools and technologies described in the curriculum are enough to design and develop new applications.

**Analysis of Overall Feedback given by the Students on R15**

Parameters	Strongly Agree	Agree	Moderate	Disagree	Strongly Disagree	Avg. Rating	Grade
Q1	56.4	43.6	0	0	0	4.564	Excellent
Q2	56.4	41	2.6	0	0	4.538	Excellent
Q3	35.9	43.6	15.4	0	5.1	4.052	Excellent
Q4	20.5	48.7	23.1	0	7.7	3.743	Very Good
Q5	28.2	56.4	15.4	0	0	4.128	Excellent
Q6	43.6	38.5	17.9	0	0	4.257	Excellent
Q7	28.2	53.8	15.4	0	2.6	4.05	Excellent
Q8	25.6	61.5	12.8	0	0	4.124	Excellent
Q9	33.3	38.5	23.1	5.1	0	4	Excellent

**Itemized responses to the Suggestions of Students**

**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 advanced courses from electives courses

**Action Taken:** Professional elective courses were offered from 2<sup>nd</sup> II semester onwards. Students can select professional elective based on their interest

**Suggestion:** Improve the project-based learning in the curriculum

**Action Taken:** Mini project-I and Mini Project-II are core courses are introduced to make the student's industry ready from 2<sup>nd</sup> year II semester onwards

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

**Action Taken:** Courses like Mobile application development, Internet of things, Statistical Programming in R, Cloud Computing, and Advanced mobile application development were introduced as professional electives

**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 4<sup>th</sup> year I semester and multimedia systems as a core course in 4<sup>th</sup> year I semester

**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, Programming through python, and Internet and Web technologies

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

**Action Taken:** Offered Credits for MOOC Courses (NPTEL, 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 enriched the research abilities to pursue higher education in the thrust areas of Computer Science

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.Competing with your peers from other Universities

Q7.Curriculum is superior to your studied Curriculum

**Analysis of Overall Feedback given by the Alumni on R 15**

Parameters	Strongly Agree	Agree	Moderate	Disagree	Strongly Disagree	Avg. Rating	Grade
Q1	100	0	0	0	0	5	Excellent
Q2	100	0	0	0	0	5	Excellent
Q3	85	15	0	0	0	4.85	Excellent
Q4	57	42	0	0	0	4.53	Excellent
Q5	85	15	0	0	0	4.85	Excellent
Q6	100	0	0	0	0	5	Excellent
Q7	100	0	0	0	0	5	Excellent

**Itemized responses given to the suggestions of Alumni**

**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 more courses on Web technologies and rapid software development tools

**Action Taken:** Introduced Internet and web technologies as a core course in 1<sup>st</sup> year I semester and Web Scripting through PHP & MYSQL as a core course in 2<sup>nd</sup> year II semester. Thereby students can development web applications for local industries from 1<sup>st</sup> year

**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.Curriculum enable the research abilities of the students in thrust areas of Computer Science

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. Apply tools and technologies described in the curriculum are enough to design and develop new applications to serve the local needs.

Q8. Courses with 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 Faculty on R 15**

Parameters	Strongly Agree	Agree	Moderate	Disagree	Strongly Disagree	Avg. Rating	Grade
Q1	65.2	28.3	6.5	0	0	4.587	Excellent
Q2	54.3	41.3	4.3	0	0	4.496	Excellent
Q3	69.6	28.3	0	0	2.2	4.634	Excellent
Q4	63	21.7	15.2	0	0	4.474	Excellent
Q5	78.3	13	8.7	0	0	4.696	Excellent
Q6	67.4	21.7	8.7	0	2.2	4.521	Excellent
Q7	67.4	19.6	13	0	0	4.544	Excellent
Q8	71.7	19.6	2.2	0	6.5	4.5	Excellent
Q9	65.2	26.1	2.2	6.5	0	4.5	Excellent

**Itemized responses given to the suggestions of Faculty**

**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 any 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.

**Action Taken:** Introduced a specific laboratory course on Linux Basics and Shell Programming Lab as a core course. Introduced Linux/Unix case study in the CPU scheduling concept in Operating Systems and gave more exploration in memory management issues in the course. Programming through python, R programming were included. Data science related workshop can be organized to develop capstone projects with the knowledge of python and R programming

**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 bigdata analytics course in industrial perspective and introduced a weka tool to carry out laboratory experiments and minor projects of the course.

**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.

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

#### **Action taken based on the suggestions from Employers:**

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

Q2.Curriculum has 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 sufficient 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 15**

Parameters	Strongly Agree	Agree	Moderate	Disagree	Strongly Disagree	Avg. Rating	Grade
Q1	96.7	3.3	0	0	0	4.967	Excellent
Q2	90.2	9.8	0	0	0	4.902	Excellent
Q3	78.7	21.3	0	0	0	4.787	Excellent
Q4	60.7	39.3	0	0	0	4.607	Excellent
Q5	82	18	0	0	0	4.82	Excellent

#### **Itemized responses given 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.

**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

**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 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 and Advanced mobile application development courses as professional elective courses

**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 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 15

Parameters	Strongly Agree	Agree	Moderate	Disagree	Strongly Disagree	Avg. Rating	Grade
Q1	44.2	40.4	15.4	0	0	4.288	Excellent
Q2	40.4	36.5	15.4	7.7	0	4.096	Excellent
Q3	32.7	50	7.7	0	9.6	3.962	Very Good
Q4	38.5	44.2	7.7	0	9.6	4.02	Excellent
Q5	40.4	42.3	7.7	7.7	1.9	4.116	Excellent

#### Itemized responses given to the suggestions of Parents

**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:** 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

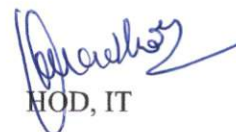
**Action Taken:** Add a greater number of activities and lab experiments in programming courses like problem-solving through C, Programming through python, and OOP through JAVA to make student ready for placement drives

**Suggestion:** Add more courses related to IT company

**Action Taken:** Advanced Programming Languages (like python, R, PHP, etc) can be included from the 1st year onwards to implement projects in various advanced areas while developing minor project-I and II

**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.

  
HOD, IT