


**CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY
(AUTONOMOUS), HYDERABAD-75**

Department of Computer Science and Engineering

Stake Holder Feedback For 2017-18

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HYDERABAD-75**

Stakeholders Feedback Analysis and Action Taken Report-(AY:2017-2018)

1. Students Feedback Analysis

Table 1: Responses related to Student Feedback (No. of Responses: 101)

S. No	Parameters	Avg Rating	%
1	Association-	3.82	76.4
2	Internships	1.6	33
3	Infrastructure-Common->Laboratory facilities	3.67	73.4
4	Infrastructure-Common->Computing facilities	3.39	67.8
5	Infrastructure-Common->Library facilities	3.66	73
6	Infrastructure-Common->Internet and Wi-Fi facilities	2.92	58
7	Infrastructure-Common->Games and Sports facilities	3.28	66
8	Infrastructure-Common->Admin. and Accounts Section Services	3.25	65
9	Infrastructure-Common->Academics & Examination Cell(AEC)	3.67	73.4
10	Infrastructure-Common->Controller of Examinations(CoE)	3.37	67
11	Infrastructure-Common->Transport facilities(if applicable)	3.25	65
12	Infrastructure-Common->Canteen facilities	3.42	68.4
13	Infrastructure-Common->Health Center facilities	3.18	64
14	Infrastructure-Common->Basic amenities including washrooms	2.50	50
15	Infrastructure-Common->Hostel facilities(if applicable)	2.91	58
16	Infrastructure-Common->Overall facilities	3.04	61
17	Placement and Training Cell->Training provided for placements.	3.35	67
18	Placement and Training Cell->Training and Placement Office provided on/off campus placement opportunities.	3.50	70
19	Placement and Training Cell->Career Counselling & Guidance for higher studies provided.	2.92	58
20	Placement and Training Cell->Co and Extra Curricular opportunities provided.	3.11	62
21	Placement and Training Cell->Motivation towards Research & Development(R&D)	3.01	60
22	Curriculum and Syllabus->	3.55	71

23	Suggestions-Curriculum Courses on Devops, Data Science
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Action Taken: Many students suggested to add new courses in the curriculum and New Courses like DevOps, Big Data Analytics courses were introduced in the syllabus.

2. Teachers Feedback Analysis

Table 3: Average Response of Faculty from all the departments (No. of Responses: 20)

S. No	Parameters	Avg. Rating	%
1	The design of the curriculum addresses the holistic development of student.	4.56	91
2	The curriculum is well balanced with knowledge, skills and employability.	4.63	93
3	The syllabus suitable to the course.	4.56	91
4	The course/courses are relevant to the present scenario.	4.69	94
5	Course objectives and outcomes are well defined.	4.69	94
6	Prescribed books/suggested readings and other references appropriate.	4.69	94
7	BoS members from Academia and Industry constructive in updating the syllabi according to the changing educational challenges and requirements in line with regulating bodies like AICTE, UGC etc.	4.47	89
8	The scheme and evaluation schedules satisfy the Teaching Learning Process.	4.80	96
9	Freedom to suggest/propose/modify/incorporate new topics in the syllabus during the revision of curriculum?	4.69	94
10	Institute/Department gives the freedom to adopt new technologies/strategies of innovative teaching?	4.56	91
11	The environment in the department is conducive to learning, teaching, and research.	4.56	91
12	Provisions for professional development are non-discriminatory and fair.	4.50	90
13	Adequacy of infrastructure (class/staff rooms, labs, library, and ICT facilities) in the institute.	4.73	94

Action Taken: Teachers recommended to increase core subjects that was introduced in R18 Curriculum

3. Parent Feedback Analysis

Table 4: Responses related to Theory Courses (No. of Responses: 11)

S. No	Parameters	Avg. Rating	%
1	The Teaching-Learning Environment	4.13	82
2	Infrastructure Facilities (Laboratories and Class rooms)	4.00	80
3	Library, Internet, Computer, Wi-Fi etc.	4.00	80
4	Monitoring of Student's Progress	4.13	82.5
5	Participation by your wards in technical events (workshops and conferences).	4	80
6	Participation in personality development activities by your ward.	4.25	85
7	Response and communication with the college authorities.	3.73	74.6
8	Support Services like Bank and Post office	3.27	65.4
9	Canteen facility in the campus.	3	60
10	Student activity centres in the college (clubs and fests)	3.73	74.6
11	Facility for sports, games and transport facility for the students.	3.45	69.0
12	Training and placement activities in the campus.	4.50	90
13	Quality of Curriculum	4.18	83.6

Action Taken: Parents recommended to increase student activities and Mini Project was introduced in R18 Curriculum

4. Employer Feedback Analysis

Table 5: Responses related to Theory Courses (No. of Responses: 05)

S. No	Parameters	Avg. Rating	%
1	Domain Knowledge and Aptitude Levels	1.8	84
2	Problem analysis and design of appropriate solutions	2	73
3	Attitude towards Research based approach	2	71
4	Adaptability to new technology/tools and zeal to be a constant learner	2.3	77.7
5	Commitment to work, managerial skills and ability to meet deadlines	2.0	66.6
6	Work towards sustainable development, Societal improvements and Environmental Benefits	2.3	77.7
7	Professional ethics	2.1	72.2
8	Communication Skills	2.5	83.3
9	Team spirit, interpersonal relations and leadership skills	1.6	60
10	How do you rate capability to analyze, synthesize, design, develop and test systems/processes	2	75
11	Overall Job performance	2	69

4. ALUMNI Feedback Analysis

Table 6: Summary of Alumni Feedback Report (No. of Responses: 15)


S. No	Parameters	Avg. Rating	%
1	Do you think our vision statement captures where we are heading as a Department to produce competent, skillful, social responsible, professionals who can contribute significantly to industry and research ?	2	67
2	Does our mission statements reflect our fundamental and unique purpose?	2	67
3	Whether the current statements of vision, mission and PEOs is as per current need.	1.75	58
4	Whether the department is moving towards right path as per vision & mission statements.	1.5	53
5	Do you want to suggest changes in Mission Statements?	Yes	
6	Do you want to suggest changes in PEOs Statements?	No	
7	Do you want to suggest changes in PSOs Statements?	No	
8	Do you think our vision statement captures where we are heading as a Department to produce competent, skillful, social responsible, professionals who can contribute significantly to industry and research ?	Yes	
9	Does our mission statements reflect our fundamental and unique purpose?	Yes	
10	Whether the current statements of vision, mission and PEOs is as per current need.	Yes	
11	Whether the department is moving towards right path as per vision & mission statements.	Yes	

Action Taken: Alumas recommended to add new technologies . DevOps and Big Data are included in the R18 syllabus .

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Consolidated Action taken report on the Feedback obtained from Stake Holders
AY : 2017-2018

S.No	Suggestions from	Suggestions	Action Taken	Remarks
1	Student	DevOps course was recommended.	In R18 syllabus, DevOps course is included.	DevOps
2	Student	Big Data Analytics course was recommended.	In R18 syllabus, Big Data course is included.	Big Data Analytics
3	Alumnus	Add new technologies may be incorporated in the curriculum.	DevOps and Big Data are included in the R18 syllabus	DevOps, Big Data
4	Parent	Mini Projects may be included in the curriculum.	Mini Projects are included in the R18 syllabus	Mini Project


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DEVOPS

(PROFESSIONAL ELECTIVE-V)

Instruction	3 Hours per week
Duration of End Examination	3 Hours
Semester End Examination	70 Marks
CIE	30 Marks
Credits	3

Course Objectives: The main objectives of this course are to

1. Describe the agile relationship between development and IT operations.
2. Understand the skill sets and high-functioning teams involved in DevOps and related methods to reach a continuous delivery capability
3. Implement automated system update and DevOps lifecycle

Course Outcomes: On successful completion of this course, students will be able to:

4. Identify components of Devops environment
5. Describe Software development models and architectures of DevOps
6. Apply different project management, integration, testing and code deployment tool
7. Investigate different DevOps Software development models
8. Assess various Devops practices
9. Collaborate and adopt Devops in real-time projects

UNIT-I

Introduction: Introduction, Agile development model, DevOps, and ITIL. DevOps process and Continuous Delivery, Release management, Scrum, Kanban, delivery pipeline, bottlenecks, examples

UNIT-II

Software development models and DevOps:

Waterfall, Spiral, RAD model, Agile Development, 7 C's of

DevOps Lifecycle for Business Agility, DevOps, and Continuous Testing.

DevOps influence on Architecture: Introducing software architecture, The monolithic scenario, Architecture rules of thumb, The separation of concerns, Handling database migrations, Microservices, and the data tier, DevOps, architecture, and resilience.

UNIT-III

Introduction to project management: The need for source code control, The history of source code management,

Roles and code, source code management system and migrations, Shared authentication, Hosted Git servers, Different Git server implementations, Docker intermission, Gerrit, The pull request model, GitLab. **Integrating the system:** Build systems, Jenkins build server, Managing build dependencies, Jenkins plugins, and file system layout, The host server, Build slaves, Software on the host, Triggers, Job chaining and build pipelines, Build servers and infrastructure as code, Building by dependency order, Build phases, Alternative build servers, Collating quality measures.

UNIT-IV

Testing Tools and automation: Various types of testing, Automation of testing Pros and cons, Selenium -

Introduction, Selenium features, JavaScript testing, Testing backend integration points, Test-driven development, REPL-driven development

Deployment of the system: Deployment systems, Virtualization stacks, code execution at the client, Puppet master and agents, Ansible, Deployment tools: Chef, SaltStack and Docker

UNIT-V

Code monitoring and Issue Tracking: Code monitoring tools: Nagios, Munin, Ganglia, Log handling. Introduction to issue trackers, Need of issue tracker: Workflows and issues, Problems with issue tracker proliferation, Trackers tools: Bugzilla, GitLab tracker, and Jira

Textbooks

1. Joakim Verona. Practical Devops, Second Edition. Ingram short title; 2nd edition (2018). ISBN-10: 1788392574
2. Deepak Gaiwad, Viral Thakkar. DevOps Tools from Practitioner's Viewpoint. Wiley publications. ISBN: 9788126579952

Reference books

1. Len Bass, Ingo Weber, Liming Zhu. DevOps: A Software Architect's Perspective. Addison Wesley; ISBN10: 9780134049847

DATA SCIENCE AND BIG DATA ANALYTICS

(PROFESSIONAL ELECTIVE-IV)

Instruction	3 Hours per week
Duration of End Examination	3 Hours
Semester End Examination	70 Marks
CIE	30 Marks
Credits	3

Prerequisites: Probability and Statistics, Data Base Management Systems.

Course Objectives: The objectives of this course are 1. Introduce a data analytics problem solving framework.

2. Develop technical skills in probability modeling and statistical inference for the practical application of statistical methods.
3. Use existing and develop new statistical tools for data science problems across different applied domains.

Course Outcomes: On Successful completion of this course, student will be able to

1. Describe Data Discovery, Data Preparation, Model Planning and Building, communicate results, operationalize phases of data analytics life cycle and Evaluation of data using statistical methods, ANOVA.
2. Predict the approaches for grouping similar objects using Least Squares, Nearest Neighbors and identify frequent patterns using Apriori algorithm, FP-Growth.
3. Examine Time Series Analysis using ARIMA and representation, processing and analysis of textual data to derive useful insights using TFIDF.
4. Recall Velocity, variety, volume, veracity of big data. Examples of big data and Risks, Crowd sourcing analytics of Big data technologies.
5. Outline the Architecture of Apache Hadoop HDFS and Map Reduce operations to perform filtering, Job Tracking and restructuring data.
6. Explain types, benefits of No SQL databases and identify applications of stream data model, query processing and optimization techniques.

UNIT-I

Data Analytics Life cycle: Data Analytics Life cycle Overview, Discovery, Data Preparation, Model Planning, Model Building, Communicate Results, Operationalize. Exploratory Data Analysis, Statistical Methods for Evaluation, ANOVA.

UNIT-II

Overview of Supervised Learning: Variable Types and Terminology, Two Simple Approaches to Prediction: Least Squares and Nearest Neighbors, Model Selection and Bias Variance Tradeoff. Association Analysis: Association rules, Apriori algorithm, FP-Growth Technique.

UNIT-III

Time Series Analysis: Overview of Time Series Analysis, ARIMA Model. Text Analysis: Text Analysis Steps, Stop Word Removal, Tokenization, Stemming and Lemmatization, Representing Text: Term-Document Matrix, Term Frequency--Inverse Document Frequency (TFIDF).

UNIT-IV

Introduction to Big Data: Defining big data, 4 V's of big data, Big data types, Analytics, Examples of big data, Big data and Data Risk, Big data technologies, benefits of big data, Crowd sourcing analytics. Hadoop Distributed File Systems: Architecture of Apache Hadoop HDFS, Other File Systems, HDFS File Blocks, HDFS File Commands.

UNIT-V

No SQL Data Management: Types of NoSQL data bases, Benefits of No SQL. Map Reduce: Introduction, Map reduce example, Job Tracker, Map Operations. Data Stream Mining: The stream data model, streaming applications, continuous query processing and optimization, Distributed query processing.

Text Books:

1. EMC Education Services "Data Science and Big Data Analytics: Discovering, Analyzing, Visualizing and Presenting Data" Wiley Publishers, 2012.
2. Hastie, Trevor, et al., "The elements of statistical learning: Data Mining, Inference, and Prediction", Vol. 2. No. 1. New York: Springer, 2009.
3. V.K. Jain, "Big Data & Hadoop", Khanna Publishing House, 2017.

MINI PROJECT

Instruction	3Hours per week
CIE	50 Marks
Credits	1

Objective: The main objective of this mini project is to explore and strengthen the understanding of fundamentals through practical application of theoretical concepts. It enables the students to design and develop solutions to real world problems by applying programming knowledge to become a good engineer. It acts like a beginners guide to do larger projects later in their career.

Course Outcomes: At the end of the course, students will be able to

1. Identify and understand the real world problems.
2. Formulate the solutions to the problems by applying Computer Science and Mathematical fundamentals.
3. Represent the solutions by using various design aids/charts/diagrams.
4. Implement the solutions using modern tools/languages.
5. Analyze and interpret the experimentation results, draw conclusions
6. Communicate effectively through technical reports and presentation according to the documentation/report guidelines

Some of the guidelines for Mini Project:

1. **Selection of Topic:** Selection of topic is a huge and important task in a Mini Project. One should have a clear idea about one's subject strengths and the selected topic should be relevant to it. Always select the project that has value addition. As a graduate you should select a project which is either advantageous to a lot of people or enhance your technical and managerial skills. Your project must play its role towards a positive growth/development in that specific field.
2. **Research about the selected topic online:** Do some online research about the selected topic. Go through the research papers from different researchers around the world on the topics related to Mini Project. Find some websites containing the information about the materials used for Mini Project.
3. **Suggestions from subject experts:** Go to the subject experts in your department and interact with them about the Mini Project topic. You can also meet many subject experts from other department or various parts of the society through physically or social media and some discussion forums. This helps you in getting suggestions in different possible ways, through which you can get a clear idea on your Mini Project topic.
4. **Planning:** After getting a clear idea about the topic, prepare a rough plan about procurement of resources, experimentation and fabrication along with your teammates. Make a rough schedule, adapt to it and distribute the work among your teammates. This will keep your Mini

Project on track and individuals will come to know about their part in the Mini Project rather than any individual (leader) taking full responsibilities.

5. **Execution of plans:** Make sure that the materials will be ready for the experimentation/fabrication by the scheduled time. Follow the schedule during experimentation/fabrication to get accurate and efficient results.
6. **Presentation:** Experimentation/Fabrication does not make a Mini Project successful; one should be able to present the results in proper way. So it should be prepared in such a way that, it reflects the exact objective of your Mini Project.

Guide lines / Instructions:

1. Each Mini project must be done in a group of 2-3 students.
2. Choose the topic/problem related to the fields/courses studied earlier or current semester
3. Each group must prepare a title of the mini project that relates to any engineering discipline and the title must emulate any real-world situation / problem.
4. Submit an early proposal (1-2 pages report describing what is the project about and the outcome of the final product would be, by the end of **Fourth Week**.
5. The title must be submitted to the respective lecturer by the end of week 9
6. Report must be submitted during the project presentation (**14th Week**)
7. Students are required to carry out the mini project in any one of the areas/courses that they have studied earlier or studying currently.
8. The progress of the mini project is monitored by the mentor and coordinator **every week**. Each student has to maintain a **project diary** duly signed by the mentor

Assessment:

1. 10% Early proposal (abstract)
2. 50% Continuous evaluation (progress of the project including literature review, design, development, coding, documentation according to the time lines)
3. 20% presentation and demonstration (structured, fluent, logic, output) ; 10% Viva Voce (Evaluated by internal PRC- Project Review Committee)
4. 10% Final Report writing

Report: A report must contain the complete project details. The layout or the organization of the report as follows:

- Summary / Abstract
- Introduction
- Software specifications

- Design of the problem (Block diagram / structured chart; Flow Chart functions or Pseudocode for the subprogram □ Results and Discussions
- Conclusion and Future work
- References, Appendix and coding. System manual-How to use the system

Note: Please find the specimen copy of the project report in the institute website.