



**NEW HORIZON  
COLLEGE OF ENGINEERING**

Autonomous College, Affiliated to VTU | Approved by AICTE New Delhi & UGC  
Accredited by NAAC with 'A' Grade & Accredited by NBA



## DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

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### Alumni feedback: 2015 – 2019 Batch

- The alumni replied that there is relevance of Curriculum in profession along with this they emphasized on application base teaching
- Alumni members found entire infrastructure very encouraging in learning process.
- To organize Workshop and seminars to improve the degree of performance of the students at placements, personality development, investigating abilities, employability skills, Industry matching technical skill set etc.
- Create a database of alumni to improve networking among the alumni and to enable better contribution to their almatmater.
- Introduce Self study topics beyond syllabus to improve the understanding and interpretation skills
- Quiz based on aptitude, pattern matching, Hackathon can be conducted to improvise student's attention.

### Employee feedback: 2015 – 2019 Batch

- Workshop and seminars are the most proficient method to get ready for placements, personality development, investigating abilities, employability skills, technical skills to be coordinated for students to improve the degree of performance
- The curriculum can bridge the gap between industry and academic
- The curriculum can help in building entrepreneurial motives, which helps the students for starting their ventures

- To gain expertise in various domains, employers suggested conducting workshops/seminars on the various domains like Data Science, Cyber Security, Global Education, etc.
- To provide students with an insight into the corporate sector, domain-specific industrial visits are recommended. These visits can help students to know things practically through interaction, working methods, and employment practices.
- Focus students on projects/technical seminars on recent emerging trends during their final semester.

### **Student Feedback: 2015 – 2019 Batch**

- Selection of electives by students based on their career path.
- Frequent industrial visits can provide good opportunities, awareness about best practices and practical working environment.
- Increase in the number of industrial visits can help students to identify their prospective area of work like software development, testing, design and automation and many more.
- Students requested to organize industrial visits with core companies like VMware, SAP, IBM, Wipro, Cerner, and many more to know the advanced research and developments, core programming techniques and practical working environments to meet the needs.
- Self study topics beyond syllabus can be listed and circulated with students.
- Motivational talks on stress management, Conflict handling, team work, team building and study skills on research and developments, patenting, Entrepreneurship can strengthen ideas and provide initiative paths to students.
- With increase in number of workshops on “trending technologies and technical jobs for the next 5 years” may help students to downstream their career paths
- Quiz based on aptitude, pattern matching, Hackathon can be conducted to improvise student’s attention.

## **Course Coordinators Feedback: 2015-2019 Batch**

To enhance the curriculum and edify knowledge of the students on current modern prerequisites, the course coordinators proposed to fuse the gaps identified in the syllabus endorsed for the third, fourth, fifth, and sixth semester

- To promote the excellence and currency of the curriculum to uplift the technical skills and potential of students to find innovative ways to solve problems and to achieve success, the course coordinators suggested top-ups for the curriculum to boost the employability and equip the students to meet workplace challenges. In this regard Course coordinators proposed changes in the syllabus endorsed for the third, fourth, fifth, and sixth semester.
- Track wise curriculum with various courses must be framed from the initial semesters.
- Placement department suggested the course ‘Internet of Things’ to be made as Professional Elective and ‘Mobile Application Development’ must be considered as core subject to meet the industry requirements for placement activities.
- Embedded Programming is suggested as IOT/Sensor based implementations are needed.
- Recommendations to use ‘Jupyter’ notebooks and Lab for Data Science/Machine learning hands-on sessions. Recommendation to give more importance to statistics in data science and machine learning.
- Recommendations to have hands-on sessions/mini project with subject ‘Mobile Application Development’ than theory concept explanation. This will encourage students to develop applications based on their ideas and exhibit their innovations during placement activities.
- No programming language to be enforced on students.
- The courses like Environmental science and awareness, Aadalitha/vyavaharika kannada can be included in the curriculum.
- The reference books of latest edition can be recommended as text books.
- Mini project component, Self study component and technical seminars must be incorporated in the syllabus.
- Student projects can be uploaded to Git-hubs to exhibit their technical knowledge.
- Suggested to introduce courses like Service oriented architecture as these design based micro services are expected in startups.

### **Action plan 2020-2021 based on 2019-2020 Feedback summary:**

#### **Based on the Alumni feedback**

- To organize seminars and workshop on state of the art technologies by inviting experts from industry/ IIT/IISc
- To gain expertise in various domains, to plan hand on workshops in recent technologies like Python, Data science, Cyber Security etc...
- To organize quiz base aptitude on the courses like java, python etc.
- To strengthen industry collaboration through MoUs.
- To organize technical events under CoE
- Motivate students to take up career building courses for overall development.

### **Action plan 2020-2021 based on 2019-2020 Feedback summary:**

#### **Based on the Employee feedback**

- Industrial visits were held as per the student requests to observe and learn the real-time working environment in various organizations.
- Seminars on personality development, investigating abilities, employability skills and technical skills were conducted to improve the degree of performance in placements.
- As NHCE engineering college already has an industrial collaboration with Wipro, the students can interact with Wipro experts to edify their technical knowledge.
- The syllabus of the data structures with C was discussed with the course coordinator and the other faculties handling the subject to refine the syllabus as per the basic requirement of the student placement.
- To gain expertise in various domains, various workshops has been conducted in recent technology like Python, Data science, Cyber Security etc...

### **Action Plan for 2020-21 based on 2019-20 feedback summary:**

#### **Based on the Student Feedback**

- Frequent industrial visits were organized with core companies like VMware, SAP, IBM, Wipro, Werner, and many more to provide good opportunities and understand the advanced research and development activities, core programming techniques, awareness about best practices and practical working environment. Domain specific industrial visits help students to create curiosity and exposure for industry readiness.
- Motivational talks on “Evolving as a healthy Engineer During Covid-19, Entrepreneurship and Management, How to Make your Career and Not Break it “are organized for students to strengthen their ideas and provide initiative paths.
- Seminars/ workshops on “How to prepare for placements, Crypto currencies and Smart contracts, VMware IT Forum 2019, Artificial Intelligence and Machine Learning Applications Using Python” and many more are organized.
- Quiz based on aptitude, pattern matching, hackathon, Brain Teaser is conducted to improvise student attention.

### **Action Plan for 2020-21 based on 2019-20 feedback summary:**

#### **Based on the Course Coordinator Feedback**

- Career based tracks for technical creativity and analytical thinking skills are provided to students to solve various software related issues. The sequence of core subjects learnt by the students are as follows
  - Third semester- UNIX system programming, Data structures with C
  - Fourth semester- OOP with Java, ARM Processor, Computer Organization
  - Fifth semester-Finite Automata and Compiler Design, Analysis and Design of algorithms, Python programming lab with mini projects.

The following Professional electives are included

- ✓ Parallel Processing
- ✓ Advanced Data Structures
- ✓ Digital image and video processing

- ✓ Computational Intelligence
- Sixth semester- Web Frameworks and Technologies, Data mining and Machine Learning

The following Professional electives are included

- ✓ Social Network Analysis
  - ✓ Soft computing
  - ✓ Cloud Computing
  - ✓ Agile Methodologies
  - ✓ Semantic Web
  - ✓ Web of Things
  - ✓ Quantum cryptography
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- Mandatory to all the students to undergo at least 6 weeks of internship in their curriculum. Many final year projects are done in government agencies like DRDO, LRDE, HAL etc or in reputed IT companies like IBM, SAP, HCL etc.
  - Project Quality is improved and indicated by following metrics
    - Regular Internal Assessments
    - External Examiner Evaluation
    - Plagiarism check
    - Student publications
    - Patents
  - All phases of compiler is included in the theory 'Finite automata and compiler Design'
  - Course contents of subjects like Machine Learning and Data Science were overlapping. The contents are revised and reframed. 'Diversion and Reduction' topics are included in Data Science.
  - 'Jupyter' notebooks are used in Labs for Data Science/Machine learning hands-on sessions.
  - More importance is given to statistics in data science and machine learning.
  - Hands-on sessions/mini project are included for 'Mobile Application Development' than theory concept explanation.
  - This will encourage students to develop applications based on their ideas and exhibit their innovations during placement activities.

- Student projects are uploaded to Git-hubs to exhibit their technical knowledge.
- Course contents of subjects like Software Engineering and Project Management, User interface design are revised and re-framed