MINUTES OF 14th MEETING OF

BOARDOFSTUDIES (BOS)

DEPARTMENT OF
COMPUTER ENGINEERING &
APPLICATIONS



JUNE 12th, 2020

GLAU/CEA/BOS/2019-20/01

12.06.2020

Members Present:

| 1. Mr. Rajesh Singh, HCL Pvt.Ltd. | 13. | Dr. Hitendra Garg |
|---|-----|-----------------------|
| 2. Mr. Kishore Kunal, Alumni, Dragonlearn.in | 14. | Dr. Suresh Raikwar |
| Mr. Suresh Singh, DirectorT&D | 15. | Dr. Ashish Sharma |
| 4. Mr. Atul Bansal, CoE | 16. | Dr. Nitin Tyagi |
| 5. Dr. Pooja Pathak, Maths | 17. | Dr. Shashi Shekhar |
| 6. Prof. Anand SinghJalal | 18. | Dr. Rohit Agrawal |
| 7. Prof. Charual Bhatnagar | 19. | Dr. Mayank Srivastava |
| 8. Prof. AshishSharma | 20. | Mr. Neeraj Gupta |
| 9. Prof. DilipSharma | 21. | Mr. Narendra Mohan |
| 10. Prof. Diwakar Bhardwaj | 22. | Mr. Saurabh Anand |
| 11. Prof. Manoj Kumar | 23. | Mr. Himanshu Sharma |
| 12. Dr. Anant Ram | 24. | Mr. Saurabh Singhal |

The Chairman Board of Studies welcomed all the members and started proceedings of the 14th meeting of BoS in accordance with the Agenda note circulatedearlier.

Agenda Item - 14.1: To confirm the minutes of the 13th BoS meeting

The minutes of the meeting of 13th BoS held on May 4th, 2019 were implemented and enclosed as Annexure A.

Agenda Item - 14.2: Action Taken Report (ATR)

The ATR based on the minutes of the 13th BoS were presented.

Agenda Item – 14.3: Agenda Item – 14.3: To consider inclusion of Industrial Internet of Things (IIoT) specialization with B. Tech. (Computer Science & Engg.) and approval of its course structure under CBCS.

The experts and members of BoS critically observed and approved the course structure and syllabus for new specialization i.e. Industrial Internet of Things (IIoT), enclosed as Annexure B.

Agenda Item - 14.4: To consider and approve changes in existing specialization for Cloud Computing and Virtualization.

The experts and members of BoS thoroughly checked and appraised the changes in the following courses of specialization for Cloud Computing and Virtualization, enclosed as AnnexureC.

| Subjects | Change | |
|---|--|--|
| Business Process Management (BCSE0504) | Merged as "Cloud and Business Process | |
| Cloud Management (BCSE0505) | Management (BCSE0508)" | |
| Cloud Security (BCSE0506) | Merged as "Cloud Security, Backup & | |
| Backup & Disaster Recovery (BCSE0507) | Disaster Recovery(BCSE0509)" | |
| Container Orchestration and Infrastructure Automation(BCSE0510) | New Inclusion | |
| Devops (BCSE0511) | New Inclusion | |
| Business Process Management Lab (BCSE0533) | Merged as "Cloud and Business Process Management Lab(BCSE0536)" | |
| Cloud Management Lab (BCSE0534) | | |

| Cloud Security Lab (BCSE0535) | Replace by "Cloud Security, Backup & Disaster Recovery Lab (BCSE0537)" |
|--|--|
| Container Orchestration and Infrastructure Automation Lab (BCSE0538) | New Inclusion |
| DevOps Lab (BCSE0539) | New Inclusion |

Agenda Item - 14.5: To consider and approve change in existing MCA Programme as per AICTE.

As per the AICTE Handbook 2020-21 the Norms for Duration, Entry Level Qualifications of MCA Programme is to be changed from session 2020-21. The experts and members of BoS approved the TWO years MCA Programme. enclosed as Annexure D.

Agenda Item - 14.6: To consider and approve inclusion of variant of following two subjects to cater the student diversity.

- BCSC0003: Database Management System
- BCSC0006: Data Structures & Algorithms

Variants:

- BCSC0014: Applied Database Management System
- BCSC0808: Applied Database Management System Lab
- BCSC0015: Applied Data Structures & Algorithms
- BCSC0809: Applied Data Structures & Algorithms Lab

The experts and members of BoS critically observed and approved the variant of these courses, enclosed as Annexure E.

Agenda Item – 14.7: To consider and approve the shifting of Compiler Design from core subject to programme elective to accommodate more Programme Electives.

The experts and members of BoS approved the changes.

Agenda Item - 14.8: To consider and approve revised syllabi for the courses in B.Tech (CSE), B.Tech (CCV), B.Tech (DA), B.Tech (CSF) and B.Tech (IoT) programmes.

All the members of BoS thoroughly checked and appraised the feedback received from the various stakeholders (Faculty/Employer/Student/Alumni) and the revision/modification in syllabus of existing courses of various programmes is proposed as follows.

| Programme | No. of Courses under consideration for revision | Name of the Courses under consideration for revision |
|--------------------|---|---|
| B.Tech (CSE) | 11 | Computer Network Computer Organization Computer Organization Lab Operating System Operating System Lab Database Management Systems Database Management Systems Lab Data Structure and Algorithms Data Structure and Algorithms Lab Software Engineering Theory of Automata and Formal Languages |
| B.Tech (CSE) - CCV | 11 | Computer NetworkComputer OrganizationComputer Organization Lab |

| B.Tech (CSE) - DA | 11 | Operating System Lab Database Management Systems Database Management Systems Lab Data Structure and Algorithms Data Structure and Algorithms Lab Software Engineering Theory of Automata and Formal Languages Computer Network Computer Organization Computer Organization Lab Operating System Operating System Lab Database Management Systems Database Management Systems Data Structure and Algorithms Data Structure and Algorithms Lab Software Engineering Theory of Automata and Formal |
|-----------------------|----|--|
| B.Tech (CSE) - CSF | 11 | Languages Computer Network Computer Organization Computer Organization Lab Operating System Operating System Lab Database Management Systems Database Management Systems Lab Data Structure and Algorithms Data Structure and Algorithms Software Engineering Theory of Automata and Formal Languages |
| B.Tech (CSE) - IoT | 11 | Computer Network Computer Organization Computer Organization Lab Operating System Operating System Lab Database Management Systems Database Management Systems Lab Data Structure and Algorithms Data Structure and Algorithms Lab Software Engineering Theory of Automata and Formal Languages |
| B.Tech (CSE)- AIML | 1 | Introduction to Artificial Intelligence |

The experts and members of BoS approved the same. The details of revised syllabi enclosed in Annexure F.

Agenda Item – 14.9: To consider and approve courses imparting employability/skill development/entrepreneurship in the B.Tech (CSE), B.Tech (CSE) - CCV, B.Tech (CSE) - DA, B.Tech (CSE) - CSF, B.Tech (CSE) - IoT, B.Tech (CSE) - AIML, B.Tech (CSE) - IIoT, BCA, MCA and M.Tech programmes.

The experts and members of BoS approved the same. The details enclosed in Annexure G.

Agenda Item - 14.10: To consider and approve introduction of new courses in the existing programmes.

Based on the feedback of various stakeholders (Faculty, Alumni, Corporate and Students) department present details of new courses to be introduced. After thorough discussion Board approved the same. The details enclosed in Annexure H.

Agenda Item - 14.11: To consider and approve course recommended by Training & Development Department

Training & Development Department of the University recommended to get the syllabus of one course approved in the Board of Studies Meeting of the department. Same was presented in front of the board. After due discussions, the board approved the same whose details are as follows:

| Year & Semester | Code & Title of the Course |
|-----------------|----------------------------|
| III Year, V Sem | BCTH 0105: Soft Skills - V |

Agenda Item - 14.12: To consider and approve courses recommended by Research Cell of the University.

Research Cell of the University has recommended to get the syllabus of Research Methodology and Introduction of One New Course in Ph.D Programme approved in Board of Studies Meeting of the department, same was presented in front of the board. After due discussions board approved the same.

Agenda Item – 14.13: To consider and approve modification in one course and to introduce one new course in PhD Programme, as recommended by the Research Cell of the University.

Research Cell of the University recommended modification in the Syllabus of "Research Methodology" Course as well as recommended to introduce "Research and Publication Ethics" course in PhD Programme from the Session 2020-21. Syllabi of both the courses were duly considered by the board and subsequently approved. The details enclosed in Annexure I.

Agenda Item - 14.14: Any other item with the permission of chair.

No item has been reported.

The meeting ended with thanks to the Chair.

(A.S. Jalal) Head, CEA

Copy to: Chairman, Academic Council, Registrar, All the members of BoS

ANNEXURE-G



Department: Computer Engineering and Applications List of courses having focus on employability/ entrepreneurship/ skill development offered by the Department (2020-21)

Activities/Content with direct bearing on S.No. Name of the Course Employability/ Entrepreneurship/ Skill development Engineering Mathematics I Employability/Skill Development 2 English Language Skills for Communication I Employability/Skill Development Basic Electrical Engineering Employability 4 Electronics Engineering Employability 5 Computer Programming Employability English Language Lab I 6 Employability/Skill Development 7 Electrical Engineering Lab Employability 8 Electronics Lab I Employability 9 Engineering Drawing Lab Employability/Skill Development 10 Computer Programming Lab Employability 11 Employability/Skill Development Engineering Mathematics II 12 English Language Skills for Communication II Employability/Skill Development 13 Basic Mechanical Engineering Employability 14 Python Programming Employability 15 English Language Lab II Employability/Skill Development 16 Engineering Workshop Practice Lab Employability/Skill Development Python Programming Lab 17 Employability 18 Object Oriented Programming Employability 19 Database Management System Employability 20 Operating Systems Employability 21 Computer Organization Employability Data Structures and Algorithms 22 Employability 23 Introduction to Microprocessors Employability 24 Computer Networks Employability 25 Software Engineering Employability 26 Discrete Mathematics Employability/Skill Development 27 Object Oriented Programming Lab Employability Database Management System Lab 28 Employability 29 Operating Systems Lab Employability 30 Computer Organization Lab Employability 31 Data Structures and Algorithms Lab Employability 32 Microprocessors Lab Employability 33 Soft Skills - I Skill Development 34 Soft Skills - II Skill Development 35 Introduction to Cyber security Entrepreneurship 36 Disaster Management Entrepreneurship 37 Basic course in Entrepreneurship Entrepreneurship 38 Leadership and Organizational Behavior Entrepreneurship 39 English for Professional Purpose - I Employability/Skill Development 40 English for Professional Purpose - II Employability/Skill Development 41 Ethics & Values Entrepreneurship 42 Engineering Mathematics III Employability/Skill Development 43 Theory of Automata & Formal Language Employability





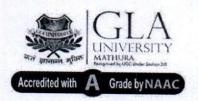
| S.No. | Name of the Course | Activities/Content with direct bearing on Employability/ Entrepreneurship/ Skill development |
|-------|--|--|
| 44 | Design and Analysis of Algorithms | Employability |
| 45 | Design and Analysis of Algorithms Lab | Employability |
| 46 | Network Programming and Management | Employability |
| 47 | Principles of Mobile Computing | Employability |
| 48 | Ad Hoc Networks | Employability |
| 49 | Cryptography and Network Security | Employability |
| 50 | Cyber security and Digital Forensics | Employability |
| 51 | Information Coding Techniques | Employability |
| 52 | Network Programming and Management Lab | Employability |
| 53 | Cryptography and Network Security Lab | Employability |
| 54 | Information Coding Techniques Lab | Employability |
| 55 | Software Quality Engineering | Employability |
| 56 | Service Oriented Architecture | Employability |
| 57 | Agile Software Development | Employability |
| 58 | Software Project Management | Employability |
| 59 | Software Testing | Employability |
| 60 | Compiler Design | Employability |
| 61 | Digital Image Processing | Employability |
| 62 | Computer Graphics And Multimedia | Employability |
| 63 | Soft Computing | Employability |
| 64 | Artificial Intelligence | Employability |
| 65 | Machine Learning | Employability |
| 66 | Machine Learning And Its Applications | Employability |
| 67 | Digital Image Processing Lab | Employability |
| 68 | Soft Computing Lab | Employability |
| 69 | Machine Learning Lab | Employability |
| 70 | Machine Learning Project | |
| 71 | Advanced Concepts in Database Systems | Employability/Skill Development Employability |
| 72 | Data Mining and Warehousing | Employability |
| 73 | Business Intelligence | Employability |
| 74 | Information Retrieval System | Employability |
| 75 | Distributed and Parallel Databases | Employability |
| 76 | Natural Language Processing | Employability |
| 77 | Introduction to Big Data Analytics | Employability |
| | Big Data Analytics | Employability |
| 79 | Data Mining and Warehousing Lab | Employability |
| 80 | Business Intelligence Lab | Employability |
| | Big Data Analytics Lab | Employability |
| | Business Intelligence Project | |
| 83 | Big Data Analytics Project | Employability/Skill Development |
| | Advanced Computer Architecture | Employability/Skill Development Employability |
| | Embedded System | Employability |
| | Internet of Things | Employability |





| S.No. | Name of the Course | Activities/Content with direct bearing on Employability/ Entrepreneurship/ Skill development |
|----------|---|--|
| 87 | Internet of Things And Its Applications | Employability |
| 88 | Distributed System | Employability |
| 89 | Parallel Algorithms | Employability |
| 90 | Cloud Computing | Employability |
| 91 | Cloud Computing and Virtualization | Employability |
| 92 | Embedded System Lab | Employability |
| 93 | Internet of Things Lab | Employability |
| 94 | Parallel Algorithms Lab | Employability |
| 95 | Cloud Computing lab | Employability |
| 96 | Internet of Things Project | Employability/Skill Development |
| 97 | Cloud Computing And Virtualization Project | Employability/Skill Development |
| 98 | Full Stack Using Scripting Technologies | Employability |
| 99 | Full Stack Using Node JS | Employability |
| 100 | Full Stack Using C#.net | Employability |
| 101 | PHP - Scripting Language | Employability |
| 102 | Digital Marketing And Transformation | Employability |
| 103 | Full Stack Using Scripting Technologies Lab | Employability |
| 104 | Full Stack Using Node JS Lab | Employability |
| 105 | Full Stack Using C#.net Lab | Employability |
| 106 | PHP - Scripting Language Lab | Employability |
| 107 | Full Stack Using Scripting Technologies Project | Employability/Skill Development |
| 108 | Full Stack Using Node JS Project | Employability/Skill Development |
| 109 | Full Stack Using C#.net Project | Employability/Skill Development |
| 110 | PHP - Scripting Language Project | Employability/Skill Development |
| 111 | Mini Project – I | Employability/Skill Development |
| 112 | Mini Project – II | Employability/Skill Development |
| | Project - Part I | Employability/Skill Development |
| | Project - Part II | Employability/Skill Development |
| | Industrial Training | Employability/Skill Development Employability |
| | Introduction to Bhagavad Gita | Entrepreneurship |
| 117 | Industrial Management | Employability |
| 118 | Soft Skills – III | Skill Development |
| 119 | Soft Skills – IV | Skill Development |
| 120 | Applied Database Management System | |
| 21 | Applied Data Structures and Algorithms | Employability Employability |
| 22 | Applied Database Management System Lab | Employability |
| 23 | Applied Data Structures and Algorithms Lab | Employability |
| 24 | Introduction to Open Source Software & Open Standards | Employability |
| | Web Programming through PHP | Employability |
| 26 I | ntroduction to IT Infrastructure Landscape | Employability |
| The Park | ntroduction to Virtualization and Cloud Computing | Employability Employability |





| S.No. | Name of the Course | Activities/Content with direct bearing on Employability/ Entrepreneurship/ Skill development |
|-------|--|--|
| 128 | Cloud Computing Architecture & Deployment Models | Employability |
| 129 | Cloud and Business Process Management | Employability |
| 130 | Cloud Security, Backup & Disaster Recovery | Employability |
| 131 | Container Orchestration and Infrastructure Automation | Employability |
| 132 | Devops | Employability |
| 133 | Virtualization Lab | Employability |
| 134 | Cloud Deployment Lab | Employability |
| 135 | Cloud and Business Process Management Lab | Employability |
| 136 | Cloud Security, Backup & Disaster Recovery Lab | Employability |
| 137 | Container Orchestration and Infrastructure Automation Lab | Employability |
| 138 | DevOps Lab | Employability |
| 139 | Environmental Studies | Skill Development |
| 140 | Introduction to Business Analytics | Employability |
| 141 | Applied Statistical Analysis | Employability |
| 142 | Data Mining and Predictive Modeling | Employability |
| 143 | Data Warehouse & Multidimensional Modeling | Employability |
| 144 | Business Intelligence | Employability |
| 145 | Hadoop & Big Data Analytics | Employability |
| 146 | Social, Web & Mobile Analytics | Employability |
| 147 | Applied Statistical Analysis Lab | Employability |
| 148 | Data Mining Lab | Employability |
| 149 | Data Warehouse Lab | Employability |
| 150 | Business Intelligence Lab | Employability |
| 151 | Hadoop & Big Data Analytics Lab | Employability |
| 152 | Social, Web & Mobile Analytics Lab | Employability |
| 153 | Information Security Fundamentals | Employability |
| 154 | IT Systems Security and Physical Security | Employability |
| 155 | C PROGRAMMING Lab | Employability |
| 156 | IT Systems Security and Physical Security Lab | Employability |
| 157 | IT Application and Data Security | Employability |
| 158 | IT Network Security | Employability |
| 159 | Information Security Audit & Monitoring | Employability |
| 160 | Cloud Architecture and Deployment Models | Employability |
| 161 | IT business Continuity & Disaster Recovery | Employability |
| 162 | Digital Forensics | Employability |
| 163 | Ethical Hacking and Penetration Testing | Employability |
| 164 | IT Application and Data Security Lab | Employability |
| 165 | IT Network Security Lab | Employability |
| 166 | Information Security Audit & Monitoring Lab | Employability |





| S.No. | Name of the Course | Activities/Content with direct bearing on Employability/ Entrepreneurship/ Skill development |
|-------|--|--|
| 167 | Cloud Architecture and Deployment Models Lab | Employability |
| 168 | Digital Forensics lab | Employability |
| 169 | Ethical Hacking and Penetration Testing Lab | Employability |
| 170 | Introduction to Internet of Things | Employability |
| 171 | Sensor Technology & Instrumentation | Employability |
| 172 | Sensor Technology & Instrumentation Lab | Employability |
| 173 | Wireless Sensor Networks &IoT Standards | Employability |
| 174 | Wireless Sensor Networks &IoT Standards Lab | Employability |
| 175 | Descriptive Analytics for IoT | Employability |
| 176 | Ipv6 Analysis and Applications | Employability |
| 177 | Descriptive Analytics for IoT Lab | Employability |
| 178 | Big Data Analytics | Employability |
| 179 | IoT for Industries | Employability |
| 180 | Designer of Smarter Cities | Employability |
| 181 | Big Data Analytics Lab | Employability |
| 182 | Introduction to Artificial Intelligence | Employability |
| 183 | Introduction to Machine Learning | Employability |
| 184 | Algorithm for Intelligent Systems and Robotics | Employability |
| 185 | Introduction to IoT | Employability |
| 186 | IIOT Communication & Interface | Employability |
| 187 | Programming Logic Using 'C' | Employability |
| 188 | Fundamentals of Computer and IT | Employability |
| 189 | Introduction of Logical Circuit and Digital Design | Employability |
| 190 | Remedial English | Employability/Skill Development |
| 191 | Mathematics –I | Employability/Skill Development |
| 192 | Programming Lab | Employability |
| 193 | Information Technology Lab | Employability |
| 194 | Soft Skills – I | Skill Development |
| 195 | Data Structures using 'C' | Employability |
| 196 | Fundamental of Database Management System | Employability |
| 197 | Fundamentals of Operating Systems | Employability |
| 198 | Management Concepts & Practices | Employability |
| 199 | Mathematics –II | Employability/Skill Development |
| 200 | Data Structures using 'C' Lab | Employability |
| 201 | Database Management System Lab | Employability |
| 202 | Operating System Lab | Employability |
| 203 | English in Practice | Employability/Skill Development |
| 204 | Soft Skills – II | Skill Development |
| 205 | Object Oriented Programming | Employability |
| 206 | Computer Organization & Architecture | Employability |
| 207 | Introduction to Python | Employability |





| S.No. | Name of the Course | Activities/Content with direct bearing or Employability/ Entrepreneurship/ Skill development |
|---------------|--|--|
| 208 | System Design & Software Engineering | Employability |
| 209 | Computer Networks & Communication | Employability |
| 210 | Programming in JAVA | Employability |
| 211 | GUI based Programming Using Visual Basic | Employability |
| 212 | Object Oriented Programming Lab | Employability |
| 213 | Python Programming Lab | Employability |
| 214 | Visual Basic Programming Lab | Employability |
| 215 | Programming in Java Lab | Employability |
| 216 | Web Technology | Employability |
| 217 | Web Technology Lab | Employability |
| 218 | Mini Project – I | Employability/Skill Development |
| 219 | Mini Project – II | Employability/Skill Development |
| 220 | Major Project | Employability/Skill Development |
| 221 | Advanced Database Management System | Employability |
| 222 | Enterprise Resource Planning | Employability |
| 223 | Software Project Management | Employability |
| 224 | Management Information System and E commerce | Employability |
| 225 | Digital Marketing & Transformation | Employability |
| 226 | Advanced Database Management System Lab | Employability |
| 227 | Digital Marketing & Transformation Lab | Employability |
| 228 | Introduction to Artificial Intelligence | Employability |
| 229 | Software Testing | Employability |
| 230 | Cyber Security | Employability |
| 231 | Data Mining & Warehousing | Employability |
| 232 | Discrete Structure & Graph Theory | Employability |
| 233 | Design and Analysis of Algorithms | Employability |
| 234 | Programming in Advanced Java | Employability |
| 235 | Introduction to Distributed System | Employability |
| 236 | Introduction to Cloud Computing | Employability |
| 237 | Introduction to Big Data | Employability |
| 238 | Introduction to Internet of Things | Employability |
| 239 | .Net Framework using VB.Net | Employability |
| 240 | Advanced Java Lab | Employability |
| 241 | Introduction to Big Data Lab | Employability |
| 242 | VB.Net Programming Lab | Employability |
| 243 | Optimization Methods | Employability |
| 244 | Environmental Studies | Skill Development |
| 245 | Effective Communication and Personality Development | Employability/Skill Development/Entrepreneurship |
| | Professional Communication & Behavioral Grooming | Employability/Skill Development/Entrepreneurship |
| $\overline{}$ | Soft Skills -III | Skill Development |





| S.No. | Name of the Course | Activities/Content with direct bearing on Employability/ Entrepreneurship/ Skill development |
|-------|--|--|
| 248 | Soft Skills -IV | Skill Development |
| 249 | Soft Skills -V | Skill Development |
| 250 | Theory of Computation | Employability |
| 251 | Software Engineering Methodologies | Employability |
| 252 | Advanced Concepts in Data Mining | Employability |
| 253 | Advanced Concepts in Networking | Employability |
| 254 | Probability and Stochastic Processes | Employability |
| 255 | Problem Solving Lab - I | Employability/Skill Development |
| 256 | Mobile Ad-hoc Networks | Employability |
| 257 | Intelligent Systems | Employability |
| 258 | Information Retrieval | Employability |
| 259 | Image Processing and Analysis | Employability |
| 260 | Design of Distributed Systems | Employability |
| 261 | Seminar-I | Skill Development |
| 262 | Seminar-II | Skill Development |
| 263 | Problem Solving Lab - II | Employability/Skill Development |
| 264 | Image Processing and Analysis Lab | Employability |
| 265 | Computer Vision | Employability |
| 266 | Wireless Sensor Networks | Employability |
| 267 | Software and Service Oriented Architecture | Employability |
| 268 | Pattern Recognition | Employability |
| 269 | High Performance Computing | Employability |
| 270 | Web Mining | Employability |
| 271 | Machine Learning | Employability |
| 272 | Dissertation I | Skill Development |
| 273 | Dissertation II | Skill Development |
| 274 | Fundamentals of Information Technology | Employability |
| 275 | Computer Programming | Employability |
| 276 | Computer Organization | Employability |
| 277 | Discrete Mathematics | Employability |
| 278 | Theory of Automata & Formal Language | Employability |
| 279 | Introduction to Microprocessors | Employability |
| 280 | Object Oriented Programming | Employability |
| 281 | Data Structures | Employability |
| 282 | Database Management System | Employability |
| 283 | Operating Systems | Employability |
| | Computer Networks | Employability |
| | Software Engineering | Employability |
| 286 | Design and Analysis of Algorithm | Employability |
| 287 | Web Technology | Employability |
| | Distributed Systems | Employability |
| 289 | Fundamentals of Information Technology Lab | Employability |
| 290 | Computer Programming Lab | Employability |





| S.No. | Name of the Course | Activities/Content with direct bearing of Employability/ Entrepreneurship/ Skill development |
|-------|---------------------------------------|--|
| 291 | Computer Organization Lab | Employability |
| 292 | Microprocessors Lab | Employability |
| 293 | Problem Solving Lab | |
| 294 | Object Oriented Programming Lab | Employability/Skill Development |
| 295 | Data Structures Lab | Employability Employability |
| 296 | Database Management System Lab | |
| 297 | Operating System Lab | Employability |
| 298 | Web Technology Lab | Employability |
| 299 | Principles of Mobile Computing | Employability |
| 300 | Ad Hoc Networks | Employability |
| 301 | Cryptography & Network Security | Employability |
| 302 | Cyber security and Digital Forensics | Employability |
| 303 | Agile Software Development | Employability |
| 304 | Software Project Management | Employability |
| 305 | Service Oriented Architecture | Employability |
| 306 | Management Information System | Employability |
| 307 | E-Commerce | Employability |
| 808 | Digital Image Processing | Employability |
| 109 | Introduction to Machine Learning | Employability |
| 10 | Soft Computing | Employability |
| | Artificial Intelligence | Employability |
| 12 | Digital Image Processing Lab | Employability |
| 13 | Machine Learning Lab | Employability |
| 14 | Data Mining and Warehousing | Employability |
| 15 | Business Intelligence | Employability |
| 16 1 | Information Retrieval System | Employability |
| 17 I | Big Data and Analytics | Employability |
| 18 I | nternet of Things | Employability |
| 19 (| Cloud Computing | Employability |
| | Big Data and Analytics Lab | Employability |
| 21 I | nternet of Things Lab | Employability |
| 2 (| Cloud Computing Lab | Employability |
| 3 .1 | Net Framework using C# | Employability |
| 4 N | Mobile Application Development | Employability |
| 5 D | Digital Marketing and Transformation | Employability |
| 6 0 | Object Oriented Programming Using C++ | Employability |
| 7 P | ython Programming Lab | Employability |
| 8 .N | Net Framework Lab | Employability |
| | Jobile Application Development Lab | Employability |
| _ | bject Oriented Programming Lab | Employability |
| | lini Project-I | Employability |
| _ | ini Project-II | Employability/Skill Development |
| | hics & Values | Employability/Skill Development Entrepreneurship |





| Department: Computer Engineering and Applications | | | | |
|--|-----------------------------------|--|--|--|
| List of courses having focus on employability/ entrepreneurship/ skill development offered by the Department (2020-21) | | | | |
| S.No. | Name of the Course | Activities/Content with direct bearing on Employability/ Entrepreneurship/ Skill development | | |
| 334 | Accounting & Financial Management | Entrepreneurship | | |
| 335 | Soft Skills-I | Skill Development | | |
| 336 | Soft Skills-II | Skill Development | | |
| 337 | Engineering Physics | | | |
| 338 | Engineering Chemistry | Employability | | |
| 339 | Engineering Physics Lab | Employability | | |
| 340 | Engineering Chemistry Lab | Employability | | |
| 341 | Research Methodology | Employability | | |
| 342 | | Employability/Skill Development | | |
| 342 | Research and Publication Ethics | Employability/Skill Development | | |

