

PROGRAM STRUCTURE

I SEMESTER

| S. No | Course Code | Name of the Course | Employability | Skill Development | Entrepreneurship | Remarks |
|-------|-------------|---|---------------|-------------------|------------------|--|
| 1 | 172CO1T01 | Advanced Data Structures & Algorithm Analysis | ✓ | | | Students are able to gain knowledge on advanced data structures enabling them to become efficient coders in software development |
| 2 | 172CO1T02 | Database Management System | ✓ | | | Students are able to acquire skills related to SQL commands, constraints, views, models, transactions, storage and indexing enabling them to be employed for backend developer |
| 3 | 172CO1T03 | Computer Organization & Architecture | ✓ | | | Students are able to acquire knowledge on Computer working and its architecture and low level operations of processors and other internal parts of a computer |
| 4 | 172CO1T04 | Mathematical Foundations of Computer Science | | ✓ | | Students are able to demonstrate problem solving skills by implementing mathematical logic, number theory and graph theory. |
| 5 | 172CO1T05 | Computer Networks | ✓ | | | |
| 6 | 172CO1E01 | Software Engineering | ✓ | | | Students are able to acquire skills relates to software engineering, project estimation and management enabling them to acquire employed as software developer. |
| 7 | 172CO1E02 | Advanced Operating Systems | ✓ | | | Students are able to understand and acquire skills related to features and functionalities of operating System and understand the utilization of Input & output and memory operations which enables them to be employed for Hardware core side job opportunities |
| 8 | 172CO1E03 | Compiler Design | ✓ | | | Students can get knowledge on designing compilers and assemblers to enable them work with different integrated environments |

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|----|-----------|--|--|---|--|---|
| 9 | 172CO1E04 | Human Computer Interaction | | ✓ | | Students are able to demonstrate GUI components such as Menus, Forms, Dialog boxes and gain knowledge on various design paradigms, online documentation concepts, information retrieval and its presentation. |
| 10 | 172CO1L01 | Advanced Data Structures & Database Management Systems Lab | | ✓ | | Students are able to demonstrate knowledge on advanced data structures and database management. |

II SEMESTER

| S. No | Course Code | Name of the Course | Employability | Skill Development | Entrepreneurship | Remarks |
|-------|-------------|--|---------------|-------------------|------------------|---|
| 11 | 172CO2T06 | Cyber Security | | ✓ | | Students can be able to protect systems, networks, devices and data from cyber attacks by knowing about different security approaches and methods |
| 12 | 172CO2T07 | Data Ware Housing & Data Mining | | ✓ | | Students are able to organize, understand and use the data in effective way and gain knowledge about warehouses which helps in integration of application systems |
| 13 | 172CO2T08 | Big Data Analytics | ✓ | | | Students are able to gain skills related to Big data analytics and related tool enabling them to be employed for data analytics role. |
| 14 | 172CO2T09 | Advanced Unix Programming | ✓ | | | Students are able to gain deep knowledge of UNIX environment, advanced commands, kernel and shell programming |
| 15 | 172CO2E05 | Machine Learning | ✓ | | | Students are able to acquire skills related to data science algorithms, enabling them to be employed as data scientists. |
| 16 | 172CO2E06 | Digital Image Processing | | ✓ | | Students are able to acquire technical skills related to image processing by using various tools related to computer vision. |
| 17 | 172CO2E07 | Mobile Computing | | | | |
| 18 | 172CO2E08 | Cloud Computing | ✓ | | | Students are able to acquire skills related to Cloud computing and distributed computing enabling them to be employed for cloud services sector |
| 19 | 172CO2E09 | Internet of Things | ✓ | | | Students are able to acquire skills related to Internet of Things and enabling them to be employed for IoT sector. |
| 20 | 172CO2E10 | Bio Informatics | | ✓ | | Students are able to gain knowledge on forensic analysis, gene therapy and molecular medicine |
| 21 | 172CO2L02 | Advanced Unix Programming and Hadoop & Bigdata Lab | ✓ | | | Students are able to gain hands on experience of UNIX environment, advanced commands, kernel and shell along with big data and usage of Hadoop software |

III SEMESTER

| S. No | Course Code | Name of the Course | Employability | Skill Development | Entrepreneurship | Remarks |
|-------|-------------|-------------------------|---------------|-------------------|------------------|---------|
| 22 | 172CO3C01 | Comprehensive Viva-Voce | ✓ | | | |
| 23 | 172CO3R01 | Seminar - I | ✓ | | | |

IV SEMESTER

| S. No | Course Code | Name of the Course | Employability | Skill Development | Entrepreneurship | Remarks |
|--------------|-------------|-------------------------|---------------|-------------------|------------------|--|
| 24 | 172CO4R02 | Seminar - II | ✓ | | | Students will be able to demonstrate problem identification, analysis, design solutions or applications in computer science and engineering domain through the acquired technical, cognitive, communication and creative skills to address societal needs. |
| 25 | 172C04P01 | Project Work Part- - II | ✓ | | | Students will be able to demonstrate problem identification, analysis, design solutions or applications in computer science and engineering domain through the acquired technical, cognitive, communication and creative skills to address societal needs. |
| TOTAL | | 25 | 14 | 7 | 0 | |



Program Coordinator



Head of the Department

Head of the Department
Department of CSE
DITVA ENGINEERING COLLEGE (A9)