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# **COURSE DETAILS**

Bachelor of Technology (B.Tech) Programme

#### A brief summary

Institute offers four year undergraduate degree (B.Tech) programme in Computer Science & Engineering. The course curriculum for the undergraduate program gives the flexibility to the students to prepare for advanced specializations. The department commits to offer a set of electives so that students can plan their academic program in advance. The course structure provides a right mix of compulsory and elective courses.

#### What you will learn

The BTech Program is divided into two distinct parts. A student has to go through a common program called Core Curriculum. Most of the core curriculum is completed in the first four semesters. The last four semesters has a large number of professional courses, that initiates the student to topics in Computer Science and Engineering.

- ✓ Expert teachers
- ✓ Extensive doumentation provided
- **✓** Good infrastructure
- **✔** Best learning environment

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### First Semester

Course Id	Course Name	Credits
NS1001	Mathematics-I (3L+ 1T)	4
NS1002	Engineering Mechanics (2L + 1T + 2P)	4
HS1001	Effective Communication Skills (2L)	2
IT1001	Introduction to Programming In C/Python (2L + 3P)	3
CS1001	Introduction to Profession (1L + 2P)	1

	Course Id	Course Name	Credits
ı	PR1001	Innovation Theory and Practice (1L + 2P) (Year Long Courses)	2
ı	PC1001	Professional Development Course (1L) (Year Long Courses)	1

## **Second Semester**

# **COURSES**

Course Id	Course Name	Credits
NS103a	ODE & PDE (2L + 1T + 2P)	4
NS103b	Linear Algebra (2L + 1T + 2P)	4
NS1004	Physics II (3L + 1T + 2P)	4
ES1002	Basic Electronics (3L + 2P)	4
DS1005	Engineering Graphics (2L + 3P)	3
ES1003	Innovation Theory and Practice (1L + 2P)	2
HS102a or HS102b	Indian Culture, Ethics and Human Values (2L + 2T)	3
PC1002	Professional Development Course (Year Long Course)	1

## Third Semester

Course Id	Course Name	Credits
IT2001	Data Structure (2L + 2P)	3
CS2002	Computer Organization and Architecture (3L + 2P)	4
CS2003	Database Management Systems (3L + 2P)	4
CS2004	Introduction to Data Science (3L + 2P)	4
OE2C09	Open Elective: Graph Theory (3L)	3
NS2001	Open Elective: Biology for Engineers (2L)	2

Course Id	Course Name	Credits
IT2C01	IT Workshop I: OOPs in Java (2P)	2
PR2002	Discipline Project (Year Long Courses)	2
PC2002	Professional Development Course (1L) (Year Long Courses)	2

### **Fourth Semester**

# **COURSES**

Course Id	Course Name	Credits
CS2005	Language Theory (3L)	3
CS2006	Operating Systems (3L)	3
CS2007	Design & Analysis of Algorithm (3L)	3
CS2008	Computer Network (3L)	3
OE2C01	Elective: NoSQL Databases (3L)	3
OE2C02	Elective: Descrete Structures (3L)	3
IT2C02	IT workshop II: Embedded System Lab (2P)	2
PR2002	Discipline Project (Year Long Course)	2
PC2002	Professional Development Course (1L) (Year Long Courses)	2

## Fifth Semester

Course Id	Course Name	Credits
CS3009	Network Security & Cryptography (3L)	3
CS3010	Software Engineering (3L)	3
CS3011	Artificial Intelligence (3L)	3
OE3C24	Open Elective: Parallel Computing (3L)	3

Course Id	Course Name	Credits
IT3C01	IT Workshop III: Computer Network Lab (2P)	2
PR3003	Optional Project (Year Long Course)	2
PC3003	Professional Development Course (1L) (Year Long Course)	1

### Sixth Semester

# **COURSES**

Course Id	Course Name	Credits
DS3014	Fabrication Project (8P)	4
HS3004	Ecology and Environment Science (2L)	2
OE3C28	Elective 1: Cyber Security (2L + 3P)	3
CS8007	Elective 1: Social Network Analysis (3L)	3
CS8009	Elective 2: Image Processing (3L)	3
CS8010	Elective 2: Introduction to Digital watermarking (3L)	3
CS8011	Elective 3: Machine Learning (3L)	3
OE3C34	Elective 3: Cyber Physical Systems (3L)	3
IT3C03	IT workshop IV: Web and mobile App development (3P)	2
PR3003	Optional Project (Year Long Course)	2
PC3003	Professional Development Course (1L) (Year Long Course)	1

## Seventh Semester

Course Id	Course Name	Credits
CS8001	Open Elective 1: Introduction to Blockchain Technology (2L + 2P)	3
CS8016	Open Elective 1: Cloud Computing (3L)	3

Course Id	Course Name	Credits
CS8004	Open Elective 2: Deep Learning and Applications (2L + 2P)	3
CS8006	Open Elective 2: Internet of Things (2L + 2P)	3
CS8002	Open Elective: Multimedia Processing (3L)	3
CS8003	Open Elective: Data Clustering (3L)	3
CS8005	Open Elective: Research Method in Computer Science (3L)	3
PC4004	Professional Development Course (1L) (Year Long Courses)	1

#### Eirth Semester

# **COURSES**

Course Id	Course Name	Credits
CS8013	Elective 1: Mobile and Wireless Network (3L)	3
CS8021	Elective 1: Information Retrival and Semantic Web (3L)	3
CS8015	Elective 2: Computer Vision with Deep Learning (2L + 2P)	3
CS8018	Elective 2: Hardware Security (3L)	3
	BTP OR Project-based Internship	9/15
PC4004	Professional Development courses (1L) (Year Long Course)	1

### Admissions to the B.Tech.programme

Admissions to the B.Tech.programme are made once a year in July through JEE (Main) conducted by Central Board of Secondary Education. The minimum academic qualification for admission is a pass in the final examination of 10+2 system or its equivalent with Physics and Mathematics as compulsory subjects and any one among Chemistry, Bio-technology, Computer Science and Biology as optional subjects. The procedures and other requirements for admission are specified in the JEE (Main) Information Brochure.

### Admissions to the B.Tech.programme for foreign nation

For admission of students for Foreign Nation will be through DASA(Direct Admission of Students Abroad)

- B.Tech Course Curriculum (course\_details\_1.html)
- Documents required at the time of Admission/Physical Reporting (course\_details\_2.html)

- Seat Matrix (course\_details\_2.html)
- Proforma for OBC Certificate (course\_details\_3.html)



#### Reservations:

Reservations for Scheduled Caste (SC), Scheduled Tribe (ST), Other Backward Classes (OBC) and Physically Handicapped (PH) candidates are as per the Government of India existing rules.

#### IMPORTANT LINKS

TA Duty 2023 (assets\misc\2022-2023 Sem II - CSE TA duty list V1.pdf)

Project Based Internship (http://pbi.iiitdmj.ac.in/)

Placement Cell (http://placement.iiitdmj.ac.in/)

Dean of Academics (https://www.iiitdmj.ac.in/academics/dean\_acad.php)

Dean of Students (https://www.iiitdmj.ac.in/students/dean\_office.php)

Dean of Research and Development (https://www.iiitdmj.ac.in/rspc.iiitdmj.ac.in/office.php?pid=7)

Dean of Planning and Development (http://faculty.iiitdmj.ac.in/faculty/pnkondekar)

#### RESEARCH GROUP

Image Processing and Computer Vision (https://www.iiitdmj.ac.in/icv.iiitdmj.ac.in/)

IoT and Embedded Systems (https://www.iiitdmj.ac.in/iot.iiitdmj.ac.in/)

Machine Intelligence (https://www.iiitdmj.ac.in/main.iiitdmj.ac.in/)

#### **QUICK LINKS**

IIITDM Jabalpur Home (http://www.iiitdmj.ac.in/)

Academic Calender (http://www.iiitdmj.ac.in/academics/calendar.php#acad cal)

Holidays 2023 (https://www.iiitdmj.ac.in/downloads/Closed-Holiday-2023.pdf)

Placement Cell (http://placement.iiitdmj.ac.in)

About Us (aboutus.php)

E & ICT Academy (http://ict.iiitdmj.ac.in/index.html)

Web Team (webteam.php)



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Mon - Fri / 9:00 AM - 05:00 PM