



भारतीय सूचना प्रौद्योगिकी संस्थान,
नागपुर

**Indian Institute of Information Technology,
Nagpur**



Government of India
Ministry of Human Resource
Development

“An Institute of National Importance by the Act of Parliament”

(Est. in 2016 by Ministry of Human Resources Development (MHRD), Government of India)

B. Tech. Admission Brochure – 2019

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About IIT Nagpur

INDIAN INSTITUTE OF INFORMATION TECHNOLOGY, NAGPUR (IIITN) is one of the twenty Indian Institutes of Information Technology in India. Set up with the objective of making available facilities for higher education, research and training in various fields of Information Technology.

It is established in the year 2016 by the Ministry of Human Resources Development (MHRD), Government of India, to address the challenges faced by the Indian IT industry and growth of the domestic IT market. It is declared as institute of National Importance by “The Indian Institutes of Information Technology (Public-Private Partnership) Act of Parliament, 2017”.

The institute is committed to get itself recognized as a leader in Information Technology related science and engineering. It wishes to establish a firm foundation for education and research with a high-quality faculty base and having a vision to be the fountainhead of new ideas and innovations in technology and science.

IIIT Nagpur strives to create an ambiance in which new ideas, research and scholarship flourish and from which the leaders and innovators and IT-entrepreneurs of tomorrow emerge.

About Nagpur City

IIITN is located in the heart of the Nagpur city, in posh area of Seminary Hills. It is 6km from Railway Station and 11km from Dr. Babasaheb Ambedkar International Airport, Nagpur. Nagpur, your own Orange city is one of the fastest developing metro city. Known for its rich heritage and culture, Nagpur city has numerous malls and places of cultural heritage worth visiting. With Metro connectivity at prominent locations, intracity travel has become stress-free. City of Nagpur has been proposed as one of the Smart Cities in Maharashtra and maintains 1st ranking among 100 cities in India.

MIHAN - Multi-Model International Passenger and Cargo Hub, located at Nagpur, is Asia’s biggest cargo hub. Also, it is home to MNCs viz. TCS, Tech Mahindra, Boeing, Tata Aeronautics Ltd, DRAL, Infosys, etc.

Our Vision

“To advance new knowledge and innovation in Information Technology and allied fields to power the nation to the forefront in the global context”

Our Mission

“The mission of IIITN is to develop competent and capable youth imbued with the spirit of innovation and entrepreneurship with the social and environmental orientation to meet the knowledge needs of the country and provide global leadership in Information Technology and allied fields”

Administration

Dr. O. G. Kakde – Director

He has worked as Director – VJTI Mumbai, Head of Electronics and Computer Science Department, and Dean (Research and Consultancy) at VNIT Nagpur. He has got extensive experience of 30 years in Academics, Research and Guidance, and general administration.



Director's Message

“Within a short span of less than three years, IIIT Nagpur started attracting talented students, who want to work on challenging problems in the field of Information Technology. IIIT Nagpur also started attracting a good number of Industry professionals to pursue research in cutting edge technologies”



Dr. A. G. Kothari

In-charge Dean

dean@iiitn.ac.in

agkothari72@rediffmail.com



Shri. K. N. Dakhale

In-charge Registrar

registrar@iiitn.ac.in

Our Partners



Facilities



ADMIN BLOCK



LIBRARY



FULLY EQUIPPED GYM



FACILITIES FOR INDOOR SPORTS



PLAY GROUND



SURROUNDED BY NATURE

- Hostel
- Library
- Reading Room
- Air-Cooled Classrooms
- Digital Classrooms
- Wi-Fi Enabled Campus
- Girls Common Room
- Facilities for Indoor Sports and Yoga
- Fully Equipped Gym
- Playground
- Computer Labs/Centre
- Conference Hall with audio and visual aids
- Recreation Room
- 24 hours Medical and Security Facility

B. Tech Admissions - 2019

SEAT MATRIX OF IIIT NAGPUR

Program Name	State/All India Seats	Seat Pool	OPEN	OPEN-PwD	GEN-EWS	GEN-EWS-PwD	SC	SC-PwD	ST	ST-PwD	OBC-NCL	OBC-NCL-PwD	Total(includes Female Supernumerary)	Program-Total	
														Seat Capacity	Female Supernumerary
Computer Science and Engineering	All India	Gender-Neutral	49	2	11	1	16	1	10	1	31	2	124	144	0
		Female-only (including Supernumerary)	6	1	2	0	5	0	0	0	6	0	20 (including "0" Supernumerary)		
Electronics and Communication Engineering	All India	Gender-Neutral	37	2	8	1	12	1	7	0	24	1	93	108	0
		Female-only (including Supernumerary)	5	0	2	0	3	0	1	0	3	1	15 (including "0" Supernumerary)		

The admission in B. Tech. CSE / ECE at IIIT Nagpur is through JoSSA / CSAB those who have cleared the JEE Mains examination in 2019.

The students, who have been allotted seat in IIIT, Nagpur must physically report the Institute as per the schedule on the JoSAA Website.

All students admitted to IIIT Nagpur are required to bring the following list of documents at the time of physical reporting:

- 1) The Original document of Verification-cum-Seat Acceptance Letter issued by the RC In-charge and Latest Provisional Seat Allotment Letter.
- 2) Class 10th (SSC) Board Certificate for date of birth proof
- 3) Class 12th Mark Sheet and Certificate
- 4) JEE Main Score Card and Admit card
- 5) Transfer certificate (must be original)
- 6) Migration certificate (must be original: If provided by the respective exam Board)
- 7) Certificate of category (OBC / SC / ST), if applicable, issued by the competent authority. (OBC certificate must be issued on or after April 1, 2019 in central Govt. format)
- 8) Caste validity certificate issued by the competent authority (for Maharashtra State candidates)
- 9) Certificate for Persons with Disabilities (PWD), if applicable
- 10) GAP certificate (If applicable)
- 11) EWS certificate (If applicable)
- 12) The Original receipt of Rs. 35,000/- (General/OBC) or Rs. 15,000/- (SC/ST) paid by the candidates as a Registration Fee at the time of seat allotment
- 13) Six passport size color photograph

Additionally, bring the following duly filled forms, can be download from the IIIT Nagpur website (www.iiitn.ac.in)

- 1) **Application Form** (prescribed format link)
- 2) **EWS Certificate Form** (prescribed format link)
- 3) **Undertaking for Anti-Ragging duly signed by the candidate as well as Parents / Guardians** (prescribed format link)
- 4) **Hostel Admission Form** (prescribed format link)

Important Websites:

1. JoSAA Website: <https://josaa.nic.in/webinfocms/Public/home.aspx>
2. IIIT Nagpur Website: www.iiitn.ac.in

First Year Fees Details

ACADEMIC FEE STRUCTURE

Fees Per Year For 1st Year (Batch 2019-20) Students for Academic Year 2019-20

Sl No	Fees per Annum	First Year (2019-20only) (Rs)
1	Tuition Fee	1,80,000
	Other Fees	
2	Registration Fees	1500
3	Library Fees	3000
4	Gym Cultural Activity and Magazine Fee	2200
5	Sports Fee	2000
6	Internet and Computer Maintenance Fee	3000
7	Training and Placement Fee	800
8	Industry Institute Interaction Fee	1500
9	Development Fee	12000
10	Examination Fee	2000
11	Group Insurance Premium	700
	Sub Total (Other Fees)	28700
	Sub Total (Yearly Fees)	2,08,700
	Fees One Time (To be paid in admission year)	
1	Library Deposit (Refundable)	5000
2	Caution Deposit (Refundable)	5000
3	Identity Card	200
4	Medical Exam	100
5	Welfare Fund	1200
6	Medical Aid Fund	5000
	Sub Total (One Time Fees)	16,500
	Total (Rs)	2,25,200
	July To November Semester (First Semester)	1,12,600
	January to May Semester (Second Semester)	1,12,600

Fees payment is semester wise in every academic session. Above fees do not include charges towards hostel and mess.

HOSTEL FEE STRUCTURE

Hostel Fees Payment

The following are the fees for Hostel Admission for 1st year B.Tech for the academic year 2019-2020 for Girls & Boys Hostel

Types of Room	FIRST INSTALLMENT (1 st Semester) To be paid at the time of admission				SECOND INSTALLMENT (2 nd Semester) To be paid by January 6, 2020		
	Hostel Rent	Other Fees	Mess Deposit	Total Amount	Hostel Fees	Mess Deposit	Total Amount
FS	17500	41500	21500	80500	17500	20000	37500

FS: Four Seated

Break-up of Other Hostel Fees for 1st Year B. Tech for 2019-20

Particulars		Boys & Girls Hostel (FS)
Room Rent (Per Year)	NR	35000
Rent Total (A)		35000
Other Fees		
Caution Money (Per Year, adjustable)	R	1000
Advance Electricity Charges (Per year, adjustable as per actual)	RAA	12000
Advance Water Charges (Per year, adjustable as per actual)	RAA	2000
Recreation (Per Year)	NR	500
Depreciation Fund (one time)	NR	3000
Welfare Fee (one time)	NR	3000
Allied Services (Per Year)	NR	20000
Other Fees Total (B)		41500
Mess Charges		
Mess Deposit (one time)	NR	1500
Mess Charges (Per year, adjustable as per actual)	RAA	40000
Mess Charges Total (C)		41500
Grand Total		118000

R: Returnable, NR: Non Returnable, RAA: Returnable, adjustable as per actual

- Note:- 1) Due to Shortage of Rooms students have to occupy four seated rooms at first instant.
2) All rooms are having three cupboards. The students have to share these cupboards between them.
3) Seats are limited and will be allotted on first come first serve basis.

ONLINE PAYMENT LINKS

For Academic fees payment/ Admission:

<https://www.onlinesbi.com/prelogin/icollecthome.htm?corpID=644817>

For Hostel fees payment:

<https://www.onlinesbi.com/prelogin/icollecthome.htm?corpID=649550>

OR

DD in Favor of “**IITN GENERAL**” Payable at Nagpur for Academic Fees

DD in Favor of “**IITN HOSTEL**” Payable at Nagpur for Hostel Fees

OR

NEFT/RTGS/IMPS DETAILS FOR ADMISSION / ACADEMIC FEES PAYMENT

IITN GENERAL Number	37236982961
Name of the Bank Account	IITN GENERAL
Account Number	37236982961
Type of the Account	CURRENT
Name of the Bank	State Bank of India
Address of Bank	VRCE Branch, South Ambazari Road, VNIT, Dist. Nagpur, Maharashtra -440011
Bank Code	06702
IFSC Code	SBIN0006702
MICR Code	440002005

NEFT/RTGS/IMPS DETAILS FOR HOSTEL FEES PAYMENT

IITN HOSTEL Number	35921684100
Name of the Bank Account	IITN HOSTEL
Account Number	35921684100
Type of the Account	CURRENT
Name of the Bank	State Bank of India
Address of Bank	VRCE Branch, South Ambazari Road, VNIT, Dist. Nagpur, Maharashtra -440011
Bank Code	06702
IFSC Code	SBIN0006702
MICR Code	440002005

Hostel

IIIT Nagpur provides the hostel facility to Girls and Boys students within its existing campus. There are separate hostel buildings for boys and girls. Currently we have 59 rooms in the hostel building.

Due to increase in number of occupants, hostel allotment will be done on First-Cum-First-Serve basis.

Hostel Facilities

- Located in the campus
- Wi-fi enabled campus
- Well furnished rooms with adequate space, light and fresh ventilation
- Mess facility with spacious dining room
- Entertainment room with TV and reading room
- Guest room facility
- Wardens are the local guardians for guidance and moral support to the students
- Counselor for guidance and counseling

Academics @ IIIT Nagpur

Admissions to IIITN are only through Joint Seat Allocation Authority (JoSAA), based on JEE(Mains) scores. Engineering aspirants from all over India opt for IIIT Nagpur. Getting into IIITN has become tougher over the years, which ensures academically strong students are admitted to IIITN.

Courses Offered

1) B.TECH. (4 Years)

Institute offers B. Tech (Four Years) B. Tech. degree Programme in two disciplines:

- **Computer Science & Engineering (Intake: 144 seats)**
- **Electronics & Communication Engineering (Intake: 108 Seats)**

The emphasis is on the innovation, creativity, entrepreneurship and hands-on on real life project on various domains. The students are exposed to following areas:

- Bio-medical
- Big Data Analytics
- IoT
- 5G, LTE
- Image processing
- Deep learning, Machine learning
- HPC
- VR and AR

2) Ph.D. in CSE and ECE (20 seats)

The first batch of PhD candidates is undergoing research work at IITN under various supervisors in areas of Machine Learning, Image Processing, Communications, etc. Ph.D programme at IITN also facilitates people from Industry to pursue research interests under Industry-Academia Collaboration.

Industry Academia Collaboration

- Tie up with Tata Consultancy Services as Industry Partner.
- MoU with ESIEE (École Supérieure d'Ingénieurs en Électrotechnique et Électronique) Paris-Graduate School of Engineering, based in France for exchange programmes.
- Lecture series delivered by Tech experts from industry.
- IT Workshops on Data Structures, Python, HTML, MatLab, Robotics, Machine Learning etc. are conducted regularly by subject experts from IT industry.

USPs of Curriculum

- Core subjects incorporated right from the first semester.
- The subjects and their contents are dynamic and revised time to time in consultation with technology experts.
- Choice Based Credit System gives an option to students to choose subjects of their choice.
- Credit based mandatory industry internship for six months.
- Option to pursue credit based Online Certification Courses from Coursera, Udemy, Google Certifications, etc.

Library

- Central Library is spread across an area of 600 Sq. Feet. It contains a Reading Hall where 50 readers can be accommodated at a time with one stack room and having a collection of around 2000 books and CDs.
- The Library has a rich collection of books in the field of Electronics Communication Engineering, Computer Science Engineering, Mathematics, Physics, Mechanics and Graphics, Environmental Sciences and also in the field of Humanities and Social Science including English and Economics.
- The Library also subscribes to various Newspapers in Hindi, English and Marathi.
- Library also has good collection including text books, reference books and magazines for various competitive exams such as GATE etc.

Department of CSE

The Department of Computer Science and Engineering at IIIT-Nagpur was established in 2016. The department is currently headed by **Dr. Pooja Jain**. The department has academic programs with the sanctioned strength of 144. The PhD program was introduced in 2018 under Visveswaraya Scheme (under MeitY) with 10 sanctioned seats. The Department of Computer Science and Engineering is dedicated for innovation and research in inter-disciplinary areas. The department takes great efforts to provide its students latest state-of-the-art curriculum which can be applied to solve the real-time problems in the industries and society. The department is equipped with all the state-of-the-art laboratories with latest technologies and platforms along with best-in-class computing facilities.

Research Areas

- Deep Learning
- Machine Learning
- Parallel Computing
- High Performance Computing
- Data Mining
- IoT
- Pattern recognition

Faculty Members



DR. O. G. KAKDE
Director



DR. POOJA JAIN
Assistant Professor and Head
(CSE)



DR. JITENDRA V. TEMBHURNE
Assistant Professor

ADJUNCT ASSISTANT PROFESSOR ON PRACTICE (AAPP)



DR. RICHAKAKHIYANI



MRS. KHUSHBOO THAKKAR

VISITING FACULTY FROM VNIT NAGPUR / INDUSTRY



DR. U. A. DESHPANDE
Professor, VNIT Nagpur



DR. R. B. KESKAR
Associate Professor,
VNIT Nagpur



DR. M. P. KURHEKAR
Associate Professor,
VNIT Nagpur



DR. M. M. DHABU
Assistant Professor,
VNIT Nagpur



DR. ASHISH S. TIWARI
Assistant Professor,
VNIT Nagpur



DR. POONAM SHARMA
Assistant Professor,
VNIT Nagpur



DR. MANSI RADKE
Assistant Professor,
VNIT Nagpur



MR. AKSHAY ZADGAONKAR
CEO, ZSoftware Inc,
Nagpur



MR. PRASSANA DESHPANDE
Agile Coach, TCS,
Nagpur

B. Tech. CSE Scheme

Year	Semester	Course Code	Course Name	Type	L	T	P	Credits
BS YEAR								
1 ST	1 ST	MAL 101	Mathematics-I	BS	3	1	0	4
1 ST	1 ST	BEL 102	Elements of Electrical Engineering	ES	3	0	2	4
1 ST	1 ST	BSL 101	Applied Sciences	BS	3	0	2	4
1 ST	1 ST	CSL 101	Computer Programming	DC	3	0	2	4
1 ST	1 ST	ECL 101	Analog Electronics	DC	3	0	2	4
1 ST	1 ST	SAP 101	Health, Sports& Safety	HU	0	0	2	0
1 ST	1 ST	HUL 102	Environmental Studies	HU	2	0	0	2
Subtotal					17	1	10	22
1 ST	2 nd	MAL 102	Mathematics-II	BS	3	1	0	4
1 ST	2 nd	ECL 102	Digital Electronics	DC	3	0	2	4
1 ST	2 nd	CSL 102	Data Structures	DC	3	0	2	4
1 ST	2 nd	CSL 103	Application Programming	DC	3	0	2	4

Year	Semester	Course Code	Course Name	Type	L	T	P	Credits
1 ST	2 nd	HUL 101	Communication Skills	HU	2	0	2	3
1 ST	2 nd	BEL 101	Mechanics & Graphics	ES	3	0	2	4
Subtotal					17	1	10	23
Total								45
SECOND YEAR								
2 nd	3 rd	MAL 201	Mathematics-III	BS	3	1	0	4
2 nd	3 rd	CSL 202	Introduction to Object Oriented Programming	DC	3	0	2	4
2 nd	3 rd	CSL 203	Computer System Organization	DC	3	0	0	3
2 nd	4 th	CSL 210	Data Structures with Applications	DC	2	0	2	2
2 nd	3 rd	CSP 201	IT Workshop-I	DC	0	0	4	2
2 nd	3 rd	ECL 202	Microprocessors & Interfacing	DC	3	0	2	4
Subtotal					15	2	8	20
2 nd	4 th	CSL 205	Design and Analysis of Algorithms	DC	3	0	2	4
2 nd	4 th	CSL 206	Software Engineering	DC	3	0	0	3
2 nd	4 th	CSL 207	Operating Systems	DC	3	0	2	4
2 nd	4 th	CSL 208	Design Principles of Programming Languages	DC	3	0	2	4
2 nd	4 th	CSL 204	Discrete Maths and Graph Theory	DC	3	1	0	4
2 nd	4 th	CSP 202	IT Workshop-II	DC	0	0	4	2
Subtotal					15	0	10	21
Total								41
THIRD YEAR								
3 rd	5 th	CSL 301	Database Management Systems	DC	3	0	2	4
3 rd	5 th	HUL 301	Open Course - I	HU	3	0	0	3
3 rd	5 th	CSL 302	Computer Networks	DC	3	0	2	4
3 rd	5 th	CSL 303	Theory of Computation	DC	3	1	0	4

Year	Semester	Course Code	Course Name	Type	L	T	P	Credits
3 rd	5 th		Elective-I	DE	3	0	0	3
Subtotal					15	2	4	18
3 rd	6 th	CSL 304	Compilers	DC	3	0	2	4
3 rd	6 th	CSL 305	Cryptography and Network Security	DC	3	1	0	4
3 rd	6 th	HUL 302	Open course-II	HU	3	0	0	3
3 rd	6 th		Elective-II	DE	3	0	2	4
3 rd	6 th		Elective –III	DE	3	0	0	3
Subtotal					15	1	6	18
Total								36
FINAL YEAR								
4 th	7 th	CSL 401	Project	DE	0	0	4	8
4 th	7 th		Elective-IV	DE	3	0	2	4
4 th	7 th		Elective-V	DE	3	0	2	4
4 th	7 th		Elective-VI	DE	3	0	0	3
4 th	7 th		Elective-VII	DE	3	0	0	3
4 th	7 th		MooC Course*	OC	3	0	0	3
OR								
4 th	7 th		Industry Internship Project	DE	0	0	4	6
Subtotal					15	0	10	25/6*
Total								31
4 th	8 th		Industry Internship Project	DE	0	0	4	6
OR								
4 th	8 th		Project	DE	0	0	4	8
4 th	8 th		Elective-IV	DE	3	0	2	4
4 th	8 th		Elective-V	DE	3	0	2	4
4 th	8 th		Elective-VI	DE	3	0	0	3
4 th	8 th		Elective-VII	DE	3	0	0	3
4 th	8 th		MooC Course *	OC	3	0	0	3
Subtotal					15	0	10	6/25*
Total								31
GRAND TOTAL								153

Type	Credits
BS	16
ES	08
HU	05
OC	06+03*
DE	38
DC	77
TOTAL	153

Department of ECE

The ECE department of IIT-Nagpur was established in 2016 and is currently headed by **Dr. Ankit Bhurane**. At IIT ECE Department, we encourage innovation. The department has academic programs with the sanctioned strength on 108. The PhD program was introduced in 2018 under Visveswaraya Scheme (under MeitY) with 20 sanctioned seats.

We continuously put forth valuable efforts to provide the students latest state-of-the-art curriculum that finds the applications in the industries.

The department is equipped with the state of the art technologies and platforms along with high-end computational facilities. The infrastructure and lab facilities are upgraded from time to time and provide adequate opportunities to students and researchers in order to learn and innovate.

We endeavour to develop our students to be industry-ready with comprehensive practical as well as theoretical knowledge.

Research Areas

- Signal, Image and Video Processing
- Wireless Communication
- Cognitive Radio
- Biomedical Signal Processing
- Wireless Sensor Network
- Antennas Design

Faculty Members



DR. ASHWIN KOTHARI
In-charge Dean



DR. ANKIT BHURANE
Assistant Professor and Head



DR. TAPAN KUMAR JAIN
Assistant Professor



DR. VIPIN KAMBLE
Assistant Professor

VISITING FACULTY FROM VNIT NAGPUR



**DR. AVINASH
KESKAR**
Professor, VNIT
Nagpur



**DR. R. B.
DESHMUKH**
Professor, VNIT
Nagpur



**DR. V. R.
SATPUTE**
Assistant Professor,
VNIT Nagpur



DR. DEEP GUPTA
Assistant Professor,
VNIT Nagpur



**DR. PRABHAT
KUMAR SHARMA**
Assistant Professor,
VNIT

B. Tech. ECE Scheme

Year	Semester	Course Code	Course Name	Type	L	T	P	Credits
FIRST YEAR								
1	1	MAL 101	Mathematics-I	BS	3	1	0	4
1	1	BEL 102	Elements of Electrical Engineering	ES	3	0	2	4
1	1	BEL 101	Mechanics & Graphics	ES	3	0	2	4
1	1	CSL 101	Computer Programming	DC	3	0	2	4
1	1	ECL 101	Electronic Devices and Circuits	DC	3	0	2	4
1	1	HUL 101	Communication Skills	HU	2	0	2	3
Sub Total					17	1	12	23
1	2	MAL 102	Mathematics-II	BS	3	1	0	4
1	2	ASL 101	Applied Sciences	BS	3	0	2	4
1	2	ECL 102	Digital Electronics	DC	3	0	2	4
1	2	CSL 102	Data Structures	DC	3	0	2	4
1	2	HUL 102	Environmental Studies	HU	2	0	0	2
1	2	CSL 103	Application Programming	DC	3	0	2	4
1	2	SAP 101	Health, Sports & Safety	HU	0	0	2	0
Sub Total					17	1	8	22
Total					34	2	20	45
SECOND YEAR								
2	3	MAL	Mathematics-III	BS	3	1	0	4

		201						
2	3	ECL 201	Signals and Systems	DC	3	0	2	4
2	3	ECL 202	Microprocessors & Interfacing	DC	3	0	2	4
2	3	ECL 203	Analog ICs	DC	3	0	2	4
2	3	ECL 204	Network Theory	DC	3	0	2	4
2	3	CSP 201	IT Workshop- I	DC	0	0	4	2
Sub Total					15	1	12	22
2	4	ECL 301	Digital Signal Processing	DC	3	0	2	4
2	4	ECL 303	Hardware description languages	DC	3	0	2	4
2	4	ECL 304	Control Systems	DC	3	0	2	4
2	4	ECL 305	Electromagnetics	DC	3	0	0	3
2	4	ECL 306	Computer Architecture & Organisation	DC	3	0	0	3
2	4	CSP 202	IT Workshop- II	DC	0	0	4	2
Sub Total					15	0	10	20
Total					30	1	22	42

Year	Semester	Course Code	Course Name	Type	L	T	P	Credits
THIRD YEAR								
3	5	ECL 310	Analog and Digital Communication Systems	DC	3	0	2	4
3	5	ECL 307	Waveguides & Antennas	DC	3	0	0	3
3	5	ECL 308	Embedded Systems	DC	3	0	2	4
3	5	ECL 309	Electronic Instrumentation	DC	3	0	0	3
3	5		Open Course - I	OC	3	0	0	3
Sub Total					15	0	4	17
3	6	ECL 311	Wireless Communication	DC	3	0	2	4
3	6	ECL 312	CMOS Design	DC	3	0	2	4
3	6		Open Course - II	OC	3	0	0	3
3	6		Elective - I	DE	3	0	0	3
3	6		Elective - II	DE	3	0	2	4
Sub Total					15	0	6	18
Total					30	0	10	35
FINAL YEAR								
4th	7th		Elective - III	DE	3	0	0	3
4th	7th		Elective - IV	DE	3	0	2	4

4th	7th		Elective - V	DE	3	0	2	4	
4th	7th		Elective – VI	DE	3	0	0	3	
4th	7th		OPEN / MOOC course	OC	3	0	0	3	
4th	7th	ECL 401	Project	DE	0	0	3	8	
4th	7th	OR							
4th	7th	ECL 402	Industry Internship Project	DE	0	0	0	6	
Sub Total					12	0	7	25/6 *	
4th	8th	ECL 402	Industry Internship Project	DE	0	0	0	6	
4th	8th	OR							
4th	8th		Elective - III	DE	3	0	0	3	
4th	8th		Elective – IV	DE	3	0	2	4	
4th	8th		Elective - V	DE	3	0	2	4	
4th	8th		Elective – VI	DE	3	0	0	3	
4th	8th		OPEN / MOOC course	OC	3	0	0	3	
4th	8th	ECL 401	Project	DE	0	0	3	8	
Sub Total					12	0	7	25/6 *	
Total								31	
GRAND TOTAL								153	

* Same choice cannot be repeated for 7th& 8thSemester.

Sem	Credits
1	23
2	22
3	22
4	20
5	17
6	18
7&8	31
TOTAL	153

Type	Credits
BS	16
ES	08
HU	05
OC	09
DC	80
DE	35
TOTAL	153

Department of BSE

Department of Basic Sciences and Engineering at Indian Institute of Information Technology Nagpur, established in 2016. It is currently headed by **Dr. Aatish S. Daryapurkar**.

The department envisages becoming a state-of-the-art department with high quality education and cutting edge interdisciplinary research in science. It acts as foundation for all the core engineering branches and offers courses in Applied Sciences, Mathematics, Humanities, Environmental Studies, Basic Electrical and Mechanical Engineering. The department continuously put the valuable efforts to provide the students latest state-of-the-art curriculum. This unique course blends the best of contemporary basic Sciences and Engineering to create professionals who are equally comfortable with both science and technology.

The department is always engaged in carrying out cutting-edge research and development for the benefit of the society. Department provides an enriching platform -where technical education can be complemented with human and social understanding. The department is well-known for breadth of understanding including knowledge of the applied sciences and provides appreciation of intellectual excellence, academic integrity, accountability and creativity.

The department is favored with proficient Faculty, all holding Ph.D. degrees from renowned institutes across India having interdisciplinary specialization.

Faculty Members



**DR. A. S.
DARYAPURKAR**
Assistant Professor and
Head (BSE)



**DR. ANURADHA
SINGH**
Assistant Professor



DR. CHARU GOEL
Assistant Professor



**DR. KIRTI
DORSHETWAR**
Assistant Professor



DR. C. M. SAKODE
Assistant Professor



DR. PRASAD V. JOSHI
Assistant Professor

List of Visiting Faculty (From VNIT Nagpur)

Sr. No	Name of the Visiting Faculty	Designation	Department
1	Dr. Ashwin Dhabale	Assistant Professor	Electrical Engineering
2	Dr. Arvind Vyawahare	Assistant Professor	Applied Mechanics
3	Dr. G. Hemachandra	Associate Professor	Applied Sciences
4	Dr. R. S. Gedam	Associate Professor	Applied Sciences

Projects

Research projects extensively use NANO SciTech Lab resources as well as contribute to its expansion. There is a major project currently associated with our facility.

- Electro spinning of lead free NBTBT6 based materials for sensors and energy harvesting applications

Research Areas

- Applied/Engineering Physics
- Materials Science
- Nanoscience and Nanotechnology
- Applied/Engineering Mathematics
- Real Algebraic Geometry
- Quadratic forms
- Algebra
- Linear/nonlinear and optimal control
- Optimization
- Biomedical systems
- Analytical Modelling
- Solid Mechanics
- Robotics
- English Literature

Group Research Interest

- Investigation of ceramic nanofiber of various lead free ceramic materials, such as Dielectric, Ferroelectrics, Piezoelectric and Multiferroics synthesized using electrospinning technique for energy harvesting and Gas sensing applications
- Investigation of multifunctional oxide thin films including multiferroic, dielectric, ferroelectric and piezoelectric thin films grown using various PVD and CVD techniques for various nanoelectronic applications
- Explore the perovskite materials for Resistive Switching Devices
- Piezoelectric and magnetoelectric energy harvesting possibly for battery materials

Training & Placement Office

- ❖ At IIITN, the Training & Placement Office is of strategic importance. It takes various initiatives to transform the students into smart workforce.
- ❖ The T&P Office believes in providing quality internships and placements to all its deserving students. Consistent efforts are made to collaborate with the leading organizations for joint technological development and research initiatives, internships and placements.
- ❖ It acts as a Resource Centre where students get information about various training programmes, online courses, internships and projects at various Govt Organizations in India.

❖ The Student Placement Committee (SPC) is headed by the Sr. Office Associate T&P **Mr. Harshad Panse**, and supported by Faculty In-charge **Dr. Pooja Jain** and student representatives.

Internships & Placements

Efforts are made at IITN to make students employable through various initiatives viz. Industry Internship, Workshops, Guest Lectures, Trainings, events, etc. Students at IITN participate regularly at inter-college competition like Hackathon, Robotics, Paper presentation, etc.

Rationale behind Industry Internship Programme

Industry Internship Programme enables the students to gain first-hand exposure of working in the real world. They get hands-on experience of working on live projects in companies. It helps them to relate the classroom learning with the real time applications in the Industry. At the workplace an Intern gets proper training, assignments, and duties without the added pressure which prepares him/her professionally.

Through internship, students develop various skills like Time Management, Communication Skills, Interpersonal Skills, Presentation Skills, etc. which help them foster their professional career. It instills a sense of professionalism and boosts their chances of getting hired by prospective employers.

As a part of the curriculum, students at IITN are required to pursue a semester-long full-time industry internship (typically from July to December) in prominent companies. This helps them in getting the much-required exposure to the real-life corporate and technical platforms. Throughout the internship, students' performance is monitored and evaluated.

Trainings

Campus Recruitment Training is a crucial aspect of the placement preparations. Students at IITN are critically trained on aspects like Aptitude, Group Discussions, and Interview. Students are also encouraged to take up entrepreneurship through interaction with founders of startups.

The T&P Office endeavors to prepare the students for recruitment process and spread awareness about the happenings in the companies world-wide.

It also plans to start certificate courses relevant in industry by 2020.

Achievements

Final year students (2016 Batch) are interning at prestigious organizations

**Highest Stipend
Rs.40,000/-**

100% internship placements in the year 2019

**Average Stipend
Rs.14,000/-**

						
						
						
						

Our Second year and Third year B. Tech. students (2017, 2018 batch) are interning at below companies / Govt. institutes in Summer 2019



Why companies prefer hiring from IIITN?

- Institute of National Importance by Act of Parliament.
- IIITN is at par with IITs and NITs.
- Admissions happen through JoSAA and CSAB. Only top 2% candidates taking JEE Mains Exam, make it to IIIT Nagpur.
- Tie up with TCS as Industry Partner.
- 100% Internship offers to Final year students.
- Students interning at Prestigious MNCs viz.
 - Fujitsu Japan.
 - Ecole Centrale Supelec, Paris.
 - Muma College of Business, University of South Florida.
 - Government Organizations - BARC, ISRO, NARL, IIRS etc.
- Industry Perspective Dynamic Curriculum designed by Tech experts and revised time to time.
- Core subjects are incorporated from the 1st semester.
- Choice Based Credit System gives an option to students to choose subjects of their choice.
- Option to pursue credit based Online Certification Courses from Coursera, Udacity, Google Certifications.
- Credit based mandatory industry internship for six months.
- MoU with ESIEE (École Supérieure d'Ingénieurs en Électrotechnique et Électronique) Paris-Graduate School of Engineering, based in France for exchange programmers.
- Lecture series delivered by Tech experts from industry.
- IT Workshops on Data Structures, Python, HTML, MatLab, Robotics, Machine Learning etc. are conducted regularly by subject experts from IT industry.
- Research work is focussed on problems faced by IT Industry.
- Opportunity for people from Industry to pursue research interests under Industry-Academia Collaboration.
- AR Vidhya – A start up founded by ECE student Mr. Kartik Kinge is based on Augmented Reality and E-Learning.
- 3rd year students pursuing summer internships at IIT Guwahati, IIT Ropar, IIT Mandi, IIT Goa, IIT Patna, IIT Jodhpur, IIT BHU Varanasi, NIT Warangal, National Informatics Centre, Bharat Electronics Ltd.
- Final year students pursuing semester internships at TCS, Tata Research Design Development Centre, BOSCH, Tech Mahindra, Persistent Systems, etc .

- Final year students have also done summer internships at IITs, NITs and other Govt Institutes.

Student's Achievements

- ❖ Parth Wazurkar from CSE department participated in **Google Summer of Code 2018** for the FreeType Organization and worked on the project “Integrating VFLib’s TeX format drivers into FreeType” in summer 2018.
- ❖ Team ARVidhya (Kartik Kinge (ECE) and Aditya Sher (CSE)) bagged **1st Prize in International IEEE SS12 Maker Fair 2018**.
- ❖ Team ARVidhya (Kartik Kinge (ECE) and Aditya Sher (CSE)) **won the Techstars Start-up weekend Hackathon held at Microsoft** Hyderabad campus powered by Google for Entrepreneurs.
- ❖ Ms. Anushri Laddha from CSE Department was the finalist at **Master Orator Championship organized by International Toast Masters Organization**.
- ❖ Six students of CSE 2nd year have successfully qualified Round 1 of **Smart India Hackathon-2019** and are currently working on the prototype model.
- ❖ Students of ECE 2nd year are actively participating in **image processing based research on image noise estimation and quality assessment**.
- ❖ Students of ECE 3rd year are working on **Fake currency identification using Smartphone camera**.
- ❖ Mr. Vaibhav Agasti selected for research internship by the prestigious **Muma College of Business, University of South Florida, USA**
- ❖ Ms. Shivani Dhok, Dr. AG Kothari and Dr. Ankit Bhurane published research paper on “**Automated Hyperspectral Image Classification using Spatial-Spectral features**” at the 6th Intl Conference on Signal Processing and Integrated Networks 2019.
- ❖ Atharva Nimbalkar published a chapter on **Application of Block Chain into IoT networks for Security** in the reference book by Springer Publications.
- ❖ Aman Soni and Sahil Deshmukh co-authored a research paper on “**Shortest path algorithm for TSV assignment in 3D IC**” in IEEE Electrical Design of Advanced Packaging and Systems (EDAPS) Symposium.
- ❖ Parth Wazurkar co-authored a research paper on “**Predictive Analytics in Data Science for Business Intelligence Solutions**” in IEEE conference CSNT 2017.

Innovation and Technology Transfer

- ❖ Gesture controlled Car
- ❖ Gravity based Green Energy Lamp

Co-curricular Activities

- **TantraFiesta - National Level Technical Event by IITN**
- **Abhivyakti – The Annual Cultural Festival**
- **Odisha Art Competition – The Rangoli and Drawing competition**
- Health Checkup, Eye Checkup and Blood Donation Campare organized every year.

Clubs and Communities

Technical

- ❖ **#Ack-Z** - A white hat security club for ethical hackers
- ❖ **United Gamers Community**: Provides a common platform for competitive gaming.
- ❖ **Gaming Community**: For multi-player gaming in virtual environment over LAN.
- ❖ **DotSlash**: Programming Community aims to foster the coding culture that exists in IITN. Entities under DotSlash:
 - Open source Group
 - Competitive Programming Group
 - Machine Learning Group

Cultural

- ❖ **Music Club**: Encourages the talented musicians and singers in the Institute.
- ❖ **Talartsdy**: The Art club aims at nurturing creativity in students in various art forms.
- ❖ **Beats Spark**: Dance Club, aims at bringing together dancers from various dance forms absorbing all the known-unknown forms of dancing for the love of culture.

Academics and Research

- ❖ **REAP**: This Research Club helps students find their research interests and develop expertise.
- ❖ **The 7C Club**: Communication and Public Speaking club, aims at developing the skills like self-confidence and leadership.

First year Orientation Programme 2019

The Orientation Programme 2019 for the new batch of first year B. Tech. students will be held immediately after the closing of admissions. The schedule will be displayed at the notice boards.

It usually consists of

1. Director's addressing
2. I/c Dean's addressing
3. Registrar's addressing
4. HODs' addressing
5. Faculty interaction
6. Campus and Lab visit
7. Briefing about policies, procedures, information related to academics, exams, etc
8. Student interaction
9. Social Media Awareness

Important Contact Numbers

Admission PI	Shri. K. N. Dhakale	80879 83449
Admission In-Charge	Dr. Tapan Jain **	97362 26189
Admission In-Charge	Dr. Jitendra V. Tembhurne **	98235 04343
Hostel Warden (Boys)	Dr. Tapan Jain	97362 26189
Hostel Warden (Girls)	Dr. Anuradha Singh	70667 69693
Officer on Special Duty (OSD)	Mr. Ranjan Parulkar **	85549 93496 86690 25564
Officer on Special Duty (OSD)	Mr. Harshad Pophali **	93732 88110
Hostel Supervisor	Mr. Sunil Dhole	78747 21870
Admin office	Mr. Hardik Jogi	97665 32213

** In Case of any queries related to admission Please contact

Dr. Tapan Jain, Dr. Jitendra V. Tembhurne and,

Mr. Ranjan Parulkar, Mr. Harshad Pophali