

# INFORMATION BROCHURE 2015-16 for Undergraduate, Postgraduate and Research Programmes





@Compiled and Edited by Dr Vishal S Sharma, Dept. of IPE, NITJ

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# Dr B R AMBEDKAR NATIONAL INSTITUTE OF TECHNOLOGY JALANDHAR-144011, INDIA



# VISION

To build a rich intellectual potential embedded with interdisciplinary knowledge human values and professional ethics among the youth, aspirant of becoming engineers and technologists, so that they contribute to society and create a niche for a successful career

# **MISSION**

To become a leading and unique institution of higher learning, offering state-of-the art education, research and training in engineering and technology to students who are able and eager to become change agents for the industrial and economic progress of the nation. To nurture and sustain an academic ambience conducive to the development and growth of committed professionals for sustainable development of the nation and to accomplish its integration into the global economy

# **QUALITY POLICY**

- To develop technical human resource of excellence suitable for global requirements.
- · To ensure good quality academic and industrial research programmes in different area of engineering and technology.
- To generate industry-institute synergy for shaping technical education to meet the requirement of industry.

#### SAY NO TO RAGGING

# Dr. B.R Ambedkar NIT Jalandhar - A RAGGING FREE CAMPUS

According to UGC guidelines, the definition of ragging states that any conduct whether by words spoken or written or by an act which has the effect of teasing, treating or handling with rudeness any other student, indulging in rowdy or undisciplined activities which causes or is likely to cause annoyance, hardship or psychological harm or to raise fear or apprehension thereof in a fresher or a junior student or asking the student to do any act or perform something which such student will not in the ordinary course and which has the effect of causing or generating a sense of sham or embarrassment so as to adversely affect physique or psyche of a fresher or a junior student.

# **IMPORTANT INSTRUCTIONS FOR THE STUDENTS**

- According to Hon'ble Supreme Court of India, Ragging in Educational Institutions is banned.
- · Ragging is a Cognizable Offence.
- Students are advised not to indulge in Ragging.
- Ragging entails heavy fines and/or suspension/expulsion.
- Ragging is an undesirable social offence, which is totally banned in the institute.
- In case the applicant for admission in the institute is found to have indulged in ragging in the past or if it is noticed that he/she has
- Indulged in ragging, admission may be refused or he/she shall be expelled from the institute.
- In case of Ragging, please do not keep quiet, report it to the authorities immediately.
- It is mandatory for the parents to report immediately to the authorities of the institute in case their wards inform them about ragging.

# PUNISHABLE INGREDIENTS OF RAGGING

- Abetment to ragging
- Criminal conspiracy to rag
- Unlawful assembly and rioting while ragging
- Public nuisance created during ragging
- Violation of decency and morals through ragging
- Injury to body, causing hurt or grievous hurt
- Wrongful restraint
- · Wrongful confinement
- Use of criminal force
- Assault as well as sexual offences or unnatural offences
- Extortion
- · Criminal trespass
- · Offences against property
- Criminal intimidation
- Attempts to commit any or all of the above mentioned offences against the victim(s)
- Physical or psychological humiliation
- All other offences following from the definition of "Ragging"

#### **PUNISHMENT**

Depending upon the nature and gravity of the offence as established by the Anti-Ragging Committee of the institute, the possible punishment for those found guilty of Ragging at the institute level shaped any one or any combination of the following:

- Suspension from attending classes and academic privileges
- · Withholding/ Withdrawing scholarship/ fellowship and other benefits
- Debarring from appearing in any test/ examination or other evaluation process
- Withholding results
- · Debarring from representing the institute in any regional, national or international meet, tournament, youth festival etc.
- Suspension/Expulsion from the hostel
- Rustication from the institute for period ranging from 1 to 4 semesters
- · Expulsion from the institute and consequent debarring from admission to any other institute for a specified period
- Fine ranging between Rupees 25,000/- and Rupees 1 Lakh
- Collective punishment: When the persons committing or abetting the crime of ragging are not identified, the institute shall resort to collective punishment
- · Fresher who do not report the incidents of ragging either as victims or as witnesses shall also be punished suitably.

As per the directions of the Hon'ble Supreme Court of India, if any incident of ragging comes to the notice of authority, the concerned student shall be given liberty to explain and if his/her explanation is not found satisfactory, the authority would expel him/her from the Institute.

# **IMPORTANT FUNCTIONARIES OF THE INSTITUTE**

Name	Designation	Email ID
Prof I K Bhat	Director	director@nitj.ac.in
Dr Joseph Anand Vaz	Dean (Academic)	anandvaz@nitj.ac.in
Dr A K Agnihotri	Dean (Planning & Development)	agnihotriak@nitj.ac.in
Dr Jaspal Singh Aujla	Dean (Students Welfare)	aujlajs@nitj.ac.in
Dr Arun Khosla	Dean (Research &Consultancy)	khoslaa@nitj.ac.in
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ProfAshish Raman	Mega Boys Hostel Block 'A', Warden	ramana@nitj.ac.in
Dr Virender Singh	Mega Boys Hostel Block 'F', Warden	singhv@nitj.ac.in
Dr JaspreetKaur	Hostel No. GH-1, Warden	rajputj@nitj.ac.in
Dr Sangeeta Garg	Mega Girls Hostel, Warden	gargs@nitj.ac.in
Dr Sarbrinder Kaur	Hostel No. G H-2 and Dy Chief Warden	kaurs@nitj.ac.in
Dr Tarun Sehgal	Medical Officer	sehgalt@nitj.ac.in

For Phone numbers see Telephone Directory (Alphabetical) given at page 54 of this prospectus.

# Dr B R AMBEDKAR NATIONAL INSTITUTE OF TECHNOLOGY JALANDHAR Modified Academic Calendar - Odd Semester (UG, PG and PhD Courses) July - December 2015

_	I			1 - 1 -		
Days	July	August	September	October	November	December
MON TUE			1 Minor I			1***
WED	1		1 Minor-I 1 2 Minor-I 2			2***
THU	2		3 3	1 1		3
FRI	3		4 4	2 Mahatma Gandhi's Birthday		4
SAT	5	1 2	5 Janamashtami 6	3	1 Total	5 6
MON	6	3 1	7 5	5 2	1 Techniti 2	7 Showing of
					1	Answer Sheets
TUE	7	4 2	8 6	6 3	3 2	8
WED	8	5 3	9 7	7 4	4 3	9 Moderation of grades
THU	9	6 4	10 8	8 5	5 4	10 Display of Grades
FRI	10	7 5	11 9	9 6	6 5	11
SAT	11	8	12	10	7	12
SUN	12	9	13	11	8	13
MON	13	10 6	14 10	12 Minor-II 7	9 6	14
TUE	14	11 7	15 11	13 Minor-II 8	10 7	15 Submission of Awards to ADs
WED	15	12 8	16 12	14 Minor-II 9	11 Diwali	16 Winter vacation
THU	16	13 9	17 13	15 10	12 8	17
FRI	17	14 10	18	16 11	13 9	18
SAT	18	15 Independence day	19	17 Bharat Dhwani	14	19
SAT SUN	19	16	19 20	17 Bharat Dhwani 18	15	20
	19 20* Start of registration & Classes					
SUN MON	20* Start of registration & Classes	16 17 11	20 21 14	18 19 12	15 16 End Sem Exam 10	20 21
SUN	20* Start of registration & Classes	16	20	18	15 16 End Sem Exam 10	20
MON TUE WED	19   20*   Start of registration & Classes   1   21*   2   22*   3	16 17 11 18 12 19 13	20 21 14 22 15 23 16	18 19 12 20 13 21 14	15 16 End Sem Exam 10  17 End Sem Exam 11 18 End Sem Exam 12	20 21 22 23
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SUN MON TUE WED THU	20* Start of registration & Classes  1 21* 2 22* 3 23* 4 24 Last Date of Regn without late fee 5	16 17 11 18 12 19 13 20 14 21 15	20 21 14 22 15 23 16 24 17 25 Idu'l Zuha (Bakrid)	18 19 12 20 13 21 14 22 Dussehra 23 15	15 16 End Sem Exam 10  17 End Sem Exam 11 18 End Sem Exam 12 19 End Sem Exam 13  20 End Sem Exam 14	20 21 22 23 24 Id-e-Milad 25 Christmas day
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SUN MON  TUE WED  THU FRI SAT SUN	19	16 17 18 18 19 19 13 20 14 21 15 22 NIT Conclave 23 NIT Conclave	20 21 14 22 15 23 16 24 17 25 Idu'l Zuha (Bakrid) 26 27	18 19 12 20 13 21 14 22 Dussehra 23 15 24 25	15 16 End Sem Exam 10  17 End Sem Exam 11 18 End Sem Exam 12 19 End Sem Exam 13  20 End Sem Exam 14  21 22	20 21 22 23 24 Id-e-Milad 25 Christmas day 26 27
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SUN MON  TUE WED  THU  FRI  SAT SUN MON  TUE  WED  THU  FRI  SAT SUN MON  THU  FRI	19   20*   Start of registration & Classes   1   21*   2   22*   3     23*   4     24   Last Date of Regn without late fee   5   25   26     27**   6   28**   7     29**   8     30**   9   31**Last date of Regn with late fee   10	16 17 18 18 19 19 13 20 14 21 15 22 NIT Conclave 23 NIT Conclave 24 16 25 17 26 18 27 19 28 20 29 30 31 Minor-I 21	20 21 14  22 15 23 16  24 17  25 Idu'l Zuha (Bakrid)  26 27 28 18 29 19  30 20	18 19 12 20 13 21 14  22 Dussehra  23 15  24 25 26 16 27 Maharishi Valmiki's Birthday 28 17  29 18 30 Techniti 19 (Classes Suspended)  31 Techniti	15 16 End Sem Exam 10  17 End Sem Exam 11 18 End Sem Exam 12 19 End Sem Exam 13  20 End Sem Exam 14  21 22 23 End Sem Exam 15 24 Engg Graphics Exam 16  25 Guru Nanak's Birthday  26*** 27***  28 29 30***	20 21 22 23 24 Id-e-Milad 25 Christmas day 26 27 28 29

Note: Winter vacation - December 16, 2015 to January 08, 2016. Start of Registration & Classes for even semester - Jan 11, 2016

<sup>\*</sup> Registration will be held in respective departments without fine during July 20-24, 2015.

\*\* Thereafter registration will be done with late fee of Rs. 500/- in respective departments during July 27-31, 2015.

\*\*\* Final practical examinations.

# INTRODUCTION

Dr B R Ambedkar National Institute of Technology was established in the year 1987 as Regional Engineering College and was given the status of National Institute of Technology (Deemed University) by the Government of India on October 17, 2002 under the aegis of Ministry of Human Resource Development, New Delhi. Now the Ministry of Human Resource Development, Government of India has declared the Institute as "Institute of National Importance" under the act of Parliament-2007. A large number of reputed industrial houses in the country visit the Institute and select the final year students as Engineers/ Management Trainees. As one of the National Institutes of Technology (NIT), the Institute has the responsibility of providing high quality education in Engineering, Technology and Sciences to produce competent technical and scientific manpower for the country. The Institute offers BTech, MTech, MSc, MBA and PhD programmes in several disciplines of engineering, technology and sciences.

#### 1.1 Location

The city of Jalandhar is situated between the rivers Sutlej and Beas on National Highway 1. It is one of the important towns of Punjab and is known for rich educational, cultural and literary activities. It is an internationally renowned industrial centre for sports goods, leather goods and hand-tools. The city is 370 kms away from Delhi enroot to Amritsar and is easily accessible from Delhi by train or bus. The Shatabdi Express trains plying from New Delhi in the morning at 07.20 hrs and in the evening at16.30 hrs.are the best modes of travel to Jalandhar. This train takes less than 5 hours to reach Jalandhar city.

**How to reach us:** The institute is located on G.T Road Amritsar bye-pass at a distance of 15 km from Jalandhar Bus Stand, 12 km from Jalandhar City Railway Station, and 18 km from Jalandhar Cantt Railway Station.

# 1.2 Campus

The Institute campus is wide spread over an area of 154 acres. It has many topographical features, various buildings of different nature with clean and wide roads surrounded by a green belt. The campus area has been broadly divided into different functional zones: (i) institution zone for teaching departments/centers/administration (ii) residential zone for the faculty and staff (iii) students' hostel zone. Other amenities on the campus include a guest house, a community centre, a dispensary, shopping centre, banks, post office, sports complex, playgrounds, new tennis courts, basketball courts, volleyball courts, open air theatre, central seminar hall and night canteen etc.

#### 1.3 Administration

Dr B R Ambedkar National Institute of Technology Jalandhar is an autonomous Institute under the aegis of Ministry of Human Resource Development, Govt. of India, New Delhi. The Institute functions under the overall control and guidance of the Board of Governors, the Director being the Executive Head of the Institution. The other administrative bodies of the Institution are the Senate, the Finance Committee, and the Building and Works Committee-the Registrar, being the Secretary.

There are five Deans in the institute:

- Dean Academic
- · Dean Planning and Development
- Dean Research and Consultancy
- · Dean Faculty Welfare
- Dean Students Welfare

#### 1.4 Collaboration

The Institute is actively involved in collaborative programmes with national and international organizations for its overall development. Memoranda of Understanding (MOUs) have been signed with the following organizations:

- Amdocs Software, Cyprus
- Confederation of Indian Industries, New Delhi
- Central Leather Research Institute, Madras
- Central Institute of Hand Tools, Jalandhar
- CSIO Chandigarh
- DRDO, Delhi
- Forest Research Institute, Dehradun
- Hewlett Packard (HP)
- Infosys

- IIP Dehradun
- IHBT Palampur
- IBM India Limited, Gurgaon
- Jayashree Textiles, Rishra
- QUARK
- SUN Microsystems India Ltd.
- TCS, Mumbai
- University of Dundee, Scotland (U.K.)
- École Centrale de Lille (France)

# 2 PROGRAMMES OF STUDY

The institute offers following undergraduate, postgraduate and research programmes

# 2.1 Undergraduate Programmes

Four year Bachelor of Technology (BTech) Programmes

- Bio Technology
- Chemical Engineering
- Civil Engineering

- Computer Science and Engineering
- Electronics and Communication Engineering
- Industrial and Production Engineering

**Textile Technology** 

- Mechanical Engineering

#### 2.2 Postgraduate and Research Programmes

Instrumentation and Control Engineering

#### 2.2.1 Two year regular MTech Programmes

- Chemical Engineering(Department of Chemical Engineering)
- Computer Science and Engineering (Department of Computer Science and Engineering)
- Control and Instrumentation Engineering(Department of Instrumentation and Control Engineering)
- Electronics and Communication Engineering(Department of Electronics and Communication Engineering)
- Manufacturing Technology(Department of Industrial and Production Engineering)
- Mechanical Engineering(Department of Mechanical Engineering)
- Structural and Construction Engineering(Department of Civil Engineering)
- Textile Engineering and Management(Department of Textile Engineering)
- VLSI Design (Department of Electronics and Communication Engineering)

#### 2.2.2 Two year regular MSc Programmes

- Chemistry
- **Physics**
- Mathematics

#### 2.2.3 Two year regular MBA Programme

#### 2.2.3 **PhD Programmes**

The Institution offers PhD (Full Time) in all the departments in various disciplines.

# ADMISSIONS TO B Tech PROGRAMMES

#### 3.1 Admission under JEE (Main)

Admission criteria to undergraduate engineering programmes at NITs, IIITs, other Centrally Funded Technical Institutions, Institutions funded by participating State Governments, and other Institutions shall include the performance in the class 12/equivalent qualifying examination and in the Joint Entrance Examination, JEE (Main). The Paper-1 (BE /BTech.) of JEE (Main) will also be an eligibility test for the JEE (Advanced), which the candidate has to take if he/she is aspiring for admission to the undergraduate programmes offered by the IITs. The States of Gujarat, Maharashtra, Madhya Pradesh, Nagaland and Odisha have joined JEE (Main) system. Therefore, the candidates seeking admission to the institutions in these states, which were earlier admitted based on their State Level Examination, are also advised to fill in the JEE (Main) - 2015 application form online. At BTech level, students are admitted through JEE (main) examination conducted by the Central Board of Secondary Education, New Delhi. As per the direction of the MHRD 50% of the seats in NITs will be filled from eligible candidates of states where NITs are located and rest 50% will be filled on all India Merit basis. The admissions are made centrally by CSAB (Central seat allocation board) as per the directions of MHRD. For latest information related to CSAB, kindly visit www.csab.nic.in.

#### DASA Admission 2015 (15% Supernumery seats) 3.2

Admissions for Foreign Nationals/ Persons of Indian Origin (PIOs)/ Non-Resident Indians (NRIs) under DASA (Direct Admission of Students Abroad)scheme of Ministry of Human Resource Development (MHRD), Government of India for undergraduate programmes in Engineering/Architecture for the academic year 2015-16 to National Institutes of Technology (NITs), Indian Institutes of Information Technology (IIITs), Schools of Planning and Architecture (SPAs) and other premier technical institutions in India.

#### 3.2.1 Admissions under DASA Scheme 2015-16

From time immemorial, India has been a centre for learning. Indian universities and institutes of higher education and research have made a significant contribution in science and technology and have played a lead role in transforming the country into a knowledge society. India can claim its position as one of the leading countries providing affordable higher education to its people as well as to students and scholars from countries all over the world. Students can be assured of experiences rich in traditions, heritage, and exposure to diverse culture which would enable them to acquire the necessary skills to succeed in today's global economy without geographical barriers. The Technical Institutions which are participating in DASA 2015-16 have established themselves among the top ranked institutions in the country in both teaching and research and the graduates are assured of a rewarding professional career. A degree from any of these institutions is among the most competitive of its kind when pursuing an international career in architecture, engineering or technology. The admission to Foreign Nationals/ Persons of Indian Origin/ Non-Resident Indians to undergraduate programs in Premier Technical Institutions is being offered under DASA scheme of MHRD from the academic session 2001-02 onwards. MHRD has entrusted the coordination of the admission process under DASA scheme for the academic year 2015-16 to MNIT Jaipur. For details please refer to DASA website: www.dasanit.org

#### 3.2.2 **Academic Eligibility**

AND

Candidates must have passed the qualifying examination, i.e. Senior Secondary [10+2] or equivalent from any system of education as recognized by the Association of Indian Universities (AIU). Candidate should have completed successfully Mathematics, Physics and any one of the subjects from (Chemistry, Bio-technology, Computer Science, Biology) - in 11<sup>th</sup>and/or 12<sup>th</sup>, as applicable in the respective boards. Must have secured a minimum of at least 60% aggregate marks or 6.50 (on a 10 point scale) or equivalent in the qualifying examination. Candidates appearing for the qualifying examination with the above-mentioned subjects in the academic year 2014-15 and expecting their final results latest by September 15, 2015 may also apply.

Candidate should have a minimum total valid score of 1440 in SAT Subject Tests (Subjects: Mathematics Level 2, Physics and Chemistry). SAT subject test score has to be sent directly through College Board to MNIT Jaipur (Institute Code: 7664). Internet downloaded score cards are not acceptable. Applicants at the time of registration for SAT Subject Tests should indicate Institute code 7664 for sending their scores to MNIT Jaipur. Applicants who have taken multiple attempts in SAT Subject Tests can send valid score to MNIT Jaipur directly through College Board USA. The best valid score in each subject will be considered for arriving at the total score which will be used for merit list preparation. SAT Subject Test scores received till 1st June, 2015 only will be considered for preparation of merit lists for Round 1. Round 2 and Round 3.

#### 3.2.3 **Residential Requirement**

Candidates must be Foreign Nationals/ Persons of Indian Origin who have completed the qualifying examination in any country OR Indian Nationals studying abroad. In case of Indian Nationals, they must have completed their 11th and 12th standard or equivalent from outside India.

#### 3.2.4 Application Fee payment

Registration fee and first semester tuition fee: A total amount of US\$ 4300[US dollars four thousand three hundred only] is required to be paid along with the application form. This is towards non-refundable registration fee of US\$ 300 (US Dollars Three hundred only) and first semester Tuition Fee of US\$ 4000 (US dollars four thousand only). Foreign Nationals, who are nationals of SAARC countries, are eligible for 50% Tuition Fee waiver provided they have passed the qualifying examination in SAARC countries. They are required to pay an amount of US\$ 2,300 [US Dollars Two thousand and three hundred only] along with the application form (i.e. US\$ 2,000 towards first semester tuition fee and a nonrefundable registration fee of US\$300).

The fee can be paid either through SWIFT Transfer or e-payment. Charges for fee payment, if any, should be borne by the candidate.

#### 3.2.5 **Submission of Application**

The submission of application is a two-step process, both are essential.

- a. Online application (http://www.dasanit.org) and submission of required documents online (scanned and uploaded). No hard copy of application or supporting documents needs to be sent.
- b. SAT subject test score to be sent to MNIT Jaipur through College Board, USA (Institute Code 7664)

#### 3.2.6 **Seat Allotment Procedure**

Seat allotment will be based on SAT subject test scores and the choices given by the candidate, in the order of their merit and priority taken together.

# **Participating Institutions**

# National Institutes of Technology (NITs)

- 1 National Institute of Technology, Agartala, Tripura 2 Motilal Nehru National Institute of Technology, Allahabad, Uttar Pradesh
- 3 National Institute of Technology, Arunachal Pradesh
- 4 Maulana Azad National Institute of Technology, Bhopal, Madhya Pradesh
- 5 National Institute of Technology, Calicut, Kerala
- 6 National Institute of Technology, Delhi
- 7 National Institute of Technology, Durgapur, West Bengal
- 8 National Institute of Technology, Goa
- 9 National Institute of Technology, Hamirpur, Himachal Pradesh
- 10 Malaviya National Institute of Technology, Jaipur, Rajasthan
- 11 National Institute of Technology, Jalandhar, Punjab
- 12 National Institute of Technology, Jamshedpur, Jharkhand
- 13 National Institute of Technology, Kurukshetra, Haryana
- 14 National Institute of Technology, Manipur
- 15 National Institute of Technology, Mizoram
- 16 Visvesvaraya National Institute of Technology, Nagpur
- 17 National Institute of Technology, Patna, Bihar
- 18 National Institute of Technology, Puducherry, Karaikkal
- 19 National Institute of Technology, Raipur, Chhattisgarh
- 20 National Institute of Technology, Rourkela, Orissa

www.mnnit.ac.in www.nitap.in www.manit.ac.in www.nitc.ac.in www.nitdelhi.ac.in www.nitdgp.ac.in www.nitgoa.ac.in www.nith.ac.in www.mnit.ac.in www.nitj.ac.in www.nitjsr.ac.in www.nitkkr.ac.in www.nitmanipur.in www.nitmz.ac.in www.vnit.ac.in www.nitp.ac.in www.nitpy.ac.in www.nitrr.ac.in www.nitrkl.ac.in

www.nitagartala.in

21 National Institute of Technology, Sikkim
22 National Institute of Technology, Silchar Assam
23 National Institute of Technology, Srinagar, Kashmir
24 Sardar Vallabhbhai National Institute of Technology, Surat, Gujarat
25 National Institute of Technology Karnataka, Surathkal, Karnataka
26 National Institute of Technology, Tiruchirappalli, Tamilnadu
27 National Institute of Technology, Warangal, Andhra Pradesh

www.nitkim.ac.in
www.nitsikkim.ac.in
www.nits.ac.in
www.nitk.ac.in
www.nitt.edu
www.nitt.edu

Indian Institutes of Information Technology (IIITs)

28 Indian Institute of Information Technology, Allahabad, (Jhalwa & Amethi Campus), UP

29 ABV-Indian Institute of Information Technology and Management, Gwalior, MP

30 Indian Institute of Information Technology, Design and Manufacturing, Jabalpur, MP

31 Indian Institute of Information Technology, Design & Manufacturing, Kancheepuram, Chennai

www.iiita.ac.in

www.iiita.ac.in

www.iiitdm.ac.in

# Schools of Planning and Architecture (SPAs)

32 School of Planning and Architecture, Bhopal
33 School of Planning and Architecture, Delhi
34 School of Planning & Architecture, Vijayawada
www.spa.ac.in
www.spav.ac.in

# Other Premier Technical Institutions

35 PEC University of Technology, Chandigarh www.pec.ac.in 36 Delhi Technological University, Delhi www.dce.ac.in 37 Indraprastha Institute of Information Technology Delhi www.iiitd.ac.in 38 Sant Longowal Institute of Engineering and Technology, Longowal, Punjab www.sliet.ac.in 39 National Institute of Foundry and Forge Technology, Ranchi, Jharkhand www.nifft.ernet.in 40 Pandit Deendayal Petroleum University, Gandhinagar www.pdpu.ac.in 41National Institute of Electronics and Information Technology, Aurangabad www.aurangabad.nielit.gov.in 42 Netaji Subhas Institute of Technology Delhi www.nsit.ac.in

#### For details and Information brochure visit

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Website: http://www.dasanit.org

# 3.3 Academic System

(The information regarding academic system in this prospectus is for information only. The relevant regulations as approved by institute senate from time to time will be applicable to students.)

The academic system at NIT, Jalandhar is framed on a credit based semester examination system. The credit system envisages a continuous evaluation of student's performance, and provides flexibility for academic progress based on individual ability and convenience, subject to the constraint of the minimum requirements for continuation of the academic programme. The students are awarded a letter grade from the prescribed grading system in each course registered by them. For each pass grade, the students accumulate the course credits as earned credits. The academic performance of the students is indicated in terms of the number of credits that he/she earns and the weighted grade point average. A specified minimum number of credits should be acquired on semester or session basis in order to qualify for continuation in the academic programme and for the award of degree.

# 3.3.1 Credits

Each lecture/tutorial of one hour duration per week in a semester is assigned one credit. Each laboratory hour per week in a semester is assigned half credit. However, some courses are preparatory in nature and have half the credit weightage of a normal course. The courses without credit are termed as noncredit (NC) courses.

#### **3.3.2** Grades

In a grading system, the evaluation in terms of marks is replaced by the award of letter grades. The structure and guidelines for the award of grades is given below:

3.3.3 Structure of Grading System

Grade	Points	Description of performance	Recommended Cut off marks*
S	10	Outstanding	90
Α	09	Excellent	80
В	08	Very Good	70

С	07	Good	60
D	06	Average	50
E*	05*	Marginal	40
I	-	Incomplete	-
U	-	Unsuccessful	-
W	-	Withheld due to shortage of attendance or withdrawal	-
NP	-	Audit Pass	-
NF	-	Audit Fail	-

\*Subject to confirmation based on standard deviation, if the sample size is greater than 20, and is flexible to the recommendation of the individual course coordinator with proper justification. However minimum marks to assign a pass grade must be 40 for all academic programmes run in the Institute.

The grades will be awarded to a student in each registered course including a laboratory course, based on his/her performance evaluated through a prescribed scheme of evaluation. The credits for the courses in which a student has obtained "E" (minimum passing grade for a course) or a higher grade will be considered as credits earned by him/her. In addition, the course in which a B Tech student to get NP grade, will also count towards his/her earned credits but to the maximum extent of 8 credits. Any course in which a student has obtained "W" or "NF" grade will not be counted towards his/her earned credits.

In case of other (elective) courses in which U or W grade has been obtained, the student may take the same course or any other course from the same category when it is offered next. Further, "U" grade secured in any course stays permanently on the grade card. The weightage of these grades is not counted in the calculation of the SGPA and CGPA. An "I" grade denotes incomplete performance in any course due to absence at the end of semester. Upon completion of all course requirements, the "I" grade is replaced by a regular grade. The grades NP and NF are awarded in a course that the student opts to audit. Audit applications are allowed during the first four weeks of a semester. The audit pass (NP) grade is awarded if a minimum "E" grade is obtained in the course and attendance is above 75% in the classes. If either of these requirements is not fulfilled, the audit fail (NF) grade is awarded. In courses, where NP grade is obtained, the corresponding course credits are counted towards earned credits. The grades obtained in an audit course are not considered in the calculation of SGPA or CGPA.

A "W" grade is awarded in a course where the student has opted to withdraw from the course. Withdrawal from a course is permitted until one week after the class test-I.

# 3.3.4 Grade Point Averages

The performance of a student will be evaluated in terms of two indices, viz., the Semester Grade Point Average (SGPA) which is the Grade Point Average for a semester and Cumulative Grade Point Average (CGPA) which is the Grade Point Average for all the completed semesters at any point of time. The SGPA is calculated on the basis of grades obtained in all courses, except audit courses, registered for in the semester:

$$SGPA = \frac{\sum (\text{Course credits} \times \text{Grade point}), \text{except audit courses, obtained during a semester}}{\sum (\text{Course credits}), \text{except audit courses, obtained during a semester}}$$

The CGPA is calculated on the basis of all pass grades, except audit courses, obtained in all completed semesters.

$$CGPA = \frac{\sum (\text{Course credits} \times \text{Grade point}) \text{ of courses with pass grade except audit courses upto a specific semester}}{\sum (\text{Course credits}) \text{ of courses with pass grade except audit courses upto a specific semester}}$$

# 3.4. Rules and Regulations for B.Tech Programmes

# 3.4.1 Registration

Registration is an important procedural part of the academic system which ensure the willingness of the student to continue in the course of the study in the institute. No credit is given to the student who attendts a course without a formal registration. The name of the registered student only appears on the roll list of the courses registered.

Pre-registration for each semester will be done according to a specified schedule prior to the end of the previous semester and paying the require tuition fee to the institute.

In absentia registration will be allowed only in rare cases at the discretion of Dean (Academic). In case of illness or absence during registration, the student should intimate the same to the Dean (Academic). Each student will be given a registration record which will be an official record of courses registered. Add, Drop, Withdrawl and Audit will be marked on this sheet itself by the academic section. The registration record should be retained by the student until he/she gets the Semester Grade card for the corresponding semester.

The following credits are required to be earned for the registration in the next semester for BTech batches:

S.No	2012 onwards	Previous batches
i	25	30
ii	50	60
iii	75	90

#### 3.4.2 Advice on Courses

At the time of completing the registration form, each student should consult his/her HOD concerned to finalize the academic programme, keeping in view minimum/maximum numbers of total and lecture credits, past performance, backlog of courses, SGPA/CGPA, workload and student's interest. Special provisions exist for academically weak students.

# 3.4.3 Credits Requirments for Registration

A student must register for aminimum of 15 credits and a maximum of 30 credits in a semester wherein theory credits registered by a student should not be less than 9 credits.

There is a minimum number of student registration to run an elective course and will be decided by the department concerned from time to time.

# 3.4.4 Late Registration

- I. For those students who were not on campus during the period of registration in the previous semester, registration procedure will be completed on a later date with permission of the Dean, Academic.
- II. For reasons beyond his/her control, if a student is not able to register or send an authorized representative with a medical certificate, he/she may apply to the Dean (Academic) for late registration. The Dean will consider and may approve late registration in genuine cases on payment of an extra fee of Rs. 500/-.
  - a. Late registration is allowed until one week after the start of the semester. The attendance requirements of 75 % will not be relaxed in late registration cases and same will be counted from the date of start of the class.

#### 3.4.5 Addition, Deletion, Audit and Withdrawal from courses

- Add and Drop: A student has the option to add or delete courses from his/her registration during the first week of the semester.
- II. Audit: a student may also apply for changing a credit course to an audit one within one week of the end of the first class test.
- III. Withdrawal: A student who wants to withdraw from a course should apply on a prescribed form within one week of the end of the first class test. A withdrawal grade (W) will be awarded in such cases.

# 3.4.6 Attendance Criteria Requirement

- I. All students must attend every lecture, tutorial and practical class. The institute desires 100% attendance with a provision for consideration for absence on account of late registration, sickness or other such contingencies. The attendance requirement of 75% of the scheduled classes in course is needed for appearing in the examination.
- II. A student with less than 75% attendance in a course during a semester will be awarded 'W' grade in that course irrespective of his/her performance in the tests. The course coordinator, while awarding the grades, will take into account the consolidated attendance record for the whole semester.
- III. In order to maintain the attendance record of a particular course, a roll call will be taken in every scheduled lecture, tutorial and practical class.
- IV. For the purpose of attendance, every scheduled practical class will count as one unit irrespective of the number of contact
- V. The course coordinator will consolidate the attendance record for the course from the beginning of the semester till the end of the semester. The teacher offering the course shall notify the students having less than 75% attendance with an intimation of the same to the concerned Head of the Department and Dean (Academic) / Associate Deans.

Every faculty offering a course will take attendance till three calendar days before the last instruction day in the semester. The percentage of attendance, calculated up to this instruction day, will be indicated in a code number/letter as follows:

Attendance rounded to	Code No/letter
95% and above	Н
85% to 94%	9
75% to 84%	8
Below 75%	L

A student who has attendance code letter L will not be allowed to sit for end semester examination in the course in which the shortfall exists.

# 3.4.7 Absence during the Semester

- I. A student must inform the Dean (Academics) immediately of any instance of continuous absence from classes.
- II. A student who is absent due to illness or any other emergency, upto a maximum of two weeks, should approach the course coordinator for make-up in quizzes, assignments and laboratory work.
- III. A student who has been absent from a class test due to illness should approach the course coordinator for a make-up test on return to class. This request should be supported with a medical certificate from the institute Medical Officer. A Certificate issued by a registered medical practitioner will also be acceptable in those cases where a student is normally residing off-campus, in such cases the registration number of medical practitioner should explicitly appear in the medical certificate. Prior to approaching the course coordinator, the student must file a copy of the medical certificate with the academic section.

- IV. In case of absence on medical grounds or other special circumstances, before or during the end semester examination, the student can apply for I-grade. 75% attendance in a course is necessary for being eligible for request of I-grade in that course. An application requesting an I-Grade should be made at the earliest, but not later than the last day of the end semester examination. This application should be made to the concerned head of department, depending on the merits of the case in discussions with concerned course coordinator, will refer the matter to Dean (Academic). The student should, subsequently, complete all course requirements according to prescribed schedule.
- V. In special situations arising due to student's inability to be present at the institute during the stipulated period, the period for convocation I grade can be extended to the beginning of the next semester. Approval for this extension is granted by Dean (Academic), on the recommendations of the concerned Head of Department of the student, the course coordinator(s), and the Chief Warden in case of a boarder. A request to this effect should be included in the application for I-grade.
- VI. In case the period of absence on Medical ground is more than 20 working days during the semester, a student may apply for withdrawal from the semester i.e. withdrawal from all courses registered in that semester. Such applications must be made as early as possible and latest before the start of the end semester examinations. No application for semester withdrawal will be considered after the end semester examination have commenced. Each application for semester withdrawal will be examined by the Dean (Academic) and depending on the merit of the case; an appropriate recommendation will be made. Partial withdrawal from courses registered in a semester is not allowed.
- VII. If a student is continuously absent from the institute for more than four weeks without notifying the Dean (Academic), his/her name will be removed from the Institute rolls.

# 3.4.8 Academic Performance Monitoring

The academic performance of students is monitored at the end of each semester by the Dean (Academic) and students failing short of prescribed minimum requirements will be informed accordingly and subsequent monitoring will be followed. The termination of the registration of the students with unsatisfactory performance will be referred to the Senate. The Senate would then appropriately make the final decision on merit of each case.

# **3.4.9 Measures for helping SC/ST students** (as per Senate decision in its 9<sup>th</sup> meeting)

A number of measures exist for helping students belonging to SC/ST categories. A senior staff member is appointed as Advisor to SC/ST students to advise them on academic and non-academic matters may be approached for obtaining assistance.

# 3.4.10 Change of Branch (Degree Programme)

- I. A student admitted to a particular discipline of BTech will normally continue in that discipline till completion of the degree.
- II. The provision of change of discipline of study of a student should be made after the completion of first two semesters (1<sup>st</sup> year) provided vacancies/vacancy exist(s) in discipline(s).
- III. The filling of vacancies for change of discipline should be done category wise (General, SC, ST or any other category notified by the Ministry of Human Resource Development, Govt. of India, New Delhi).
- IV. A student is eligible to apply for change of discipline at the end of first year(after 2<sup>nd</sup> semester) only, provided he/she satisfies the following criteria:
  - i. CGPA for General category students: greater than or equal to 7.50 CGPA for SC/ST category students: greater than or equal to 6.50
- ii. Earned credits at the end of 1<sup>st</sup> year must be equal to the credits prescribed in the scheme of first and second semester (1<sup>st</sup> year) of their studies.
- iii. Any credits earned through contact course, shall not be considered for discipline change.
- V. The change of discipline will be permitted strictly in order of merit as determined by the CGPA at the end of the first year subject to the limitation that (a) the actual number of students in the 3<sup>rd</sup> semester in the branch to which transfer is to be made, should not exceed the sanctioned strength and (b) maximum 10% registered students in 3<sup>rd</sup> semester of the discipline from which transfer is sought, will be allowed the change of discipline.
- VI. Application for a change of discipline must be made by intending eligible students in the prescribed form for this purpose. The Deputy Registrar (Academic) will call for application and the completed application form must be submitted to him by the last date specified in the notification.
- VII. The alteration of choices will not be permitted after the last date.
- VIII. Change of discipline shall be made strictly on the basis of inter-se-merit of the applicants, based on CGPA. Ties will be broken by JEE (main) rank of applicants.

# 3.4.11 Special Requirement for Degree

The students entering in the Institute are required to undergo the following non-credit mandatory requirements towards completion of their degree:-

- 1. NSO (National Sports Organization)
- 2. NCC (National Cadets Corps)
- 3. NSS (National Service Scheme)
- All students are required to enroll for either one of NCC, NSO or NSS activity in their first year.
- On completion of 100 hours, student is awarded "Satisfactory" grade.
- Further, this 100 hours requirement over a period of one year is broken into 50 hours requirement per semester.
- The student is registered in NCC-1/NSO-1/NSS-1 level in the 1<sup>st</sup> Semester and on obtaining "Satisfactory" grades he/ she is allowed to registered in NCC-2/NSO-2/NSS-2 in the 2<sup>nd</sup> Semester.

- Unless a student obtains "Satisfactory" grade in both 1<sup>st</sup> and 2<sup>nd</sup> semesters he/she does not complete the non-credit (NC) requirement of NCC, NSO, and NSS.
- This requirement should be completed in one year. If, however, a student is not able to complete this requirement in the first year, he/she must complete it by the end of the 2nd year (4th semester), otherwise he/she will not be allowed to register for any course until he/she completes this mandatory requirement.

#### 3.4.12 Discipline

- i. Every student is required to observe discipline and decorous behavior both inside and outside the institute campus and not to indulge in any activity, which will tend to bring down the prestige of this institute.
- ii. Any act of indiscipline of a student reported to the Dean (Students Welfare) will be referred to the Institute Discipline and Welfare Committee constituted by the Senate, which will enquire into the charges and recommend suitable punishment if the charges are substantiated.
- iii. Every student shall have to undertake 2-credits of discipline for award of BTech degree. The student shall be continuously evaluated for discipline during his/her entire period of enrolment.

# 3.4.13 Requirement of minimum credits to be earned for registration in higher semesters

For 2012 Batch onwards: A student is required to earn a minimum 25 credits for registration in the 3<sup>rd</sup> semester, 50 credits for registration in 5<sup>th</sup> semester and minimum 75 credits for registration in 7<sup>th</sup> semester.

# 3.4.14 Requirements to be fulfilled for BTech Degree

A student would be eligible to obtain BTech (Four Year) degree, if he/she

- a. Earns prescribed number of credits in all
- b. Obtains a minimum Cumulative Grade Point Average (CGPA) of 5.0
- c. Fulfills the requirements of all courses under different categories as prescribed in the syllabi
- d. Completes the prescribed practical training satisfactorily
- e. Fulfills the requirement of attending NCC/NSS/NSO activities in their first year or at best by the end of second year (fourth semester) satisfactorily
- f. Must have earned pass grade in the discipline courses.
- g. Maximum duration of degree course is 6 years. However additional extension of one semester may be allowed by the chairman BOAC on the recommendations of the Head of the concerned department.

# 3.4.15 Slow Pace Scheme Identification of students:

- a) After the completion of 1<sup>st</sup> year the students who failed to clear 60% of total 1<sup>st</sup> year credits.
- b) If the student after repetition of 1<sup>st</sup> year courses failed to clear 60% of credits again at the end of 2<sup>nd</sup> year of their study at NITJ, they have to join the slow pace program.

# Courses to be offered per semester to slow pace programmes students:

- a) Maximum 4 no of theory courses or min 3 number of theory courses can be allowed to register in a semester.
- b) Maximum 4 no of practical courses can be allowed to register in a semester.
- c) Total registered credits per semester should not be more than 20.

# **Duration:**

Maximum time duration to be allowed to the students to complete the BTech degree in slow pace programmes shall be eight years from the date of admission.

# Certificates (DMC & Degree)

The DMC of these types of candidates will bear the tag of "Slow Pace" and BTech certificate will be the same as that of the regular candidates.

# 3.4.16 Power to Modify

Notwithstanding all that has been stated above, the Senate has the right to modify any of the above regulations from time to time. For any ambiguity of clarification, the decision of the Chairman, Senate will be final.

# 4. Admission to MTech (full time) programme

Admission to MTech (Full Time) programmes to candidates/students is conducted centrally through CCMT as per the directions of MHRD. The admission is based strictly on the merit as per GATE scores.

# 4.1 Registration: MTech (Full Time)

- 1. Every student will enroll and register for the courses he/she intends to undergo during the first semester, of MTech programme on a pre-specified date notified for the purpose.
- 2. In case of subsequent semesters, the registration for the courses will be done on a specified date/dates before the end semester examination of the previous semester. In this connection, there may be proper registration card, which will contain details of the core and elective courses, seminars and dissertation work to be taken up in the semester along with the number of credits for each course/seminar/project work.
- 3. During the 4<sup>th</sup> semester, students will normally be registered only for the dissertation work and not for theory courses. In case a student is short of a few credits required for the MTech degree, he/she may be permitted by the Chairman, BOAC to register for one or two courses along with Project under the clear recommendations from the concerned head of the

- department. However, the teaching assistantship wherever applicable will be paid only for a maximum duration of four semesters.
- 4. Late registration will be allowed with a late fee of Rs.500/- up to one week beyond the last date specified for the registration. However under special circumstances, the period may be relaxed by the Dean, Academic Programmes.
- 5. From 2<sup>nd</sup> semester onwards, all MTech students are required to enroll on a specified date at the beginning of a semester. A student will become eligible for enrollment only if, in addition to satisfying all the academic requirements, he/she has cleared all dues to the institute, hostel, library, etc., up to the end of the previous semesters and he/she has not been debarred from enrollment by the institute discipline committee. At the time of enrollment, a student can drop a course for which he/she was registered earlier and opt for another course with the consent of all faculty advisors and on valid grounds.
- 6. Withdrawal from course, in which a student is earlier registered, is permissible up to two weeks from the date of commencement of the semester. However, its substitution by another course is not permitted. The number of courses after, withdrawal should enable the students to earn the necessary credits to continue his/her studies.
- 7. In case the withdrawal has been from the list of core courses, the student will have to register for these courses when offered next.
- 8. A student may be allowed by Chairman, BOAC to withdraw from a semester completely under extra ordinary circumstances e.g. medical grounds. However, withdrawal from a semester will be allowed only for a maximum continuous period of two semesters.

# 4.2 Regulations of MTech (Full Time) Programme

# 1. Eligibility Criteria for Admission

- 1.1 Candidates who have been awarded Bachelor's Degree in Engineering/Technology from a recognized university with a valid GATE score or Master's Degree in appropriate branch of Sciences with a first class or minimum 60% marks (CGPA 6.5) or equivalent and a valid GATE score or UGC/CSIR fellowship are eligible to apply for admission to MTech programme of the institute. However, if the seats remain vacant after admitting GATE qualified candidates, candidates without GATE score may be considered for the purpose of admission. However, such candidates will have to qualify the entrance test conducted by the institute.
- 1.2 Candidates sponsored by UGC/AICTE approved technical institutes having same academic qualifications as required at serial no.1.1 and preferably two years' experience of full time job are eligible to apply for MTech programme. A valid GATE score or UGC/CSIR fellowship is not required. However, such candidates will have to qualify the entrance test conducted by the institute.
- 1.3 Candidates sponsored by industries/R&D organizations/national laboratories having academic qualifications as in 1.1 with preferably two years of experience are eligible to apply for the MTech programme. However, a valid GATE score or UGC/CSIR fellowship is not required. However, such candidates will have to qualify the entrance test conducted by the institute.
- 1.4 For a foreign national candidate who applies through Ministry of Human Resource Development, Govt. of India, or Indian Council of Cultural Relation, Govt. of India, are eligible to apply provided that they possess the same minimum academic qualifications.
- 1.5 All in-service candidates must have to submit No Objection Certificate of their employers.

#### 2. Admission

- **2.1** Applications on prescribed format will be invited once in a year through advertisement in the national dailies media and on institute's website.
- 2.2 The Board of Governors of the Institute on the recommendations of the Institute Senate will decide on the number of seats for various Departments/Centres/Specializations. The reservations of seats for SC/ST candidates will be as per the Govt. of India norms provided the SC/ST candidates have valid GATE score and satisfy other Senate requirements.
- 2.3 The BOAC will decide on the operational aspects including selection of candidates, the academic calendar and other regular activities regarding the conduct of the programme. If there are any vacancies after the admission date is over, the filling of such vacancies will be decided by the Chairman of the Senate.
- 2.4 Regarding all matters concerning selection of candidates, the decision of the Senate Chairman or his nominee, viz; Chairman, BOAC will be final.
- 2.5 The selected candidates should satisfy all other admission requirements stipulated in the letter of offer of admission and only then they will be admitted to MTech programme after payment of the prescribed fee and other charges. If at any subsequent time, it is found that the candidates do not fulfill any of the stipulated requirements, the Chairman, BOAC may revoke his/her admission to the programme, with the approval of the Director.

# 3. **Programme Structure**

- 3.1 Each stream of MTech programme will have the following components:
  - i. Core courses (theory), practical and seminar/independent study
  - ii. Elective courses
  - iii. Dissertation work
- 3.2 In addition, the MTech students may be required to give one or more seminars and undergo industrial/practical training as per the requirements of the programme.
- 3.3 Each regular MTech programme will be completed in four semesters. During each MTech semester, the student will register for course work and/or dissertation work as specified by the institute Senate for each programme. The curriculum

for different courses should be drawn up so that minimum number of credits for successful completion of any MTech programme is not less than 60.

- 3.4 Each MTech student will be required to register for all the core courses specified in the curriculum of his programme of studies and he/she will have to successfully complete all the core courses.
- 3.5 Each MTech student will have to register for elective courses offered by the department in that particular semester from the list of courses approved by the institute senate. However, a student may be permitted selection of electives other than those listed by the departments provided these have relevance to the area of specialization.
- 3.6 In certain specialized MTech programmes, a student may be permitted to register for a maximum of two B Tech courses. Such courses will be identified by the concerned department with a prior approval of the institute Senate.
- 3.7 Each course will be assigned credits as follows;
  - One credit for each lecture period.
  - ii. One credit for each tutorial period.
  - iii. One credit for each laboratory session of two or three hours.
  - iv. Credits for seminars, industrial/practical training will be as per the curriculum approved by the institute senate.

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# 4. Registration

- 4.1 Every student will enroll and register for the courses he/she intends to undergo during the first semester of MTech programme on a pre-specified date notified for the purpose.
- 4.2 In case of subsequent semesters, the registration for the courses will be done on a specified date/dates before the end semester examination of the previous semester. In this connection, there may be proper registration card, which will contain details of the core and elective courses, seminars, and dissertation work to be taken up in the semester along with the number of credits for each course/seminar/project work.
- 4.3 During the 4<sup>th</sup> semester, students will normally be registered only for the dissertation work and not for theory courses. In case a student is short of a few credits required for the MTech degree, he/she may be permitted by the Chairman, BOAC to register for one or two courses along with project under the clear recommendations from the concerned head of the department. However, the teaching assistantship wherever applicable will be paid only for a maximum duration of four semesters.
- 4.4 Late registration will be allowed with a late fee of Rs.500/- up to one week beyond the last date specified for the registration. However under special circumstances, the period may be relaxed by the Dean, Academic Programmes.
- 4.5 From 2<sup>nd</sup> semester onwards, all MTech students are required to enroll on a specified date at the beginning of a semester. A student will become eligible for enrollment only if, in addition to satisfying all the academic requirements, he/she has cleared all dues to the institute, hostel, library, etc., up to the end of the previous semesters and he/she has not been debarred from enrollment by the institute discipline committee. At the time of enrollment, a student can drop a course for which he/she was registered earlier and opt for another course with the consent of all faculty advisors and on valid grounds.
- 4.6 Withdrawal from course, in which a student is earlier registered, is permissible up to two weeks from the date of commencement of the semester. However, its substitution by another course is not permitted. The number of courses after withdrawal should enable the student to earn the necessary credits to continue his/her studies.
- 4.7 In case the withdrawal has been from the list of core courses, the student will have to register for these courses when offered next.
- 4.8 A student may be allowed by Chairman, BOAC to withdraw from a semester completely under extra-ordinary circumstances (e.g. medical grounds). However, withdrawal from a semester will be allowed only for a maximum continuous period of two semesters.

# 5. Faculty Adviser

To render general advice to the students in connection with the academic programmes and to help them in planning the courses of study, the admitting department/centre will assign a group of students to a faculty member, to be called the faculty adviser, of the department/ centre.

# 6. Maximum Duration of the Programme

- 6.1 Minimum duration of the MTech programme for regular candidates shall be four semesters.
- 6.2 The students who do not complete their dissertation work upto the end of 4<sup>th</sup> semester and are permitted to submit the report on the subsequent date; next date of successful completion of the dissertation work will be mentioned in the grade card.
- 6.3 An MTech student will be allowed to submit the dissertation regarding the project work, only if he has appeared in all the theory papers of the programme. The result of the dissertation shall be declared after the candidate has passed all the theory papers and the seminars etc.
- 6.4 In case the dissertation is rejected or the candidate is unable to complete the dissertation by the end of the 4<sup>th</sup> semester, he/she will be allowed to submit the same within three years from the date of admission in case of full-time candidates. Further extension beyond three years for full-time programme and beyond five years for part-time programme, but not exceeding six months, may be allowed by the Chairman, BOAC on the recommendations of the concerned project guide and head of the concerned department.

# 7. Minimum requirement to continue the programme

- 7.1 A full time MTech student should earn minimum 12 successful credits in the first semester and 28 successful credits at the end of 2<sup>nd</sup> semester. In case an MTech student does not satisfy these requirements, he/she will have to leave the programme.
- 7.2 For continuation in the programme, an MTech student should have a minimum CGPA of 5.0. While calculating the CGPA for eligibility to continue in the programme, only courses successfully completed up to the point under consideration by the concerned student will be taken into account. If the CGPA of any student, calculated in this manner, falls below 5.0, the student will be issued a warning and in case he/she again obtain a CGPA less than 5.0 in the following semester, then he/she will be disqualified of the programme.

# 8. Attendance Requirements

- 8.1 The institute desires 100% attendance with a provision for consideration for absence on account of late registration, sickness or other such contingencies. The attendance requirements of 75% of the scheduled classes in course are needed for appearing in the examination.
- 8.2 A student with less than 75% attendance in a course during a semester will be awarded 'W' grade in that course irrespective of his/her performance in the tests. The course coordinator, while awarding the grades, will take into account the consolidated attendance record for the whole semester.
- 8.3 In order to maintain the attendance record of a particular course, a roll call will be taken in every scheduled lecture.
- 8.4 The course coordinator will consolidate the attendance record for the course form the beginning of the semester up to class test I and class test II and also up to the end of the semester. The teacher offering the course shall notify the students having less than 75% attendance with an intimation of the same to the same to concerned HOD and Deputy Registrar (Academics).
- 8.5 Every faculty offering a course will take attendance till three calendar days before the last instruction day in the semester. The percentage of attendance, calculated up to this instruction day, will be indicated in code number/letter as follows:

Attendance rounded to	Code No/letter
95% and above	Н
85% to 94%	9
75% to 84%	8
Below 75%	L

A student who has attendance code letter L will not be allowed to sit for end semester examination in the course in which the short fall exists.

#### 9. Dissertation Work

9.1 Allocation of Dissertation: The broad areas in which MTech dissertation work is feasible will be displayed by the concerned HOD on the notice board. The minimum qualification of a faculty member for MTech supervisory work shall be Ph.D or MTech with 5 years teaching/research experience. The students will be asked to submit at least three preferences to the HOD. The HOD in consultation with associated faculty members will allocate the candidates to the faculty members. If the type of work is interdisciplinary in nature, a maximum of two dissertation guides may be allowed. The above allocation of MTech thesis topics should be completed by the end of the second semester.

# 9.2 a. Submission of dissertation:

- The candidate is required to submit three copies of M Tech thesis (spiral bound) to the Office of concerned HOD through his/her supervisor(s).
- ii. The candidate will submit a certificate from his/her research supervisor stating that the research work undertaken has been original and has not been published/printed anywhere else for the award of any degree.
- iii. A certificate from the Accounts Section of the institute stating 'no dues pending' against candidate will also be submitted along with the thesis.
- iv. HoD will forward the list of all eligible candidates along with the proposed list of Examiners (Minimum six names) to the office of Dean (Academic) cum Chairman BOAC within three working days of the last date of submission of Thesis/Dissertation.
- b. Evaluation of Dissertation: The credit allotment will be based accordance to the following weightage.

First presentation	20%
Second presentation (pre submission)	20%
Thesis evaluation by external examiner	30%
Viva voce Examination	30%

First and second presentation shall be made towards the end of third and fourth semester, respectively. During first and second presentation, the candidate will be jointly evaluated by HOD/nominee and the candidate's dissertation guide. The thesis examination shall be conducted in open public defence. If a candidate is found unsuitable, he/she can appear again in the next semester provided the final submission should be within three years.

# 9.3 Panel of examiners for viva-voce examination:

Internal Examiner – dissertation guide

- 2. External Examiner To be appointed by the Chairman, BOAC from a panel of Six examiners submitted by the dissertation guide through the Head of the Department to the Chairman, BOAC.
- 3. Head of the concerned Department.
- 9.4 The candidate shall prepare his/her dissertation under the supervision of the concerned faculty at the Institute. If however, the HOD is convinced that facilities for carrying out the work exist elsewhere (recognized by NIT, Jalandhar) the candidate may be deputed by Chairman, BOAC to some other Institute/Organization after the recommendation of the concerned guide and Head of the Department.
- 9.5 In case the dissertation supervisor leaves the Institute and joins some other Institution or some R & D organization, he/she may continue to guide the research work of the candidate registered with him/her provided he/she has guided the candidate for minimum period of 6 months. Further in case of any dispute between the candidate and guide, the case will be referred to Chairman, BOAC for necessary action.
- 9.6 The dissertation shall present an orderly and critical exposition of the existing knowledge of the subject or shall embody results of original investigation and shall demonstrate the capability of the candidate to do independent research work.
- 9.7 Thesis write up: The dissertation should be written in English in specific format. It should include the following;
  - a) Abstract
  - b) Introduction and objectives
  - c) Literature review
  - d) Experimental/Theoretical work
  - e) Results and discussions
  - f) Conclusions
  - g) References

Further following guidelines should be followed:

- The dissertation should be typed 1.5 spaced, on both sides of the paper, of approximately 200 x 250 mm or A4 size, leaving 40 mm margin on the left-hand side. Six copies of the dissertation, with all photographs and illustrations are to be submitted.
- Headings of sub-divisions of the text should be in lower case capitals, left aligned and bold. Sub-headings should be in lower case capitals and placed immediately next to the margin and the text should start from the next line. Further, sub-heading should be lower case capitalized first letter only and placed next to the margin with colon. The matter would be in continuation of sub-heading.
- All symbols should be defined wherever they first appear and confirm to the internationally accepted symbols.
- > Tables should also be typed on paper size 200 x 250 mm. These should be numbered serially with the work Table towards the left margin followed by title at the top of the table. Figure captions should be provided at the bottom of the figure.
- > References cited in the text should be indicated by the author's name and the year of publication in parenthesis. They should not be numbered and should be typed at the end of the paper in the alphabetical order. The title of the work referred to should be within inverted commas. References should be given in the following form;
  - (a) Kawabata S (1996) "Micro-measurement of the mechanical Properties of Single Fibre" in "Modern Textile Characterization Methods", Ed., Mastura Raheel, Marcel Dekker, Inc., pp.311-328.
  - (b) Terzaghi K (1943), "Theoretical Soil Mechanics", John Wiley and Sons, Inc, New York, 210
  - (c) Terzaghi K (1943), "Critical Height and Factor of Safety of Slopes against Sliding", Proc.Ist Int.Conf.Mech. and Foundation Engineering Vol.1, pp.156-161.
  - (d) Terzaghi K and Lacroix Y (1964), "Mission Dam: An Earth and Rock-fill Dam on Highly Compressible Foundation", Geotechnique, Vol.No.1, pp.13-50.

# 1. Academic System

The academic system at NIT Jalandhar is framed on credit-based semester examination system. The credit system envisages a continuous evaluation of student's performance, and provides flexibility for academic progress at an optimum pace based on individual ability and convenience, subject to the constraint of the minimum requirements for continuation in the academic programme.

The student is awarded a letter grade from the prescribed grading system in each course registered by him. For each pass grade, the students accumulate the course credits as earned credits. The academic performance of the student is indicated in terms of the number of credits that he/she earns and the weighted grade point average. A specified minimum number of credits should be acquired on semester or session basis in order to qualify for continuation the academic programme and for the award of MTech degree.

# **Grades:**

The grading system, the evaluation in terms of marks is replaced by the award of letter grades. The structure and guidelines for award of grades are given as under:

Grade	Points	Description of performance	Recommended cut off Marks *
S	10	Outstanding	90
Α	09	Excellent	80
В	08	Very Good	70
		Good	

С	07	Good	60
D	06	Average	50
Е	04	Marginal	40
U	-	Unsuccessful	-
I	-	Incomplete	-
W	-	Withheld due to shortage of attendance or	-
		withdrawal	
NP	-	Audit Pass	1
NF	-	Audit Fail	1

Subject to confirmation based on standard deviation, if the sample size is greater than 20, and is flexible to the recommendations of the individual course coordinators with proper justification.

The grades will be awarded to a student in each registered course, based on his/her performance evaluated through a prescribed scheme of evaluation. In theory courses, the evaluation is weighted on class tests, assignment and end semester examinations in prescribed proportions. The recommended weight- age for class tests is 40%, for assignments 10% and for end semester's examination is 50%. The credits for the courses in which a student has obtained "E" (minimum passing grade for a course) or a higher grade will be considered as credits earned by him/her. In addition, courses up to a maximum of 8 credits in case of B Tech students in which a student has got 'NP' grade will not be counted towards his/her earned credits.

For the other (elective) course in which U or W grade have been obtained, the student may take the same course or any other course from the same category when it is offered next. Further, 'U' grades secured in any course stay permanently on the grade card. The weightage of these grades is not counted in the calculation of the SGPA and CGPA.

An 'I' grade denotes incomplete performance in any course due to absence at the end of semester. Upon completion of all course requirements, the "I' grade is converted to a regular grade.

These grades (NP and NF) are awarded in a course that the student opts to audit. Audit applications are allowed during the first four weeks of a semester. The audit pass (NP) grade is awarded if a minimum 'E' grade is obtained in the course and attendance is above 75% in the classes. If either of these requirements is not fulfilled he audit fail (NF) grade is awarded. In courses, where NP grade is obtained, the corresponding course credits are considered in the calculation of SGPA or CGPA.

A 'W' grade is awarded in a course where the student has opted of withdraw from the course. Withdrawal from a course is permitted until one week after the class test-I.

# **Grade Point Averages:**

The performance of a student will be evaluated in terms of two indicates, viz, the semester Grade Point Average (SGPA) which is the Grade Point Average for a Semester and Cumulative Grade Point Average (CGPA) which is the Grade Point Average for all the completed semesters at any point of time. The SGPA is calculated on the basis of grades obtained in all courses, except audit courses, registered for in the semester.

$$SGPA = \frac{\sum (\text{Course credits} \times \text{Grade point}), \text{except audit courses, obtained during a semester}}{\sum (\text{Course credits}), \text{except audit courses, obtained during a semester}}$$

The CGPA is calculated on the basis of all pass grades, except audit courses, obtained in all completed semesters.

$$CGPA = \frac{\sum (\text{Course credits} \times \text{Grade point}) \text{ of courses with pass grade except audit courses upto a specific semester}}{\sum (\text{Course credits}) \text{ of courses with pass grade except audit courses upto a specific semester}}$$

# 2. Leave Rules for Full-Time Students

- 11.1All MTech students would apply to the concerned HOD for leave stating the reasons whenever they are not in a position to attend the classes/work related to dissertation. They will not be allowed to avail an unauthorized leave even if they have fully utilized the permissible leave.
- 11.2All MTech students are eligible for leave of 30 days in a year (15 days per semester). The intervening holidays will be treated as a part of leave with provision of suffixing and prefixing holidays. In no way the leave rules would affect the attendance requirements for MTech students.
- 11.3All M Tech students shall be eligible to leave station for visiting other places preferably after completion of their course work or during vacations when there is no teaching work scheduled, if recommended by Supervisor(s) and HOD, and approved by Dean Research and Industrial Liaison well in advance for various purposes, e.g. library consultation, meeting experts, presentation of research papers/participation in the conferences/short term courses/symposiums etc., getting samples tested from other laboratories, using the lab facilities elsewhere if the same is not available at NIT Jalandhar, interaction with the External Supervisor, and any other similar purpose as recommended by his/her Supervisor(s) and HOD. For these purposes, he/she shall be permitted for 30 days per year. The leave as mentioned at Clause 11.2 shall be in addition.

# 3. Discipline

Every MTech student is required to observe proper discipline and decorous behaviour both inside and outside the campus. He/she should not indulge in any activity, which will tend to lower the prestige of the institute.

Any act of indiscipline on the part of MTech student, which is reported to Chairman, BOAC will be referred to the Discipline Committee of the Senate from time to time. The Committee will investigate the charges. If the charges are substantiated, it will recommend suitable punishment for the same to the Director. The decision of the Director will be final in this regard.

# 4. Project work in Industry or R & D works

The students may also opt to carry out their dissertation work in industry (having R & D facilities) and R&D organizations (like national research laboratories, etc.) during the final semester, subject to the following condition:

"A committee constituted by the Chairman, BOAC on the recommendations of the Head of the Department shall examine all such request and will give the approval." The students who are allowed to do the dissertation in the industry/R & D organizations will have to pay tuition fee and other charges to the institute for 4<sup>th</sup> semester also.

# 5. Award of MTech Degree

An MTech student will be eligible for the award of MTech degree

- b) if he/she has successfully completed all the core courses/elective courses, dissertation work and any other requirement of the curriculum as required by the institute Senate.
- c) If he/she has earned the required credits as applicable to the respective batch and approved by the Institute's Senate.
- d) If he/she has obtained a minimum CGPA of 6.0 in the entire course.
- e) If he/she has paid all the institute dues including hostel dues, library dues, etc.
- f) No disciplinary action is pending against him/her.

The award of MTech degree will be approved by the Board of Governors of the institute on the recommendations of the institute Senate.

# 15. Stipend cum Teaching Assistantship

MTech full time students may be awarded scholarship-cum-teaching assistantship as per the guidelines of Ministry of HRD, Govt. of India.

# 5 . Admission to MTech (part time)

No admission for this year

# 1. Maximum Duration of the Programme

- 1.1 Minimum duration of the MTech programme for part-time candidates shall be seven semesters.
- 1.2 The students who do not complete their dissertation work up upto the end of 7<sup>th</sup> semester and are permitted to submit the report on the subsequent date; next date of their successful completion of the dissertation work will be mentioned in the grade card.
- 1.3 In case the dissertation is rejected or the candidate is unable to complete the dissertation by the end of the 7<sup>th</sup> semester, he/she will be allowed to submit the same within five years from the date of admission. Further extension beyond five years for part-time programme, but not exceeding six months, may be allowed by the Chairman, BOAC on the recommendations of the concerned project guide and head of the concerned department.

# 2. Minimum requirement to continue the programme

A candidate must earn minimum 50 % of the prescribed credits by the end of 2<sup>nd</sup> semester and 50 % of the prescribed credits at the end of fourth semester. In case an MTech student does not satisfy these requirements, he/she will have to leave the programme.

These regulations have been given effect to all the candidates enrolled since the commencement of the programme.

#### **Power to Modify**

Notwithstanding all that has been stated above, the Senate can modify any of the above regulation from time to time.

#### 6. Admission to MSc programme

# 6.1 Master of Science (MSc) requirement

From the year 2015-16 admission to MSc (Full Time) programmes will be based upon IIT-JAM score card and are admitted centrally by CCMN as per directions of MHRD.

# 6.2 Regulations for Master of Science (M.Sc.) Programme

# 1. Eligibility Criteria for Admission

1.1 A candidate who has passed the examination for the award of Bachelor's degree from a recognized university, in the concerned discipline as one of the major subjects at Bachelor's level, with first class or minimum 60% marks or equivalent are eligible to apply for admission to M.Sc. Programme of the Institute. For admission to M.Sc. Programme in the discipline of Physics, candidates must have taken Mathematics as of one of the subjects at Bachelor's level.

1.2 Foreign national candidates who apply through Ministry of Human Resource Development, Govt. of India, or Indian Council of Cultural Relations, Govt. of India, are eligible to apply provided that they possess the same minimum qualifications as given in 1.1.

# 2. Admission

- 2.1 Applications on prescribed format will be invited once in a year through advertisement in the national dailies media and on institute's website.
- 2.2 The Board of Governors of the Institute on the recommendations of the Institute Senate will decide on the number of seats for various Departments/Centres/specializations. The reservations of seats for SC/ST candidates will be as per the Govt. of India norms.
- 2.3 The BOAC will recommend to the Chairman Senate regarding the operational aspects of the Programme including selection of candidates, the academic calendar and other regular activities regarding the conduct of the programme. If there are any vacancies after the admission date is over, the filling of such vacancies will be decided by the Chairman of the Senate.
- 2.4 Regarding all matters concerning selection of candidates, the decision of the Chairman Senate or his nominee will be final.
- 2.5 The selected candidates should satisfy all other admission requirements stipulated in the letter of offer of admission and only then they will be admitted to M.Sc. Programmes after payment of the prescribed fee and other charges. If at any subsequent time, it is found that the candidates do not fulfill any of the stipulated requirements, the BOAC may revoke his/her admission to the programme, with the approval of the Director.

# 3. Programme Structure

- 3.1 Each stream of M.Sc. Programme will have the following components:
  - i. Core courses (Theory), practical and seminar/independent study
  - ii. Elective courses
  - iii. Proiect work

In addition, the M.Sc. students may be required to give one or more seminars as per the requirements of the programme.

- 3.2 M.Sc. Programme will be completed in four semesters. During each M.Sc Semester, the student will register for course work and/or Project work as specified by the Institute Senate for each programme. The curriculum for different courses should be drawn up so that minimum number of credits for successful completion of any M.Sc. Programme is not less than 90.
- 3.3 Each M.Sc. student will be required to register for all the core courses specified in the curriculum of his programme of studies.
- 3.4 Each M.Sc. student will have to register for elective courses offered by the department in that particular semester from the list of courses approved by the Institute Senate. However, a student may be permitted selection of electives other than those listed by the Departments provided these have relevance to the area of specialization.
- 3.5 Candidates will have to successfully complete all the core courses (including laboratory. courses), elective courses, and project work appropriate as per the teaching scheme.
- 3.6 Each course will be assigned credits as follows:
  - i. One credit for each lecture period.
  - ii. One credit for each tutorial period.
  - iii. One credit for each laboratory session of two or three hours.
  - iv. Credits for seminars and Project will be as per the curriculum approved by the Institute Senate.

# 4. Registration

- 4.1 Every student will enroll and register for the courses he/she intends to undergo during the first semester of M.Sc. Programme on a pre-specified date notified for the purpose.
- 4.2 In case of subsequent semesters, the registration for the courses will be done on a specified date/dates before the end semester examination of the previous semester. In this connection, there may be proper registration card, which will contain details of the core and elective courses, seminars, and Project work to be taken up in the semester along with the number of credits for each course/seminar/project work.
- 4.3 During the 3<sup>rd</sup> or 4<sup>th</sup> semester, students will register for the Project work in addition to theory and laboratory courses.
- 4.4 Late registration will be allowed with a late fee of Rs.500/- up to one week beyond the last date specified for the registration. However under special circumstances, the period may be relaxed by the Dean, Academic Programmes.
- 4.5 A student will become eligible for enrollment only if, in addition to satisfying all the academic requirements, he/she has cleared all dues to the Institute, hostel, library, etc., up to the end of the previous semesters and he/she has not been debarred from enrollment by the institute discipline committee.
- 4.6 A student may be allowed by Chairman, BOAC to withdraw from a semester completely under extra-ordinary circumstances (e.g. medical grounds). However, withdrawal from a semester will be allowed only for a maximum continuous period of two semesters.

# 5. Faculty Adviser

To render general advice to the students in connection with the academic programmes and to help them in planning the courses of study, the respective department/center will assign a group of students to a faculty member, to be called the faculty adviser, of the department/center.

# 6. Maximum Duration of the Programme

- 6.1 Minimum duration of M.Sc programme for regular candidates shall be four semesters.
- 6.2 For the students who do not complete their project work up to the end of 4<sup>th</sup> semester and are permitted to submit the report on the subsequent date, next date of completion of the project work and the next date of viva-voce examination will be mentioned in the grade card.
- 6.3 An M.Sc. student will be allowed to submit the Project report regarding the project work, only if he has appeared in the theory papers up to the 4<sup>th</sup> semester examination. The result of the Project work shall be declared after the candidate has passed all the theory paper and the seminars.
- 6.4 In case the Project is rejected or the candidate is unable to complete the Project by the end of the 4<sup>th</sup> semester, he/she will be allowed to submit the same within three years from the date of admission.

# 7. Minimum requirement to continue the programme

7.1 An M.Sc student should successfully pass the 50% of the prescribed credits with CPGA not less than 5.0 at the end of 2<sup>nd</sup> semester. In case a M.Sc. student does not satisfy these requirements, he/she will have to leave the programmme.

# 8. Attendance Requirements

- 8.1 The Institute desires 100% attendance with a provision for consideration for absence on account of late registration, sickness or other such contingencies. The attendance requirements of 75% of the scheduled classes in course are needed for appearing in the examination.
- 8.2 A student with less than 75% attendance in a course during a semester will be awarded 'W' grade in that course irrespective of his/her performance in the tests. The course coordinator, while awarding the grades, will take into account the consolidated attendance record for the whole semester.
- 8.3 In order to maintain the attendance record of a particular course, a roll call will be taken in every scheduled lecture.
- 8.4 The course coordinator will consolidate the attendance record for the course from the beginning of the semester up to class test-I and class test-II and also up to the end of the semester. The teacher offering the course shall notify the students having less than 75% attendance with an intimation of the same to the concerned HOD and Deputy Registrar (Academics).
- 8.5 Every faculty offering a course will take attendance till three calendar days before the last instruction day in the semester. The percentage of attendance, calculated up to this instruction day, will be indicated in code number/letter as follows:

Attendance rounded to	Code No/letter
95% and above	Н
85% to 94%	9
75% to 84%	8
Below 75%	L

A student who has attendance code letter L will not be allowed to sit for end semester examination in the course in which the short fall exists.

# 9. Project Work

**Allocation of Project:** The broad areas in which M.Sc. Project work is feasible will be displayed by the concerned HOD on the notice board. The students will be asked to submit at least three preferences to the Head of the Department. The Head of the Department will allocate the candidates to the faculty members. If the type of work is interdisciplinary in nature, a maximum of two Project guides may be allowed. The allocation of M.Sc. project work should be completed by the end of the third semester.

Evaluation of Project: The evaluation of the project work will be done by an Evaluation committee:

- i. Concerned HOD
- ii. Project Guide(s)
- iii. External Examiner(s)

The External Examiner(s) shall be nominated by the Director for which the concerned HOD shall forward a panel of experts to Dean, Research and Industrial Liaison. Each candidate will have to submit the project report & make a presentation before the evaluation committee. The External Examiner shall be paid TA/DA and honorarium as per institute norms.

Project Report & write up: The Project report should be written in English in a specific format. It should include the following:

- a. Abstract
- b. Introduction
- c. Literature review
- d. Experimental/Theoretical work
- e. Result and discussions
- f. Conclusions

# g. References

Further following guidelines should be followed:

- The Project should be typed 1.5 spaced, on both sides of the paper, of approximately 200 x 250 mm or A4 size, leaving 40 mm margin on the left-hand side. Six copies of the Project, with all photographs and illustrations are to be submitted.
- Headings of sub-divisions of the text should be in lower case capitals, left aligned and bold. Sub-headings should be in lower case capitals and placed immediately next to the margin and the text should start from the next line. Further, sub-heading should be lower case capitalized first letter only and placed next to the margin with colon. The matter would be in continuation of sub-heading.
- All symbols should be defined wherever they first appear and confirm to the internationally accepted symbols.
- > Tables should also be typed on paper size 200 x 250 mm. These should be numbered serially with the work table towards the left margin followed by title at the top of the table. Figure captions should be provided at the bottom of the figure.
- References cited in the text should be indicated by the author's name and the year of publication in parenthesis. They should be numbered and typed at the end of the paper in the alphabetical order. The title of the work referred to should be within inverted commas. References should be given in the following form:
- [1] Kawabata S (1996) "Micro-measurement of the mechanical of Single Fibre" in "Modern Textile Characterization Methods", Ed., Mastura Raheel, Marcel Dekker, Inc., pp. 311-328.
- [2] Singh A and Singh T (1991), "Nonlinear Interaction of RIPPLED LASER beam with unmagnetized plasma", in "Plasma Physics and Controlled Fusion", IOP Publishing Ltd. and Pergamon Press, Great Britain, vol. 33, No.2, pp. 123-133.
- [3] Terzaghi K (1943), "Theoretical Soil Mechanics", John Wiley and Sons, Inc, New York, 210.
- [4] Terzaghi K (1943), "Critical Height and Factor of Safety of Slopes against Sliding", Proc. 1<sup>st</sup> Int. Conf. Mech. and Foundation Engineering Vol.1, pp. 156-161.
- [5] Terzaghi K and Lacroix Y (1964), "Mission Dam: An Earth and Rock-fill Dam on Highly Compressible Foundation", Geotechnique, Vol. No.1, pp. 13050.
- [6] Chately P K and Sharma A (1982), "Weak radiative decays of hyperous and charmed baryons in a quarks model," Physical Rev. D 25, 2351

# 10. Academic System

The academic system at NIT Jalandhar is framed on credit-based semester examination system. The credit system envisages a continuous evaluation of student's performance, and provides flexibility for academic progress at an optimum pace based on individual ability and convenience, subject to the constraint of the minimum requirements for continuation in the academic programme.

The student is awarded a letter grade from the prescribed grading system I each course registered by him. For each pass grade, the students accumulate the course credits as earned credits. The academic performance of the student is indicated in terms of the number of credits that he/she earns and the weighted grade point average. A specified number of credits that he/she earns and the weighted grade point average. A specified minimum number of credits should be acquired on semester or session basis in order to qualify for continuation the academic programme and for the award of M.Sc. degree.

# **Grades**

The grading system, the evaluation in terms of marks is replaced by the award of letter grades. The structure and guidelines for award of grades are given as under:

Grade	Point	Description of performance	Recommended cut off Marks*
S	10	Outstanding	90
Α	09	Excellent	80
В	08	Very Good	70
С	07	Good	60
D	06	Average	50
E	04	Marginal	40
U	-	Unsuccessful	-
1	-	Incomplete	-
W	-	Withheld due to shortage of attendance or withdrawal	-
NP	-	Audit Pass	-
NF	-	Audit Fail	-

\*Subject to confirmation based on standard deviation, if the sample size is greater than 20, and is flexible to the recommendations of the individual course coordinators with proper justification.

The grades will be awarded to a student in each registered course, based on his/her performances evaluated through a prescribed scheme of evaluation. In theory courses, the evaluation is weighted on class tests, assignment and end semester examinations in prescribed proportions. The recommended weightage for class tests is 40%, for assignments 10% and for end semester's examination is 50%. The credits for the course in which a student has obtained "E" (minimum passing grade for a course) or a higher grade will be considered as credits earned by him/her. For the other (elective)

course in which U or W grade have been obtained, the student may take the same course or any other course from the same category when it is offered next. Further, 'U' grade secured in any course stay permanently on the grade card. The weightage of these grades is not counted in the calculation of the SGPA and CGPA.

An 'l' grade denotes incomplete performance in any course due to absence at the end of semester. Upon completion of all course requirements, the 'l' grade is converted to a regular grade.

These grades (NP and NF) are awarded in a course that the student opts to audit. Audit applications are allowed during the first four weeks of a semester. The audit pass (NP) grade is awarded if a minimum 'E' grade is obtained in the course and attendance is above 75% in the classes. If either of these requirements is not fulfilled the audit fail (NF) grade is awarded. In courses, where NP grade is obtained, the corresponding course credits are considered in the calculation of SGPA or CGPA.

W' grade is awarded in a course where the student has opted to withdraw from the course. Withdrawal from a course is permitted until one week after the class test-I.

#### 10.2 Grade Point Averages

The performance of a student will be evaluated in terms of two indicates, viz, the Semester Grade Point Average (SGPA) which is the Grade Point Average for a semester and Cumulative Grade Point Average (CGPA) which is the Grade Point Average for all the completed semesters at any point of time. The SGPA is calculated on the basis of grades obtained in all courses, except audit courses, registered for in the semester.

$$SGPA = \frac{\sum (\text{Course credits} \times \text{Grade point}), \text{except audit courses, obtained during a semester}}{\sum (\text{Course credits}), \text{except audit courses, obtained during a semester}}$$

The CGPA is calculated on the basis of all pass grades, except audit courses, obtained in all completed semesters.

$$CGPA = \frac{\sum (\text{Course credits} \times \text{Grade point}) \text{ of courses with pass grade except audit courses upto a specific semester}}{\sum (\text{Course credits}) \text{ of courses with pass grade except audit courses upto a specific semester}}$$

#### 11. Discipline

Every M.Sc. student is required to observe proper discipline and decorous behaviour both inside and outside the campus. He/she should not indulge in any activity, which will tend to lower the prestige of the institute.

Any act of indiscipline on the part of M.Sc. student, which is reported to Chairman ACPGPR, will be referred to the Discipline Committee of the Senate from time to time. The Committee will investigate the charges. If the charges are substantiated, it will recommend suitable punishment for the same to the Director.

# 12. Award of M.Sc. Degree

An M.Sc. student will be eligible for the award of M.Sc. degree

- (i) If he/she has successfully completed all the core course /elective course, Project work and any other requirement of the curriculum as required by the institute Senate.
- (ii) If he/she has earned the required credits as applicable on the respective batches and approved by the Institute's Senate.
- (iii) If he/she has obtained a minimum CGPA of 6.0 in the entire course.
- (iv) If he/she has paid all the institute dues including hostel dues, library dues, etc.
- (v) No disciplinary action is pending against him/her.

The award of M.Sc. degree will be approved by the Board of Governors of the institute on the recommendations of the institute Senate.

These regulations have been given effect to all the candidates enrolled since the commencement of the programme.

# 13. Power to Modify

Notwithstanding all that has been stated above, the Senate may modify any of the above regulation from time to time.

# 7. Admission to MBA (Full Time) programmes:

The admissions are open for Indian nationals only. The candidates with Bachelor's degree in any discipline from recognized university with 60% marks or 6.5 CGPA on 10-point scale or equivalent are eligible to apply for the MBA programme. The candidates appearing in the final year/semester of the qualifying Bachelor's degree may also apply subject to the condition that they would submit document of fulfillment of their eligibility at the time of counseling [if candidate's result is awaited as on the date of counseling, he/she has to submit affidavit as per the format given in important instructions VII (8)]; failing which their candidature/admission may be cancelled. The candidate who fails to fulfill eligibility conditions as on the date of counseling will not be considered for admission. Relaxation admissible under policy of Govt. of India in minimum percentage (55%) / grade point average (6.0) for SC/ST/PH candidates is applicable.

**Selection Procedure:** Admissions will be made on the basis of CMAT (80% weightage), Group Discussion (10% weightage), and Interview (10% weightage). The candidates will have to submit their best of all scores of CMAT tests admissible for MBA admissions in the academic year 2015-2016. The list of candidates and schedule for Group Discussion/Interview will be notified only on Institute's website.

# 7.1 Regulations of MBA:

An MBA student will be eligible for the award of MBA degree:

- i. If he/she has successfully completed all the requirements of the curriculum as required by the Institute Senate.
- ii. If he/she has obtained a minimum CGPA of 6.0 in the entire course.
- iii. If he/she has paid all the institute dues including hostel dues, library dues etc.
- iv. No disciplinary action is pending against him/her.
- v. Maximum duration for the completion of MBA degree shall be four semesters(i.e.2 years)

# 8. Admission of Ph. D (full time) programme

Admission to PhD (Full time/Part time) programmes will be based upon performance of the candidates in the written test to be conducted by the institute and the recommendations of a panel of experts before which the candidate(s) is required to make a presentation on a topic of his/her proposed area of research using power point presentation.

# 8.1 Regulations for the Admission to PhD Programme and Award of PhD Degree (Regular)

# (1) Minimum Qualifications for Admission:

# 1.1 PhD for Indian Nationals:

**Engineering Departments:** Master's Degree in Engineering/Technology in the relevant area of research along with Bachelor's Degree in appropriate branch of Engineering/Technology with a first class or minimum 60% marks or equivalent Grade Point at Master's and Bachelor's level\*.

Sciences/Humanities/Management Departments: Master's Degree in appropriate branch of Science/ Humanities/Social Sciences/Management with a first class or minimum 60% marks or equivalent Grade Point\*.

\*Relaxation in minimum Percentage/Equivalent Grade Point requirements will be given as per the National Reservation Policy of Govt. of India.

# 1.2 PhD for Foreign Nationals

Foreign national candidates, who apply through Ministry of Human Resource Development, Govt. of India, or Indian Council of Cultural Relations, Govt. of India, are eligible to apply provided that they possess the same minimum qualifications as given in 1.1.

# 1.3 PhD for Candidate/Staff working under Sponsored Projects:

Candidate/staff working under the projects sponsored by MHRD/DST/UGC or some other government agency and coordinated by the institute faculty as Principal investigator/Coordinator shall be eligible for admission to PhD programme. However the candidate/staff should have the same academic qualifications as given in 1.1.

#### 2. Admission Process

Applications on prescribed format for admission to PhD programme will be invited twice in a year through advertisement in the national dailies, media and on institute's website. The advertisement shall include the predetermined seats and as per the guidelines of reservation policy of Government of India. The person's desires for applying in more than one department/category shall be required to apply on separate application form along with appropriate fee. The candidate shall be required to submit a write-up (1-2 pages) of his/her proposed area of research along with the application.

# 2.1 Screening Committee:

A Screening Committee will comprise of the Head of Department and three faculty members (co-opted by HoD from the department) holding PhD degree. The committee shall screen all applications for admission to PhD programme. The committee is expected to verify the eligibility of the applicant(s) for the Entrance Test/Interview based upon his/her details mentioned in the application(s) and the documents enclosed. After screening of all applications, the Head of Department shall forward the list of the eligible candidates to Deputy Registrar (Academic) with a copy to Dean (Academic). The Deputy Registrar (Academic) shall consolidate the list of all the departments and notify through appropriate means with the approval of Dean (Academic).

# 2.2 Entrance Test:

All the candidates to PhD Programme (Full Time/Part Time) shall be admitted through an Entrance Test followed by an interview to be organized by respective department as the case may be. The Entrance Test will be of MCQ Mode. The syllabus for the same will be notified on the Institute Website. At the time of interview, candidates are expected to discuss their research interest/area of interest.

# 2.3 Interview:

Candidates, who secure 40% marks (minimum) in the Entrance Test, shall be called for interview. The preference shall be given to the UGC/CSIR/NET/GATE qualified candidates.

# 2.4 Interview Committee

The eligible candidates who have qualified Entrance Test shall have to appear before an Interview Committee for an interview. The Interview Committee shall comprise of the following:

Director / Nominee

- 1. Dean (Academic) / Nominee
- 2. All faculty members of the concerned department (with PhD qualification)

Keeping in view the available seats, the Interview Committee shall recommend the names of candidates found suitable for admission to PhD Programme for the approval of Chairman, Senate. The Deputy Registrar (Academic) shall notify the list of selected candidates through appropriate means.

#### 3. Research Guidance

# 3.1 PhD Supervisor:

A permanent faculty member of the institute with PhD qualification can act as a research supervisor. However, in case of demise/any other casualty, the "Research Scholar (RS)" registered under a supervisor(s) shall be transferred to other suitable supervisor(s) in the department subject to the approval of RAC. However It shall be the responsibility of the Head of the Department to bring the matter for the information of Chairman, RAC, to decide the future course of action for the candidate (s) registered with the Supervisor. In addition, if a supervisor(s) gets transferred/reemployed/avails deputation/lien in other department/ workplace/centre with in NIT, Jalandhar or retirement/resignation/ long leave of a supervisor(s) from the institute (more than 06 months)/lien/ deputation to join other institute then he/she shall continue supervising the RS in the department where RS is initially registered. In case the Supervisor is likely to be superannuated within five (5) years from the date of registration of a Research Scholar, he/she shall be allowed to act as supervisor if there is one more regular faculty member from the same department to act as other supervisor.

# 3.2 Other Supervisor:

Depending upon the nature of the research problem, other supervisor(s) may be allowed in addition to the supervisor from the department where the RS is registered. In such case, maximum two other supervisors may be approved by RAC, out of which, one from the same/other department from NIT, Jalandhar, and second (in-service or retired) from an organization other than NIT, Jalandhar, preferably a centrally funded institution/ university/Research laboratory of Government of India/Public Sector undertakings/state funded University /institution. The consent (on the official letterhead) of the proposed supervisor(s) shall be forwarded to Dean (Academic) for consideration in the RAC. The RAC may recommend the other supervisors. The request for appointment of other supervisor(s) may be entertained within 18 months of the registration of the RS.

# 3.3 Change of Supervisor:

The request for change of supervisor(s) may be entertained within 18 months of the registration. Permission may be granted to a RS for the change of Research supervisor(s) by the RAC under exceptional circumstances. However, in such cases, the consent of both, i.e. approved Research supervisor and proposed (new) Research supervisor shall be essential.

**3.4** The number of RS with a 'supervisor' and/or 'other supervisor' shall not exceed eight at a time. Further, a faculty member can act as co-supervisor for research scholars registered with any other Institute/University after getting approval from the competent authority, provided the institute work does not suffer due to the same.

# 4. Admission

Candidates, whose selection is recommended by the Interview Committee and approved by Chairman Senate, shall be offered admission and advised to deposit prescribed fee. After depositing the fee, he/she shall be designated as "Research Scholar (RS)". For all purposes, the date of registration of a RS shall be the date on which he/she has deposited fee in the institute. After registration, Research Advisory Committees (RACs) for the individual RS shall be constituted by Dean (Academic) in consultation with the concerned HOD and Supervisor(s) as per Clause 10. After the constitution of the RACs, the first meeting shall be held within a month to approve the supervisor(s), broad area of Research and the courses of study for individual RS.

# 5. Registration

The RS is required to follow the instructions given below for registration:

- 1. He/she is required to register himself/herself (in person) on the scheduled dates of registration (only). There shall not be any provision of deputing any representative by him/her for registration purposes. Further, he/she shall be required to register in subsequent semesters till the submission of PhD thesis.
- 2. He/she shall deposit the requisite fee at the time of registration in every semester.
- 3. He/she is required to fill the registration form and deposit it with the department through his/her supervisor(s).
- 4. He/she shall be allowed to register for the subsequent semester(s) if his/her progress report by his/her supervisor(s)/HOD during the previous semester(s) is found satisfactory.
- 5. The act of not-depositing the fee or not-completing the registration process as mentioned above on the scheduled dates shall be treated as the "voluntary discontinuation" of studies by the RS. In such case, he/she will cease to be a bonafide student with immediate effect.
- 6. The instructions as above for registration shall be applicable for all full-time and part-time Research Scholars.
- 7 Late registration will be with a late fee of Rs.500/- up to one week beyond the last date specified for the registration. However under special circumstances, the period may be relaxed by the Dean (Academic).
- 8 The candidate is required to follow the registration rules till he/she submits his/her PhD thesis.

# 6. Duration of PhD Programme

The minimum period of residential requirement for study and research at the institute from the date of registration to the date of submission of thesis shall be 36 months. A candidate is normally expected to submit his/her thesis within five years from the date of registration. This period may be extended by the Senate as a special case to a maximum of seven years from the date of registration after which the registration shall stand cancelled.

#### 7. Course Work

# 7.1 Minimum Credit and CGPA requirements:

Every Internal/External Research Scholar (Full Time/Part Time) admitted under PhD Programme is required to pass the theory courses approved by the RAC (for minimum 12 credits) securing CGPA=6.0 (minimum). The grading system similar to post-graduate programmes shall also be applicable to PhD Programme.

# 7.2 Courses:

The course work must include one course of Research Methodology and rest of the courses may be taken as per the recommendations of RAC. Courses completed after the date of registration shall count towards the requirement for the award of PhD degree.

# 7.3 Attendance requirements:

The institute desires 100% attendance in the theory courses with a provision for consideration for absence due to unavoidable circumstances. The attendance requirements of 75% of the scheduled classes in a course are needed for appearing in the theory examination.

The course coordinator will consolidate the attendance record for the course from the beginning of the semester upto class test-I and class test-II and also up to the end of the semester. The teacher offering the course shall notify the students having less than 75% attendance with an intimation of the same to the concerned HOD.

Every faculty offering a course will take attendance till three calendar days before the last instruction day in the semester. The percentage of attendance, calculated up to this instruction day, will be indicated in a code number/ letter as follows:

Attendance rounded to	Code No/letter
95% and above	Н
85% to 94%	9
75% to 84%	8
Below 75%	L

The RS who have attendance code letter L will not be allowed to sit for end semester examination in the course in which the short fall exists.

# 8. Leave Rules for Regular Candidates

- 8.1 The RS is required apply to the concerned HOD for leave stating the reasons whenever they are not in a position to attend classes/perform thesis work.
- 8.2 All RS are eligible for leave of 30 days in a year @ 15 days per semester. The intervening holidays will be treated as part of leave with provision of suffixing and prefixing holidays. In no way, the leave rules would affect the attendance requirements for the RS.
- 8.3 All RS shall be allowed to leave station for visiting other places preferably after completion of their course work or during vacations when there is no teaching work scheduled, if recommended by Supervisor(s) and HOD, and approved by Dean Academic well in advance for various purposes like library consultation, meeting experts, presentation of research papers/participation in the conferences/short term courses/symposiums etc., getting samples tested from other laboratories, using the lab facilities elsewhere if the same is not available at NIT Jalandhar, interaction with the External Supervisor, and any other similar purpose as recommended by his/her Supervisor(s) and HOD. For these purposes, he/she shall be permitted for 60 days per year. The leave as mentioned at Clause 8.2 shall be in addition.
- 8.4 Maternity Leave: The woman RS will be eligible for Maternity Leave with Assistantship as per Govt. of India notification released from time to time.

# 9. Discipline

- 9.1 The RS is required to observe proper discipline and decorous behaviour both inside and outside the campus. He/She should not indulge in any activity, which will tend to lower the prestige of the institute.
- 9.2 Any act of indiscipline on the part of RS, which is reported to Dean (Academic), will be referred to the Discipline Committee of the Senate from time to time. The Committee will investigate the charges. If the charges are substantiated, it will recommend suitable punishment for the same to the Director. The decision of the Director will be final in this regard.

# 10. Research Advisory Committee (RAC)

The RAC shall be constituted within one month of the registration of the research scholar. The head of the department shall prepare the case and will submit the same in the office of Dean Academic.

# 10.1 Composition of Research Advisory Committee

The following will be the composition of RAC:

- 1. Dean (Academic) (Ex-officio) (Chairman)
- 2. Head of the concerned Department (Member).
- 3. All approved PhD supervisors of the RS (Member(s)).
- 4. Subject expert(s) outside the institute to be nominated by the Chairman, Senate. The concerned supervisor(s) shall provide a list of three Subject Experts with their addresses, telephone numbers and e-mail IDs (through Head of Department) to Dean (Academic) well in advance.

# 10.2 Responsibilities of Research Advisory Committee

The RACs will have the following responsibilities:

- 1. Confirmation of supervisor to the RS.
- 2. To monitor the performance of the RS.
- 3. To recommend the Courses of studies for the concerned RS.4. To hold the comprehensive viva-voce examination of RS.

# 11. Minimum Residential Requirements

For a regular RS under scholarship/Project scheme, the minimum period of residential requirement for study and research at the institute from the date of registration to the date of submission of thesis shall be 36 months. During this residential requirement, the RS(s) shall report to his/her supervisor(s) from the department where he/she is registered. The RS is allowed to leave station to visit other libraries/ laboratories/industry etc. for consultation/ experimentation/data collection/ attend a conference/present a paper in a conference/ symposium after due permission from his/her supervisor(s) and approval of the concerned Head of Department. However, there shall not be any residential requirement for the regular internal faculty registered as part-time RS, and also other part-time RS employed in an AICTE/UGC approved institution in Jalandhar/within a radius of 200 KM around NIT, Jalandhar, or external candidates sponsored from a centrally-funded institution/ university/Research laboratory of Government of India/Public Sector undertakings/state funded University /institution having a MOU with NIT, Jalandhar. These external/part time RSs shall be required to submit a Certificate from their Employers at the time of registration stating that the concerned candidate(s) is an employee of that organization and is allowed to pursue his/her research work at NIT, Jalandhar, and his/her routine work permit him/her to devote sufficient time for research work. In case of transfer/ deputation/change of employment, it will be the responsibility of the RS to obtain the similar document from his/her new/immediate employer and submit it to the institute. But for all other external/part time RS, this residential requirement shall be minimum of 06 months. A full time research scholar may be allowed to continue as part time research scholar only after the successful completion of his/her comprehensive examination and then onwards he/she will be governed by Part-Time PhD regulations.

# 12. Comprehensive Viva-voce Examination

- 12.1The comprehensive examination of the RS shall be held after six months (minimum) of registration, provided he/she has passed the course work prescribed by the RAC. If RS does not submit his/her research plan/detailed research proposal for the purpose of his comprehensive examination within 18 months of his/her registration, then his/her registration shall stand cancelled and he/she shall have to apply for re-admission.
- **12.2**The comprehensive examination shall be held as oral.
- 12.3For the comprehensive examination, the RS is required to present a Research Plan/Detailed Research Proposal before RAC. In case, the RAC is satisfied with the presentation, then he/she shall be declared successful/pass in the comprehensive examination and his/her Research Plan/detailed Research Proposal shall be approved. On the other hand, if the performance of the RS is not satisfactory, then he/she may be given one more chance to present his/her research proposal within three months of first presentation. After the second attempt, if the performance of the RS remains unsatisfactory, his/her registration shall be cancelled from the institute.

# 13. Pre-submission Seminar and submission of synopsis

Upon satisfactory completion of course work including research methodology and comprehensive examination, which shall form part & parcel of PhD Programme, RS, before submission of synopsis, shall make a pre- PhD presentation in the Department that may be open to all faculty members and research students, for getting feedback and comments, which may be suitably incorporated into the draft thesis under the advice of the supervisor. If the RAC is satisfied with the performance of RS, he/she is required to submit the synopsis (10 copies) of his/her research work.

The synopsis will be submitted preferably three months before the submission of PhD thesis. It should be computer printed on A4 size paper with appropriate references/bibliography.

# 14. Submission of thesis

- 14.1 On the recommendations of RAC, Dean (Academic) may allow a RS to submit his/her thesis provided he/she has published/accepted for publication minimum one research paper in a national/international refereed journal (out of his/her research work) and submitted the synopsis of his/her thesis subject to fulfilling all other regulations.
- 14.2 The thesis should be written in English in a format, which may include preferably the following sections:
  - i.
  - ii. Introduction and objectives
  - iii. Literature review

- iv. Experimental/Theoretical work
- v. Results and discussions
- vi. Conclusions
- vii. Scope of the future work
- viii. References/Bibliography

In thesis write up, the following guidelines should be followed:

- The thesis should be typed 1.5 spaced on both sides of the paper of A4 size, leaving 40 mm margin on the left hand side. After open house viva-voce to defend thesis finally, six copies of the thesis, with all photographs and illustrations, are to be submitted.
- Headings of sub-divisions of the text should be in lower case capitals, left aligned and bold. Sub-headings should be in lower case capitals and placed immediately next to the margin and the text should start from the next line. Further sub-heading should be lower case capitalized first letter only and placed next to the margin with colon. The matter would be in continuation of sub-heading.
- All symbols should be defined wherever they first appear and conform to the internationally accepted symbols.
- Tables should be also typed on A4 paper size. These should be numbered serially with the word 'Table' towards the left margin followed by title at the top of the table. Figure captions should be provided at the bottom of the figure.
- Reference cited in the text should be indicated by the author's name and the year of publication in parenthesis. These should not be numbered and should be typed at the end of the paper in the alphabetical order. The title of the work should be within inverted commas.
- **14.3**The RS is required to submit three copies of PhD thesis (spiral bound) to the Office of Dean (Academic) through his/her supervisor(s) and the concerned HOD provided he/she has already submitted his/her synopsis.
- **14.4**The RS will submit a certificate from his/her research supervisor stating that the research work undertaken has been original and has not been published/printed anywhere else for the award of any degree.
- **14.5**A certificate from the Accounts Section of the institute stating 'no dues pending' against RS will also be submitted along with the thesis.

# 15. Evaluation of thesis

- **15.1** The thesis shall contain account of the research work carried out by the RS leading to discovery of new facts and should give evidence of originality either in interpretation of data, development of new experimental or theoretical techniques or definite contribution to the advancement of knowledge. The thesis should give evidence regarding the capability of the RS to do independent research work.
- **15.2** Along with the synopsis of PhD thesis submitted by the RS, the supervisor(s) shall forward a panel of eight examiners comprising of four foreign examiners and four Indian examiners (in a sealed envelope) through proper channel to Dean (Academic). The examiners must be expert in the research area and preferably, their names may appear in the list of "References" in the PhD thesis submitted by the RS. Out of which the Chairman, Senate, shall appoint one foreign examiner and one Indian examiner for the evaluation of PhD thesis. Dean (Academic) will obtain the willingness from the appointed examiners by sending them a copy of synopsis submitted by the RS. The Chairman, Senate is empowered to amend the panel of examiners submitted by the research supervisor(s).
- **15.3** After getting the willingness from the appointed examiners, Dean (Academic) will send two copies of spiral bound thesis to them for detailed evaluation.

Dean (Academic) will convey to the thesis examiners that their evaluation reports should include:

- i. Definite statement as to whether the thesis is acceptable or not acceptable for the award of PhD Degree.
- ii. List of questions to be asked or clarifications to be sought from the RS during the viva-voce examination.
- iii. The detailed statement regarding the quality of the work undertaken.
- iv. Statement whether the quantity of work done is sufficient for the award of Ph.D Degree or not.
- v. In case the examiners feel that:

Definite Revision of the thesis is required

- Or, the thesis is not acceptable in the present form and has to be completely re-written due to insufficient quantity and/or quality of research work undertaken, it should be clearly stated.
- **15.4** After receiving of the examiners' reports, the Photostat copies of the reports shall be forwarded to the concerned research supervisor(s) by Dean (Academic). The research supervisor(s) shall send his/her comments to the Dean (Academic) for further action.
- **15.5** If one or both examiners ask for complete/partial revision of the thesis, the RS will be asked to re-submit the thesis after incorporating the necessary changes in light of the comments of the examiner(s) within a period of six months. The resubmitted thesis may be sent to the same examiner(s) again for evaluation, if required.
- **15.6** If one or both examiners recommend the thesis for the award of PhD degree, subject to minor changes, the RS will be asked to re-submit the thesis after incorporating the changes in light of the comments of the examiner within a period of three months. The re-submitted thesis may be sent to the same examiner(s) only if the Examiner(s) has mentioned about it in his/her report(s).

- 15.7 In case, both the examiners give positive/favorable reports, the thesis will be considered accepted. However, if one of the examiners gives positive/favorable report and the other rejects the thesis, then another copy of thesis shall be sent to a third examiner (same set of examiner) appointed by the Chairman, Senate from the panel already given by the research supervisor(s). If the report of the third examiner is found positive/favorable, then the thesis shall be considered accepted. In case, the third examiner rejects the thesis, then the Chairman, Senate will decide (on the basis of the reports of examiners), whether the thesis is to be rejected/or referred again to a new set of examiners for a fresh evaluation.
- 15.8 In all other cases, not covered by the above regulations, the matter will be referred to the RAC for consideration.
- **15.9** A RS whose thesis has been accepted for the award of PhD degree shall be required to appear in Open House Viva Voce Examination before the following committee/panel:
  - 1. Dean (Academic)
  - 2. One of the External Examiners
  - 3. Head of the concerned department
  - Research supervisor(s)

After satisfactory performance of the RS in the open house viva-voce examination, this committee shall forward its recommendations to the Chairman Senate for the award of PhD degree to the RS. The Chairman Senate will recommend to the Senate for the award of PhD degree to the successful RS.

The RS is required to submit six hardbound copies of his/her PhD thesis as per the approved format alongwith a soft copy (in a CD) in PDF format. The distribution of these six copies is as follows:

- a. For central library (along with CD)
- b. For departmental library
- c. For the RS
- d. For one supervisor
- e. For second supervisor
- f. For the Office of Dean (Academic)
- g. In case, there are more than two supervisors, then the number of copies to be submitted by the RS will increased accordingly, i.e. six plus number of supervisors more than two.
- h. One CD to be deposited with UGC
- **15.10** In case the RS fails in the open house viva-voce examination, he/she may be permitted to reappear in the open house viva-voce examination at a later date (approved by the Chairman, Senate) after the recommendation has been made by the RAC in this regard.
- **15.11**If the open house viva voce examination committee/panel finds that the performance of the RS is not satisfactory even on the second occasion, the matter will be referred to the Institute Senate for a decision.
- **15.12 Depository with UGC**: Following the successful completion of the evaluation process and announcements of the award of PhD, the Institute shall submit a soft copy of the PhD thesis to the UGC within a period of thirty days, for hosting the same in INFLIBNET, accessible to all Institutions/Universities.
- **15.13** Issuance of Provisional Certificate: On successful completion on the Open House viva after evaluation of thesis the candidate shall be issued a provisional certificate certifying to the effect that the Degree has been awarded in accordance with the provisions of UGC Regulations-2009 for Minimum Standards and Procedure for Award of PhD Degree.

# 16. Award of Degree

If the performance of the RS has been satisfactory in the open House viva-voce examination as per Clause 15, he/she will be awarded PhD degree on the recommendations of the Senate and with the approval of the Board of Governors.

- 17. Conversion of full-time admission to part-time for RS The RS (full-time) may be allowed to continue as RS (part-time) if he/she satisfies the following conditions:
  - 1. The request from the RS in this regard is made to Dean (Academic) through proper channel and he/she has already passed the prescribed course work.
  - 2. His/her progress report by his/her supervisor(s) is found satisfactory.
  - 3. In case, he/she has been offered a regular job in some organization, then he/she may obtain a 'no objection certificate' from his/her employer to continue his/her research work as a part-time RS at NIT, Jalandhar and enclose along with his/her request for the purpose.
  - 4. The RS may be allowed to register as part-time candidate only after the recommendation of the RAC and approval of Chairman, Senate.
  - 5. The full-time RS after conversion to part-time RS shall not be considered for any scholarship/stipend/contingency grant/ teaching assistantship as meant for full-time RS.
  - 6. All rules and regulations of part-time programme shall be applicable for such RS. Further, once changed to part time candidature, the concerned RS cannot revert back.

# 18. Stipend cum Teaching Assistantship/Scholarship and Contingency grant

Stipend cum Teaching Assistantship/Scholarship and Contingency grant shall be given to the admitted candidates as per the latest notification of the MHRD in this regard. However, Stipend cum Teaching Assistantship/Scholarship and Contingency grant to the candidate working under the Sponsored Projects coordinated by the faculty of the institute shall be given as per the terms and conditions of the project.

# 20. Remuneration to Examiners

The remuneration payable to each examiner shall be decided by the Institute from time to time.

# Regulations for the Admission to PhD Programme and Award of PhD Degree (Regular & Part Time)

# A. Attached to Clause No. 1.3 of PhD Regulations

Candidate/staff working under the projects, those having appropriate provisions for salaries and contingency grant for the required duration which are sponsored by reputed industrial organization (s) and coordinated by the institute faculty as Principal investigator/Coordinator shall also be eligible for admission to PhD programme.

# B. Attached to Clause No. 12 of PhD Regulations (Regular)

The research plan/detailed research proposal to be submitted by the RS for Comprehensive Examination shall be called as 'PhD Research Proposal', which shall preferably be prepared on the following guidelines:

# 1. The proposal may have the following Sections:

- i. Introduction, which may include brief introduction to the research area, its importance and brief review of literature on the proposed area of research.
- ii. Research Significance
- iii. Objectives
- iv. Scope and Methodology
- v. Bar Chart indicating time schedule
- vi. List of most appropriate references
- 2. The title page should contain the proposed title of the research, name and roll number of the RS, name (s) of the supervisor (s), department, institute, month and year of submission.
- 3. The total number of pages of the proposal are limited to 15 inclusive of the title page.
- 4. It should be typed on A4 size paper, Times New Roman 11 point font size, preferably at 1.5 line spacing with 30 mm margin on left and 25.4 mm margin on right, top and bottom.
- 5. The Major Headings as given in S.No.1. above shall be in bold block capitals having 12 point font size. The Sub headings (if any) shall be bold title case.

# (C) Attached to Clause No. 13 of PhD Regulations (Regular)

The Synopsis to be submitted by the RS for Pre-Submission Examination shall be called as 'PhD Synopsis'. It should preferably contain Sections on Introduction which includes brief Review of Literature, Objectives, brief Methodology, brief Analysis of Results, Case Studies if any, Conclusions and Recommendations. List of publications should also be given at the end. The Figure (s) and Table (s) may only to be given if considered utmost necessary.

The formatting guidelines of the PhD Research Proposal given above in (B) may be followed.

The title page should contain the title of the research, name and roll number of the RS, name (s) of the supervisor (s), department, institute, month and year of submission.

The total number of pages of the synopsis are limited to 10 inclusive of the title page.

# 8.2 Regulations for the Admission to PhD Programme and Award of PhD Degree (Part-Time)

# 1. Eligibility Criteria for Admission:

# 1.1 PhD for Internal Candidates:

Faculty/Technical/Scientific staff of NITJ preferably having two-year's experience and possessing the same academic qualifications as that for PhD regular candidates, are eligible to apply for PhD Programme (as a part-time candidate).

# 1.2 PhD for External Candidates:

External candidates specified by Industry/Institute having R & D facility recognized by NITJ preferably with two-years' experience and having same academic qualifications as that for PhD regular candidates are eligible to apply for PhD Programme (as a part-time candidate). In–service candidates must have to submit No Objection Certificate of their employer.

# 1.3 PhD for Candidate/Staff working under Sponsored Projects:

Candidate/staff working under the projects sponsored by MHRD/DST/UGC or some other government agency and coordinated by the institute faculty as Principal investigator/Coordinator shall be eligible for admission to PhD programme. However the candidate/staff should have the same academic qualifications as given in 1.1.

# 2 Duration of Programme

A RS under external/part time/faculty/staff scheme is allowed to submit his/her thesis within 03 to 4½ years from the date of registration, after which he/she shall have to request for extension for submission of thesis. The Research Advisory Committee may extend the period of submission of thesis by another 2½ year. Thus, maximum duration for submission of thesis is limited to 07 years. However the student is permitted to submit the thesis only after the completion of minimum three years from the date of registration for the programme.

# 3 Stipend cum Teaching Assistantship/Scholarship and Contingency grant

No Stipend cum Teaching Assistantship/Scholarship and Contingency grant shall be given to the candidates admitted as under Part-Time PhD Programme. However, Stipend cum Teaching Assistantship/Scholarship and Contingency grant to the candidate working under the Sponsored Projects coordinated by the faculty of the institute shall be given as per the terms and conditions of the project.

# 4 Other Conditions

Rest all other rules/regulations will be same as that of regular Ph. D. programme. Annexure-I

# 8.3 Provision of makeup examination for UG/PG programmes

The existing provision of two summer course, winter and makeup examination for UG program is extended to PG students also on rolls irrespective of their year of admission.

8.4 Revision of contingency grant of project to the BTech /PG/PhD students

Course	Amount					
PhD Students	Rs.30,000-00					
PG Students	Rs.15,000-00					
BTech Students	Rs.5,000-00					

# 8.5 Provisions of Seminar grant for attending International/National Conference to UG/PG student

It has been decided that UG/PG students may also be provided seed money as per details mentioned below to support partially their registration and travel expenses.

International Conference	B.Tech/PG	Rs.10,000-00
	PhD	Rs.25,000-00
National Conferences	B.Tech/PG	100% reimbursement may be
	PhD	allowed to UG/PG students

#### 8.6 Summer/Winter contact courses to B Tech / PG students

Only two summer contact courses will be allowed to the students for clearing their backlogs during summer course. No winter course will be allowed to the students (as per Senate decision in its 20<sup>th</sup> meeting).

# 8.7 Improvement in CGPA

If a BTech/MTech student wants to improve upon the CGPA, to be eligible for the award of degree, he should be given a time of maximum one year to improve his/her CGPA after completion of all course work with the following conditions:

- i. The improvement shall be allowed for only in those theory courses in which the students had earlier secured minimum grades (with appropriate fees).
- ii. If the CGPA of the student after improvement exceeds the minimum CGPA requirement for the award of degree i.e. 5.0 and 6.0 for under graduates and postgraduates respectively, it will be restricted to 5.0 and 6.0 only.

#### 8.8 Fee Refund

Institute shall refund the entire fee after deduction of one thousand rupee to those candidates who surrender/ withdraw their seat before the date of closing of the admission every year and seats vacated by them are filled through waiting listed candidates/ spot admissions. However only caution money shall be refunded to candidates who surrender / withdraw their admission after closing date of admission and the seats vacated by these candidates are remaining vacant thereafter. The above rule is applicable to those candidates only who are physically admitted to the institute and are on the rolls of the institute. However, those candidates who have been just allotted seat and are not physically admitted. The rules of admitting agency (like CCMT, CSAM etc.) will be applicable and same agency will be responsible for refund of fee.

# 8.9 Seat Matrix for UG Programmes BTech

(InstCd=Institute code; BrcCd= Branch code; StCd= State code; SC= Schedule caste; ST= Scheduled tribe; OBC= Other boycotted

catagories; PwD= Person with disability)

Name of Programme	Quota	InstCd	BrcD	StCd1	ОР	OPPwD	sc	SCPwD	ST	STPwD	ОВС	OBCPwD	Total
Bio Technology	HS	NJL	вот	РВ	12	0	3	0	2	0	5	1	23
Chemical Engineering	HS	NJL	CHE	РВ	22	1	7	0	3	1	12	0	46

Civil Engineering	HS	NJL	CIV	PB	23	1	7	0	3	0	12	0	46
Computer Science and Engineering	HS	NJL	CSE	РВ	23	0	6	1	4	0	13	0	47
Electronics and Communication Engineering	HS	NJL	ECE	РВ	24	0	6	1	3	0	13	0	47
Instrumentation and Control Engineering	HS	NJL	ICE	РВ	23	1	7	0	3	0	11	1	46
Industrial and Production Engineering	HS	NJL	IPE	РВ	22	1	7	0	3	0	12	1	46
Mechanical Engineering	HS	NJL	MEC	РВ	22	1	7	0	4	0	12	0	46
Textile Technology	HS	NJL		РВ	22	1	7	0	3	0	13	0	46
Bio Technology	os	NJL	вот	РВ	11	1	4	0	1	0	6	0	23
Chemical Engineering	os	NJL	CHE	РВ	23	0	6	1	3	0	13	0	46
Civil Engineering	os	NJL	CIV	РВ	22	1	6	1	4	0	13	0	47
Computer Science and Engineering	os	NJL	CSE	PB	23	1	7	0	3	0	11	1	46
Electronics and Communication Engineering	os	NJL	ECE	РВ	22	1	7	0	4	0	11	1	46
Instrumentation and Control Engineering	os	NJL	ICE	РВ	23	0	7	0	4	0	13	0	47
Industrial and Production Engineering	os	NJL	IPE	РВ	23	0	7	0	3	1	12	0	46
Mechanical Engineering	os	NJL	MEC	РВ	23	1	6	0	3	0	12	1	46
Textile Technology	os	NJL		РВ	22	1	7	0	4	0	12	0	46

# 8.10 Seat Matrix for CCMT 2015 ( MTech-Full Time)

S. No.	Department	M Tech programme	Gate subject admissibility	Seat Matrix								Total
								Perso	ns with	Disabili	ties	
				OP	OBC	SC	ST	OP	OBC	sc	ST	
1	Chemical Engineering	Chemical Engineering	СН	14	07	04	02	01	00	00	0	28
2	Industrial and Production Engineering	Manufacturing Technology	PI/ME	13	08	04	02	01	0	0	0	28
3	Instrumentat ion and Control Engineering	Control & Instrumentation Engineering	Group-I Admission through GATE (Instrumentatio n & Control Engineering) GATE (IN)	07	04	02	01	01	0	0	0	15

S. No.	Department	M Tech programme	Gate subject admissibility					Seat Ma	atrix			Total
								Perso	ns with	Disabili	ties	
				OP	ОВС	sc	ST	OP	OBC	sc	ST	
1	Chemical Engineering	Chemical Engineering	СН	14	07	04	02	01	00	00	0	28
			Group-II Admission through GATE (EE / EC)	06	04	02	01	0	0	0	0	13
4	Civil Engineering	Structural and Construction	CE	14	07	04	02	0	1	0	0	28
5	Computer Science and Engineering	Engineering Computer Science and Engineering	CS/IT	14	07	04	02	0	0	1	0	28
6	Computer Science and Engineering	Information Security	CS/IT	05	02	02	01	0	0	0	0	10
7	Electronics & Communicat ion Engineering	Electronics & Communication Engineering	EC	14	07	04	02	0	1	0	0	28
8	Electronics & Communicat ion Engineering	VLSI Design	EC	05	02	02	01	0	0	0	0	10
9	Mechanical Engineering	Mechanical Engineering	ME	13	08	04	02	1	0	0	0	28
10	Textile Technology	Textile Engineering and Management	TF	14	08	04	02	0	0	0	0	28
				119	64	36	18	4	2	1	0	244

8.11 Seat Matrix for MSc(a) Eligibility

S. No	Programme	Department	Duration (Years)	Eligible BSc Degree	JAM PAPER	Special Eligibility Criteria
1	MSc in Physics	Physics	2	BSc (3 year regular) with Physics as a major subject and with an aggregate of minimum 60% or 6.5 CGPA (OC/OB) and 55% or 6.0 CGPA (SC/ST).	PH	The candidate must have studied Mathematics as compulsory subject in Bachelor's degree
2	MSc in Chemistry	Chemistry	2	BSc (3 year regular) with Chemistry as a major subject and with an aggregate of minimum 60% or 6.5 CGPA (OC/OB) and 55% or 6.0 CGPA (SC/ST)	CY	NIL
3	MSc in Mathematics	Mathematics	2	BSc or equivalent degree (3 year regular) with Mathematics as a major subject and with an aggregate of minimum 60% or 6.5 CGPA (OC/OB) and 55% or 6.0 CGPA (SC/ST)	MA	NIL

(a)Seat Matrix

(2)		Number of Seats												
Programme	ос	ОВ	sc	ST	OC-PWD	OB-PWD	SC-PWD	ST-PWD	Total					
MSc in Physics	15	8	5	2	1				31					
MSc in Chemistry	15	8	4	3	-		1		31					
MSc in Mathematics	16	8	4	2	-	1			31					

# 8.12 Seat Matrix for MBA

	S.N	Name of Programme	OP	OBC	SC	ST	Total
ĺ	1	MBA	15	08	05	02	30

# 8.13 Seat Matrix for PhD

	S.N	Name of Programme	OP	OBC	SC	ST	Total
ĺ	1	PhD in various discipline	50	27	15	80	100

# 9. SEMESTER FEE AND OTHER CHARGES

Sr. No.	Programme	Revised fee(Tuition fee)/yr
1	B tech	Rs 70,000/-
2	Mtech/ MBA	Rs 70,000/-
3	M. Sc	Rs 15,000/-
4	Ph.D	Rs 15,000/-

# **Other Charges**

		Revised fee (As recommended by the
S No.	Particulars	committee)
Main Ac	count	
1	Admn./Registration Fee	500
2	Library fee	200
3	Alumni Home Charges	200
4	Room Rent (only for hostlers)	1500
Total		2400
Examina	ation Account	
5	Examination Fee	500
Total		500
Hostel F	Fund Account	
6	Mess and utensil fee	100
7	Hostel Maintenance	500
8	Hostel and mess establishment charges	400
Total		1000
Security	/ Fund (Refundable)	
9	Institute caution money (At the time of admission)	5000
Total		5000
Student	fund account	
10	Stationery fee/Project fee	100
		2

11	Students welfare fee	200
12	Medical fee	300
13	Identity card fee (One time)	100
14	Students activity fee	1200
15	International/National conferences	400
16	Internet fee	350
Total		2650
Develo	opment fund account	
17	Development fee	3000
Total		3000
Fee ac	count	
18	Medical insurance fee (yearly)	500
Total		500
Grand	total	15050

### 9.1 Mode of payment

All institute dues could be paid by online banking Account no 65236072258, IFSC Code-STBP0000841, State Bank of Patiala, NIT Branch.

### 10. Power to Modify

Notwithstanding all that has been stated above, the Senate can modify any of the above regulation from time to time.

# 11. AWARDS

### 11.1Institute Awards/Medals

- Chairperson's gold medal is awarded to the overall topper of the institute at BTech level.
- A gold medal is awarded to the topper of each branch at BTech, MSc and MTech level.

# 11.2Scholarship

Scholarship	Eligibility/Amount
Akash Saxena Memorial Scholarship	Rs. 10000/- with a Certificate to the topper in CSE branch up to six semesters at BTech level
ONGC Scholarship for ME and CH students	Rs. 5000 per month for 3 <sup>rd</sup> year topper student
Top Class Central Sector Scholarship for SC/ST students (GOI Sponsored)	Annual income less than Rs.4.5 Lacs. Top 12 SC students and Top 5 ST students admitted through JEE (Main).
Post matric Scholarship for SC students of Punjab	The post Matric scholarship will be awarded by the Pb. Govt. to the SC students whose annual income is less than Rs.2.5 lacs.

# 12. HOSTELS

There are eight boys' hostels (including one mega hostel) and three girls' hostels. The facilities of reading room, indoor games, etc. are available in each hostel. Internet facility is provided in most of the hostels. Other facilities like LCD/ LED TVs, geysers, water purifiers and water coolers are provided in all the hostels.

### **Hostel Rules**

- i. The hostel facility is available to the regular students who are on the rolls of the institute depending upon the availability. The students who wish to stay with their parents or guardians outside the campus may be allowed to do so with the permission of the competent authority.
- ii. Hostel wardens are appointed for each hostel and they exercise 'general supervision' and 'control' over the inmates.
- iii. In case of any problem related to the hostel, the student should see the concerned Warden/Chief Warden/Dean Students Welfare.
- iv. Any case of illness by the hostler should be reported to the officials of the institute dispensary.
- v. No student should keep any fire-arm, lethal weapon, alcohol/drug, poisonous thing or intoxicant of any kind in the hostel and anyone found guilty of having committed a breach of the rule, shall be liable to be expelled from the hostel, apart from any other punishment that may be given to him/her by the Chief Warden/Institute Discipline Committee.
- vi. No student meeting will be held in the hostel premises without the prior written permission/approval of the concerned hostel Warden/Chief Warden/Dean Students Welfare.

- vii. The students shall make proper use of common rooms having newspapers, allied literature and other articles required for indoor games. The hostel warden will fix hours of the common room from time to time. The common room secretary and Joint Secretary will be responsible for the use of the common room. The warden shall nominate the Secretary/Joint Secretary in the first instance.
- viii. While visiting the dining hall, the common room and canteen, the students should be in their proper dress.
- ix. All the boarders shall vacate the hostel rooms before they leave for vacation so that annual repairs and white washing etc. may be carried out. All the hostel articles issued to the students should be returned to the hostel office before they leave the hostel. They will be responsible for the loss, if any, and which will be recovered from them.
- x. The mess of various hostels operates on cooperative basis. A committee of the students from every hostel manages the affairs of the mess.
- xi. Possessing any kind of motorized vehicle, e.g. car, scooter, motorcycle, moped etc. by the hostlers is not permitted.
- xii. Any hostler is allowed to go to his/her home (only) during vacations/week ends against intimation to the hostel office.
- xiii. All of the hostel inmates are required to deposit an advance of Rs 18,000/- (or as decided from time to time) per semester with the hostel-clerk to join the mess.
- xiv. All of the hostel inmates are required to follow the norms of the hostel/mess.
- xv. Institute does not own the responsibility of theft and loss of any items possessed by the inmates. However, in the interest of inmates they may insure their valuables.
- xvi. Mess facility is mandatory for all hostel inmates.
- xvii. All of the hostlers are required to observe the hostel timings strictly as notified by the hostel administration from time to time.

#### **Council of Wardens**

Wardens	Hostel No	Email
Dr. Anish Sachdeva	Chief Warden	asachdeva@nitj.ac.in
Dr. Uma Shankar	Hostel No. 1, Warden	shankeru@nitj.ac.in
Dr. Shailendra Badhuria	Hostel No.2, Warden	bhaduriass@nitj.ac.in
Dr. AditiyaParkash	Hostel No.3, Warden	prakasha@nitj.ac.in
Dr. Abhinav Partap Singh	Hostel No. 4, Warden	jaiswarsinghap@nitj.ac.in
Dr. Kumar Parag	Hostel No. 5, Warden	paragk@nitj.ac.in
Dr Harsh Manchanda	Hostel no. 6, Warden	manchandah@nitj.ac.in
Dr. Rizwan Khan	Hostel No. 7 and Dy Chief Warden	khanar@nitj.ac.in
Dr. Praveen Malik	Mega Boys Hostel Block 'B', Warden	malikp@nitj.ac.in
Prof.Ashish Raman	Mega Boys Hostel Block 'A', Warden	ramana@nitj.ac.in
Dr. Virender Singh	Mega Boys Hostel Block 'F', Warden	singhv@nitj.ac.in
Dr. JaspreetKaur	Hostel No. GH-1, Warden	rajputj@nitj.ac.in
Dr. Sangeeta Garg	Mega Girls Hostel, Warden	gargs@nitj.ac.in
Dr. Sarbrinder Kaur	Hostel No. G H-2 and Dy Chief Warden	kaurs@nitj.ac.in

For Phone numbers please see telephone directory at the end of this prospectus

In case of emergency, students shall have to take special permission in advance from the concerned warden to stay out for late hours. The authority and the mode to operate the hostel funds is decided by the Director. The amendments in the hostel rules and other related matters can be made by the Director.

# Allotment of room in the hostel

- i. The student must be personally present to take possession of allotted room.
- ii. The student may be allowed to choose his/her roommates.
- iii. The boarder shall not be entitled to retain accommodation in the hostel beyond his/her normal period of study.
- iv. No boarder is allowed to change his/her room without the permission of the Warden.
- v. The boarder shall have to vacate accommodation as and when asked for.

#### **Room Inventory**

Every boarder is provided with a chair, a table and a cot. She/he will be responsible for these items and other electrical fittings etc. Furniture and electrical fittings are not to be removed from one room to another. Every boarder has to see that no damage has been made to the hostel property. Fittings and repair charges for any damage (intentional or negligence) have to be borne by the boarder concerned.

### Discipline

All the students are required to maintain good discipline and congenial environment while studying in the Institute. The students shall not indulge in such activities amounting to an act of indiscipline and misdemeanor such as:

- i. Taking out processions and holding demonstration in the campus.
- ii. Gheraoing, intimidating and threatening the faculty/staff/students.
- iii. Interfering with the functioning of various committees.
- iv. Disturbing the classes, assaulting teachers and students taking examination or in any other academic activity.
- v. Defacing the building or any structure by writing slogans and pasting bills, damaging the institute property.
- vi. Keeping in possession any lethal weapon and bullet, unwanted/harmful instrument.
- vii. Possessing and/or consuming alcoholic liquor/drugs.
- viii. Rash driving, driving on the pedestrian path, triple riding, and parallel driving in restricted areas/institute campus.
- ix. Making obscene gestures in the campus while roaming and sitting in and around the campus.
- x. Keeping motorized vehicles by the students in the hostels.
- xi. Use of mobile phone in the classes and examination centre.

Any other acts of indiscipline decided by the competent authority not befitting to the presentation of the students.

Any student, with the intention of causing indiscipline or with the knowledge that he/she is likely by such act to cause indiscipline may be imposed penalty as mentioned below:

- i. Cancellation of admission.
- ii. Suspension from attending classes.
- iii. Withholding/withdrawing scholarship/fellowship and other benefits.
- iv. Debarring from appearing in any test/examination or other evaluation processes.
- v. Withholding result.
- vi. Debarring from representing the institution in any national or international meet, tournament, youth festival, conference etc.
- vii. Suspension/expulsion from the hostel.
- viii. Rustication from the institution
- ix. Expulsion from the institution and consequent debarring from admission in other institutions.
- x. Fine up to Rs. 50,000/-
- xi. Collective punishment will be awarded if the individuals committing indiscipline are not identified.

### Withdrawal/Expulsion from the Hostels

- i. After the general allotment, application for withdrawal from the hostel should be counter-signed by the father/guardian and submitted to the hostel warden. It should also be ensured that the student does not owe any hostel dues.
- ii. The Director/Chief Warden may expel a boarder from the hostel, if he/she is in the habit of staying away without intimation to the hostel office, or hostel fee and mess dues are not cleared in time.
- iii. Students who do not clear their dues, such as dues of the hostel mess, canteen, fine etc. by the prescribed date will not be registered for the subsequent semester until and unless, they clear all their dues and submit "No Dues Certificate" from the account section and the concerned hostel warden. The students who leave the institute after completing the degree requirements or otherwise, their result as well as the provisional certificate/ degree will be withheld till "No Due Certificate" is produced.
- iv. No boarder shall leave the hostel without handing over the charge of the room.

#### Students' Guests

- i. Guests are not, ordinarily, permitted to stay in the hostels except in the case of father/ brother and mother/sister (in case of girl students) provided he/she comes from a far off place. The student must get permission for the stay of his/her guest in the hostel from the concerned warden.
- ii. Female guests are not permitted to stay in boy's hostel. Likewise male guests are not permitted to stay in the girls hostel.
- iii. A boarder keeping a guest without the prior permission of the Warden is liable to be penalized.
- iv. No hosteller is permitted to stay/sleep in the room of other student during daytime/night even with his/her consent.

### **Proper use of Electric Power**

- i. Light, fan etc. must be switched off when not in use.
- ii. The use of electric heater, electric rod, air conditioner etc. and other similar appliances in the hostel rooms are prohibited.
- iii. Boarders are warned against tampering with electric installation, and for all electric repairs, the electrician should be called in.

# 13. COMMON FACILITIES AND CO-CURRICULAR ACTIVITIES

### 13.1 The Students' Activity Centre (SAC)

The Students' Activity Centre is the nerve Centre of all the student activities on the campus. The Centre comprises of a club building, gymnasium hall, open-air theatre, and hobbies workshop, which cater to various extra-curricular activities of the students.

#### 13.2 Canteen

Day and night canteen facility is available for the students, staff and faculty.

### 13.3 Book Shop

There is a bookshop situated in the shopping complex of the institute, where Xerox facility is also available. Additionally, a separate Xerox facility is available in the Library.

# 13.4 Students' Counseling Service (SCS)

Faculty members are appointed as Academic Counselors for each batch and each discipline. Academic Counselors assist the students in sorting out their difficulties and dilemmas relating to their living in campus - away from their homes and competitive academic pressures.

### 13.5 Technical Club

Technical Club functions under "clubs and hobbies activities" of the institute. The objective of the technical club is to bring together faculty and students on a common platform to exchange ideas, share knowledge on emerging technologies.

### 13.6 Benevolent Fund Scheme

The institute has setting up NIT Benevolent Fund Scheme for the benefit of its students. All students admitted to the institute are required to donate an amount of Rs. 100/- on one time basis. This amount shall be claimed from the student at the time of their first registration.

# 13.7 Medical Facilities

The institute has a dispensary in the campus to provide the medical assistance to the students round the clock. The consultation is also provided to the members of the faculty/staff residing in the campus. In case of medical emergency, the ambulance van is available 24 hours for taking patient(s) to other hospitals for the necessary treatment.

Name	Designation	Qualification	Email
Dr Tarun Sehgal	Medical Officer	MBBS	sehgalt@nitj.ac.in

### 13.8 Bank and Post office

There are two banks and a post office in the institute premises to cater the need of the campus residents. Further, the ATMs by State Bank of Patiala and Canara Bank remain functional round the clock.

### 13.9 Newsletter

The Institute brings out half yearly newsletters reflecting activities of students, faculty and staff in each year.

# 13.10 Identity cards

Every student is required to keep with his/her identity card issued by the institute while moving in or outside the campus. .

#### 13.11 Curricular Activities

Extra-curricular activities for the odd semester (August-December 2015) have been planned as mentioned below. It shall be notified at the appropriate time. The faculty advisor shall notify rules concerning different competitions two weeks before the start of each competition. The information concerning rules can also be obtained personally from the concerned faculty advisor.

### List of Events

Sr	Competitive Event
No.	
1.	Photography Exhibition (Student's own work)
2.	Extempore
3.	Skit Competition
4.	On the spot Painting Competition cum Exhibition
5.	Debate Competition
6.	Geet/Ghazal Competition

7.	Rangoli Competition
8.	Instrumental Solo (Indian or Western) Competition
9.	Exhibition of Individual Collection of Stamps and
	Coins
10.	On the spot Sketching Competition cum Exhibition
11.	Creative Writing
12.	Abhiyakti
13.	Hindi Phakhwara

Students desirous of becoming office bearers/executive members are advised to appear for personal interview at the office of the respective faculty advisor:-

- Music and Dramatics
- Fine Arts
- Literary and Debating

- Photography and other hobbies
- Hiking and Trekking
- SPIC-MACAY

All the notices concerning extra-curricular activities shall be put up at the exit point near reprographic centre of the Main Block. The faculty advisor shall announce the dates for trip of Hiking and Trekking Society two weeks in advance.

#### **DEPARTMENTS**

# CHEMISTRY

# **Faculty**

Name	Designation	Qualification	Email
Dr Jaspreet Kaur Rajput	Associate Professor & Head	PhD (Pbi. Uni)	rajputj@nitj.ac.in
Dr B S Kaith	Professor	PhD (PU)	kaithbs@nitj.ac.in

Dr N C Kothiyal	Professor	PhD (ISM)	kothiyalnc@nitj.ac.in	
Dr Rajeev Jindal Associate Professor		PhD (PU)	jindalr@nitj.ac.in	
Dr Harsh K Manchanda	Associate Professor	PhD (KU)	manchandah@nitj.ac.in	
Dr Sangeeta Obrai	Associate Professor	PhD (GNDU)	obrais@nitj.ac.in	
Dr Virender Singh	Assistant Professor	PhD (CDRI, Lucknow)	singhvirender010@gmail.com	
Dr Uma Shanker	Assistant Professor	PhD (IIT-Roorkee)	umaorganic29@gmail.com	

# **Academic Programme**

# PhD Programme

Full Time and Part Time PhD programmes in various areas: Smart Polymers, Biodegradable Composites, Nanotechnology, Synthetic Organic Chemistry, Co-ordination Complexes, Solution Thermodynamics and Environmental Chemistry are offered by the Department

### M. Sc. Programme

M. Sc. in Chemistry

# Special features of M. Sc. Chemistry

In addition to courses on Inorganic Chemistry, Organic Chemistry, Physical Chemistry, Analytical Chemistry and Spectroscopy the following courses are mandatory for all students:

- Intellectual Property Rights
- · Electronics for Chemists
- Computational Techniques for Chemists
- Pharmaceutical Chemistry
- Summer Training in IITs, IISER, NIPER, IISc, CSIR Labs, Good-University and Industries
- Scientific Documentation and Presentation Skills
- Project work in III and IV semesters
- Comprehensive written exam and viva voce at the end of the IV semester
- More than 05 departmental electives to be chosen by students as per their aptitude

# **Research and Development Activities**

The faculty members of the department are actively carrying-out research on areas like: Smart Polymers, Biodegradable Composites, Nanotechnology, Synthetic Organic Chemistry, Co-ordination Complexes, Solution Thermodynamics and Environmental Chemistry.

### **Laboratory Facilities**

- Undergraduate Chemistry Laboratory
- Instrumental Chemical Analysis Laboratory / Computer Lab
- Physical Chemistry Lab
- Synthetic Chemistry Lab
- R & D Cum Project Lab

# **Sponsored Projects Completed**

Modernization of Chemical Instrumentation Laboratory (MODROB Project).

Assessment and Control of Lead Pollution from Vehicular Emission in Urban Environment of Punjab.

Distribution of Heavy Metal Pollutants in Aquatic Environment of Punjab.

Biodegradation of Tannery Waste, R&D project AICTE, New Delhi

# 2 HUMANITIES AND MANAGEMENT

### Faculty

Name	Designation	Qualification	Email
Dr S Ghosh	Professor & Head	PhD (IITD)	ghoshs@nitj.ac.in
Dr S J S Bedi	Associate Professor	PhD (GJUST)	bediss@nitj.ac.in
Dr Jagwinder Singh	Assistant Professor	PhD (PU)	singhj@nitj.ac.in
Dr Kumar Parag	Assistant Professor	PhD (AU)	paragk@nitj.ac.in
Dr Aditya Prakash	Assistant Professor	PhD (JNU)	prakasha@nitj.ac.in

# **Academic Programmes**

# **Under Graduate Programmes**

The department offers the core and elective courses to the B Tech students of all the disciplines. The compulsory courses in theB Tech stream are Introduction to Management, Human Values and Behavior, English Communication, English Communication Laboratory, Engineering Economics and Industrial Management, Entrepreneurial Development and Management, Financial and Cost Accounting, Human Resource Management and Industrial Relations whereas open

electives courses offered include Marketing Management, Organizational Behavior, Business Environment, Knowledge Management, Business Ethics, Logistics & Distribution Management, Industrial Psychology and Readings in Literature and Linguistics.

### **Soft-Skills and Personal Interviews Programme**

In order to equip the students with the skills required to face the campus and off-campus interviews, the department offers a compulsory course "Soft-Skills and Personal Interviews Programme" to all the BTech third year students of all the branches. The programme enhances the employability of engineering students and helps to bridge the gap between industry expectations and their current skill set. Their hard technical skills coupled with the desired soft skills impart our budding engineers a winning edge and make them **Job-Ready**.

### **PostGraduate Programme**

The department offers two years full time MBA programme at par with leading management schools with specialization in Human Resource Management, Marketing Management, Financial Management and Information Technology.

### **PhD Programme**

The department offers Full / Part Time PhD Programme in Business Management (Human Resource Management, Strategic Management, Marketing Management and Entrepreneurship Development & Management) & English Literature and Linguistics.

# **Laboratory Facilities**

**Communication Laboratory:** Communication leads to empowerment. To empower a student, a communication laboratory plays a pivotal role. It helps to polish and enrich the communication skills of the students. The objective is to groom an engineer with strong spoken and written communication skills.

**Computational Laboratory:** Computational laboratory is an essential source of learning. It not only broadens the horizon and intellect of a student but also helps him to be articulate in his approach. Any formal medium of education is incomplete without information technology. Therefore, the department has specially setup the computational laboratory for the students.

### **Research & Development**

Research is central to the vision of the department and consistent with this, a thriving research culture has been developed. The department has achieved significant success in terms of publications in internationally referred journals. In addition, an inclination towards research is evident in faculty members of the department who actively present and publish research work, reference papers and articles in national and international journals & conferences.

### **Consultancy Projects**

Consultancy is an essential component in public-private partnership. It helps to understand the requirement of the industry and to design the courses for the students accordingly. The department offers consultancy in the field of Entrepreneurship Development and Management, Marketing Management, Human Resource Management, English Literature & Linguistics, communication and Soft Skills.

# MATHEMATICS

### Faculty

Name	Designation	Qualification	Email
Dr Geeta Partap Associate Professor & Head F		PhD (KUK)	pratapg@nitj.ac.in
Dr Jaspal Singh Aujla	Professor	PhD (PU)	aujlajs@nitj.ac.in
Dr Sheo Kumar	Professor	PhD (IITD)	kumars@nitj.ac.in
Dr Damanjit Kaur	Associate Professor	PhD (HPU)	kaurd@nitj.ac.in
Dr Raghaw Raman Sinha	Assistant Professor	PhD (BHU)	sinharr@nitj.ac.in
Alka Bhalla	Associate Professor	MSc(GNDU), MPhil(PU)	bhallaa@nitj.ac.in

# **Academic Programmes**

**M Sc Mathematics** 

# PhD (Full and Part Time)

In addition to the above mentioned programmes, B Tech/MTech core/elective courses are offered by the department to the engineering disciplines

# **Research and Development**

The faculty of the department is interested in the following research areas: Wavelet & Finite Element Methods for Partial Differential & Integral Equations, Numerical analysis and Computer Programming, Linear Algebra, Operator Theory, Matrix Analysis, Statistics, Applied Mathematics (Mechanics of Solids), Micro Polar Elasticity.

Dr.Jaspal Singh Aujla has been selected as Senior Associate for a period of six years (2011-2016) at Abdul Kalam International Centre for Theoretical Physics, Trieste, Italy.

### **Laboratory Facilities**

Computing Laboratory for M Sc/PhD programme

#### 4 PHYSICS

# Faculty

Name	Designation	Qualification	Email
Dr Rohit Mehra	Associate Professor & Head	PhD (GNDU)	mehrar@nitj.ac.in
Dr Arvinder Singh	Professor	PhD (GNDU)	arvinders@nitj.ac.in
Dr Sarabjeet Singh	Professor	PhD (UR)	singhs@nitj.ac.in
Dr H M Mittal	Associate Professor	PhD (DU)	mittalhm@nitj.ac.in
Ms Jyoti Bharj	Associate Professor	MSc (KUK)	jyoti@nitj.ac.in
Dr Harleen Dahiya	Assistant Professor	PhD (PU)	dahiyah@nitj.ac.in
Dr Praveen Malik	Assistant Professor	PhD (TIET)	malikp@nitj.ac.in
Dr A P Singh	Assistant Professor	PhD (JNU)	abhi.pr.s@gmail.com
Dr Arvind Kumar	Assistant Professor	PhD (IITD)	iitd.arvind@gmail.com

### **Academic Programmes**

# **M Sc Physics**

A two year MSc programme in physics is being offered by the department w.e.f. Session 2006-2007.

# **PhD Programmes**

Full time and part time PhD Programmes in area of Laser-Plasma Interaction, Applied Electromagnetics, Nuclear Physics, High Energy Physics, Radiation Physics, Liquid Crystal and Condensed Matter Physics are offered by the department In addition to the above mentioned programmes, BTech/MTech core/elective courses are offered by the Department to the engineering disciplines

# **Research and Development**

The faculty in the department has interest in the following research areas:

Laser-Plasma Interaction, Applied Electromagnetics, Material Science, Nuclear Physics, High Energy Physics, Radiation Physics, Liquid Crystal, Condensed Matter Physics.

# **Laboratory Facilities**

# For Undergraduate Programme:

- Applied Physics Laboratory
- Material Science Laboratory
- Fiber Optics and Laser Laboratory

# For Postgraduate Programme

- Electronics Laboratory
- Scientific Computation Laboratory
- Solid State Physics Laboratory

# **Research Laboratory**

- Computational Plasma Laboratory
- Radiation Physics Laboratory
- Liquid Crystal Laboratory
- High Energy Physics & Computational Laboratory

### **Sponsored Projects Undertaken**

- Modernization of Applied Physics Laboratory
- Electrical Properties of Polymers
- Modernization of Fiber Optics Laboratory

# **Sponsored Project on going**

- Some universal features of Nuclear Structure in Super Deformed Nuclei
- Measurement of Radon, Thoron and progeny distribution in different type of houses in Bathinda, Mansa, Muktsar and Faridkot district of Punjab
- Measurement of Radon, Thoron and their Progeny Distribution in the Different Type of Houses and Natural radioactivity in Soil in Hanumangarh, Churu and Sri Ganganagar Districts of Rajsthan
- Hyperon Semi-leptonic Decays in the Chiral Constituent Quark Model
- Electromagnetic Structure of hadrons at low Q<sup>2</sup>
- Electro-optic and dielectric studies in nanomaterial dispersed ferroelectric liquid crystals
- Strangeness and Charmless in Heavy-Ion Collision Experiments

- Nuclear Physics Laboratory
- Plasma Physics Laboratory
- Spectroscopy Laboratory

### 5. BIOTECHNOLOGY

# **Faculty**

Name	Designation	Qualification	Email
Dr A K Jana	Professor and Head	PhD (IITD)	janaak@nitj.ac.in
Dr Nitai Basak	Associate Professor	PhD (NITJ)	basakn@nitj.ac.in

### **Academic Programmes**

BTech in Biotechnology

# **Postgraduate Programme**

Full and Part Time PhD Programmes in Biotechnology

# **Laboratory Facilities**

- Microbiology Laboratory
- Biochemistry Laboratory
- Bioprocess Engineering Laboratory
- Molecular Biology and Genetic Engineering Laboratory
- Immunology Laboratory

- Cell and Tissue Culture Laboratory
- Separation Process in Biotechnology Laboratory
- Bioinformatics Laboratory
- Bioprocess Modelling and Simulation Laboratory
- Environmental Biotechnology Laboratory

### **Achievement of Students**

- Mr Sujit J Patil, B.Tech Final Year passing out 2015, obtained All India Rank 2 in GATE 2015
- Ms Ankita, B.Tech Final Year passing out 2014, obtained All India Rank 12 in GATE 2014
- Mr Kapish Gupta B.Tech Final Year passed out 2012, obtained All India Rank 2 in GATE 2012
- Mr Kapish Gupta B.Tech Final Year passed out 2012, obtained All India Rank 5 in CSIR-UGC NET 2012

### **Research and Development**

The faculties of the department are working in the research areas: Microbial Biotechnology, Enzyme Technology, Bioprocess Engineering, Green Biofuel production, Environmental Biotechnology.

#### CHEMICAL ENGINEERING

### **Faculty**

Name	Designation	Qualification	Email
Dr S Bajpai	Associate Professor & Head	PhD (NITJ)	bajpais@nitj.ac.in
Dr M K Jha	Professor	PhD (ISM)	jhamk@nitj.ac.in
Dr Ajay Bansal	Associate Professor	PhD (PU)	bansala@nitj.ac.in
Dr Renu Bansal	Associate Professor	PhD.(NITJ)	bansalr@nitj.ac.in
Dr Poonam Chadha	Associate Professor	PhD.(NITJ)	chadhap@nitj.ac.in
Dr Sangeeta Garg	Associate Professor	PhD.(NITJ)	gargs@nitj.ac.in
Sh N K Srivastava	Associate Professor	MTech (IITR)	srivastavank@nitj.ac.in
Ms Rubal Preet	Assistant Professor	MTech (NITJ)	preetr@nitj.ac.in
Dr Jatinder Kumar Ratan	Assistant Professor	PhD (NITJ)	kumarj@nitj.ac.in
Dr Neetu Divya	Assistant Professor	PhD (NITJ)	divyan@nitj.ac.in

# Academic Programmes Undergraduate Programme

BTech in Chemical Engineering

# **Postgraduate Programmes**

Full and Part Time MTech in Chemical Engineering
Full and Part Time PhD Programmes in Chemical Engineering

# **Laboratory Facilities**

- Fluid Mechanics Laboratory
- Unit Operations Laboratory
- Energy Engineering laboratory
- Chemical Technology Laboratory
- Heat Transfer Laboratory
- Mass Transfer Laboratory

- Chemical Process Control and Reaction Engineering Laboratory
- Pollution Abatement Laboratory
- Bio-Chemical Engineering Laboratory
- Process Modeling and Simulation Laboratory
- Departmental Computer Centre

### **Research and Development**

The faculty members of the department are actively engaged in guiding research in the areas of Chemical Engineering, Biochemical Engineering, Petroleum Engineering, Energy and Environment, Biodegradable Plastics, Multiphase Flow etc.

# **Sponsored Projects**

- Effective Pollution Abatement and Efficient Biogas Generation from Molasses based Industrial Effluent
- Modernization of Chemical Technology Laboratory
- Modernization of Fuel Technology laboratory
- Modernization of Industrial Pollution Abatement Laboratory
- Thrust Area Project on Production, Recovery and Application of Enzymes
- Modernization of Chemical Process Control Laboratory
- TEQIP project for creating Bio-Engineering facility, up gradation of Mass Transfer Laboratory and expansion of Fluid Mechanics Laboratory
- Study on Treatment of Groundwater of AB Sugar Ltd

# CIVIL ENGINEERING

# Faculty

Dr A P Singh	Professor & Head	PhD (PTU)	singhap@nitj.ac.in
Dr A K Agnihotri	Professor	PhD (UOR)	agnihotriak@nitj.ac.in
Dr Partap Singh	Professor	PhD (PU)	singhp@nitj.ac.in
Dr S P Singh	Professor	PhD (UOR)	spsingh@nitj.ac.in
Sh Davinder Singh	Assistant Professor	ME (PU)	singhdj@nitj.ac.in
Dr Rizwan Ahmad Khan	Assistant Professor	PhD (IITD)	khanar@nitj.ac.in
Ms Shailja Bawa	Assistant Professor	MTech (PU)	bawas@nitj.ac.in

# AcademicProgrammes.

# **Undergraduate Programme**

BTech in Civil Engineering

### **Postgraduate Programmes**

MTech Full Time and Part Time in Structural and Construction Engineering PhD Full Time and Part Time in various specializations of Civil Engineering

# **Laboratory Facilities**

- **Environmental Engineering Laboratory**
- Geotechnical Engineering Laboratory
- Structures Testing Laboratory
- Concrete Technology Laboratory
- Transportation Engineering Laboratory

- Survey Laboratory
- **CAD Laboratory**
- Structural Analysis Laboratory

# **Research and Development**

The faculty of the department has interest in the following research areas:

Structural Analysis and Design: Computer Applications and Finite Element Analysis Techniques, Linear and Non-linear Analysis.

Structural Materials: Applications of Steel Fibre Reinforced Concrete in Structural Components, Permeability Studies, High Performance Concrete, Fatigue Behaviour.

Geo-technical Engineering: Applications of Geotextiles and Geo-fibres in Foundation Engineering, Reinforced Soil Systems.

Geo-environmental Engineering, Pavement Design

As part of its efforts in forging a close relationship with the industry, the department maintains a close liaison with various government/public and private sector organizations by virtue of rendering them consultancy services in most of areas viz. structural analysis and design of steel and concrete structures, material testing, geotechnical investigations and survey work.

# **Sponsored Projects**

- UKIERI Collaborative Research Project -on Sustainable High Performance Concrete Infrastructure.
- Modernization of Concrete Structure Laboratory
- Earthquake resistant Design of reinforced concrete structural members.
- Modernization of Geotechnical Engineering Laboratory
- Engineering properties of fibre reinforced soil and its applications to shallow foundations
- Modernization of Surveying Laboratory
- Permeability of Steel Fibre Reinforced Concrete.
- **DST-FIST Project**

# COMPUTER SCIENCEANDENGINEERING

### **Faculty**

Name	Designation	Qualification	Email
Dr Renu Dhir	Associate Professor & Head	PhD (Pbi U)	dhirr@nitj.ac.in
Dr Ajay K Sharma	Professor (on lien to NIT Delhi)	PhD (KUK)	sharmaajayk@nitj.ac.in
Dr A L Sangal	Professor	PhD (NITJ)	sangalal@nitj.ac.in
Dr Harsh K Verma	Associate Professor	PhD (PTU)	vermah@nitj.ac.in
Sh D K Gupta	Associate Professor	MTech (NITJ)	guptadk@nitj.ac.in
Dr Geeta Sikka	Associate Professor	PhD (NITJ)	sikkag@nitj.ac.in
Sh Rahul Aggarwal	Assistant Professor	B Tech (GNDU)	aggarwalr@nitj.ac.in
Ms Rajneesh Rani	Assistant Professor	MTech (Pbi U)	ranir@nitj.ac.in
Dr Paramvir Singh	Assistant Professor	Ph.D (GNDU)	singhpv@nitj.ac.in

# Academic Programmes Undergraduate Programme

B Tech in Computer Science and Engineering

# **Postgraduate Programmes**

MTech (Full Time and Part Time) Programmes in Computer Science and Engineering MTech(Full Time) Programme in Information Security PhD (Full and Part Time) Programmes in Computer Science and Engineering

### **Laboratory Facilities**

- RDBMS
- Wireless Data and optical Networks
- Linux
- Computer Programming
- Microprocessor
- Project Laboratory
- Computer Network
- · Robotics and Artificial Intelligence

- Natural Language &Pattern Recognition
- Data Communication
- Embedded Systems
- Software Engineering
- Information Security
- Computer Graphics
- Operating Systems
- Digital Circuit Logic Design

### **Research and Development**

The faculty of the department has interest in the following research areas: Algorithms, Information Security, Numerical Analysis and Scientific Computing, Wireless and Optical Computer Networks, Distributed Systems, Software Systems and Natural Language Processing.

### **Sponsored Projects and Lab Development**

- Information Security Education and Awareness (ISEA) Project
- Modernization of Robotics and Artificial Intelligence Laboratory
- Modernization of PC Maintenance and Audio Visual Laboratory
- Modernization of Microprocessor Laboratory
- Setting up of Advanced RDBMS Laboratory
- Setting up of Advanced Wireless Data & Optical Networks Lab
- Setting up of Advanced Sensor Networks Lab.

# **ELECTRONICS AND COMMUNICATION ENGINEERING**

# Faculty

Name	Designation	Qualification	Email
Dr B S Saini	Associate Professor & Head	PhD (NITJ)	sainibs@nitj.ac.in
Dr R K Sarin	Professor	PhD (St. Petersburg)	sarinrk@nitj.ac.in
Dr A K Khosla	Associate Professor	PhD (IPU)	khoslaak@nitj.ac.in
Dr Mamta Khosla	Associate Professor	PhD (NITJ)	khoslam@nitj.ac.in
Dr Ramesh K Sunkaria	Assistant Professor	PhD (IITR)	sunkariak@nitj.ac.in
Dr Indu Saini	Assistant Professor	PhD (NITJ)	sainii@nitj.ac.in
Dr Neetu Sood	Assistant Professor	PhD (NITJ)	soodn@nitj.ac.in
Sh Ashish Raman	Assistant Professor	MTech (GSIT)	ramana@nitj.ac.in

Dr Balwinder Raj	Assistant Professor	PhD (IITR)	rajb@nitj.ac.in
Ms Deepti Kakkar	Assistant Professor	MTech (PU)	kakkard@nitj.ac.in

# Academic Programmes Undergraduate Programme

B Tech in Electronics and Communication Engineering

### **Postgraduate Programmes**

MTech in Electronics and Communication Engineering (Full time) MTech in VLSI (Full time)

Full and Part Time PhD Programmes in Electronics and Communication Engineering

#### Laboratories

- VLSI Design Laboratory
- Embedded SystemsLaboratory
- Biomedical Signal Processing and Telemedicine Laboratory
- Digital SignalProcessingLaboratory
- Devices and Circuits Laboratory

- Communication System Laboratory
- Basic ElectronicsLaboratory
- Emerging Technologies Laboratory
- Microwave Engineering Laboratory

### **Research Areas**

VLSI Design, RF Design, Semiconductor Device modeling, Biomedical Signal Processing, Machine learning, Physiological Variability Studies, ECG Signal Analysis and Interpretation, Image Processing, Wireless Systems design, OFDM and next generation wireless systems, Cognitive Radio.

# **Sponsored Projects**

- Up gradation of Basic Electronics Lab
- Investigations on Reconfigurable Systems
- Special Manpower Development Programme in the Area of VLSI Design (SMDP-II)
- Investigations on Reconfigurable Systems
- Mobile e-Learning Terminal Project (in association with IITR) 2010-2011 (completed) with grant of 25 lacs
- Collaborative project: Establishment of a database of ECGs recorded from a healthy native Indian population (2008-2013) undergoing with grant of 10 lacs
- Soft Computing based Techniques for Modeling of Engineering and Medical Imaging Systems with grant of 8 lacs

# 10 INDUSTRIAL AND PRODUCTION ENGINEERING

### **Faculty**

Name	Designation	Qualification	Email
Sh R K Bansal	Associate Professor & Head	ME (IITD)	bansalrk@nitj.ac.in
Dr R K Garg	Professor	PhD (TIET)	gargrk@nitj.ac.in
Dr Arvind Bhardwaj	Professor	PhD (KUK)	bhardwaja@nitj.ac.in
Dr Sarabjit Singh Bal	Associate Professor	PhD (NITJ)	balss@nitj.ac.in
Dr Vishal S Sharma	Associate Professor	PhD (KUK)	sharmavs@nitj.ac.in
Dr Ajay Gupta	Associate Professor	PhD (NITJ) MBA (IGNOU)	guptaa@nitj.ac.in
Dr Anish Sachdeva	Associate Professor	PhD (IITR)	asachdeva@nitj.ac.in
Dr Lakhwinder Pal Singh	Assistant Professor	Ph.D (NITJ)	singhl@nitj.ac.in
Dr Shailender Singh Bhadauria	Assistant Professor	PhD (NIT Bhopal)	bhadauriass@nitj.ac.in
Sh Rajeev Trehan (*)	Assistant Professor	MTech (NITJ)	trehanr@nitj.ac.in

(\*)Sh Rajeev Trehan, Assistant Professor, Centre of Training and Placement are involved in the Department of Industrial and Production Engineering for teaching of UG & PG courses.

# Academic Programmes Undergraduate Programme

B Tech in Industrial and Production Engineering.

# **Postgraduate Programmes**

MTech in Industrial Engineering (Part-Time)
MTech in Manufacturing Technology (Full-Time)
Full and Part Time PhD Programmes in Industrial and Production Engineering

#### Laboratories

- Metrology and Mechanical Measurements Laboratory
- Computer Aided Manufacturing and Automation Laboratory (CAMAL).
- Modern Tool Room/Non Traditional Machining Methods Laboratory.
- Work-study and Ergonomics Laboratory.
- Statistical Quality Control Laboratory.
- Metallurgy and Heat Treatment Laboratory is in process of being set up
- Computational and CAD Laboratory

# **Research and Development**

The faculty of the department has expertise in the following research areas: Non-Conventional Machining, Change Management, Human Factors Engineering, Supply Chain Management, Environment Management System and Sustainability, Fracture Mechanics, Reliability & maintenance, Optimization of Production Systems, Technology Management, Metal Cutting and Occupational Health & Safety.

# **Sponsored Projects Handled**

- Modernization of Machine Tool Laboratory
- Numerical Control of Machine Tools
- Non-Traditional Machining Methods
- Modern Tool Room
- Modernization of Metrology Laboratory
- Technology gap Analysis study for Bicycle parts cluster in Ludhiana
- Technology gap analysis study for Sewing Machine cluster in Ludhiana

### PEO's of the Department

# To serve the nation by producing qualified and skilled engineers who will

- i. Excel in professional career and/or higher education by acquiring knowledge in Engineering, Computational and Statistical principles.
- ii. Have the ability to analyze real life problems and develop solutions that are technically sound, economically feasible and socially acceptable.
- iii. Exhibit professionalism, ethical attitude, communication skills, team work in their profession and adapt to current trends by engaging in lifelong learning.

# 11. INSTRUMENTATION AND CONTROL ENGINEERING

#### **Faculty**

Name	Designation	Qualification	Email
Dr Dilbag Singh	Associate Professor & Head	PhD (IITR)	singhd@nitj.ac.in
Dr A K Jain	Professor	PhD (NITJ)	jainak@nitj.ac.in
Sh Narinder Singh	Associate Professor	MTech (PAU)	singhn@nitj.ac.in
Dr Sarwan Kumar Pahuja	Associate Professor	PhD (IITD)	pahujas@nitj.ac.in
Ms Roop Pahuja	Associate Professor	MTech (IITR)	pahujar@nitj.ac.in
Dr Sheela Tiwari	Associate Professor	PhD (NITJ)	tiwaris@nitj.ac.in
Dr Kuldeep Singh Nagla	Associate Professor	PhD (NITJ)	naglaks@nitj.ac.in
Dr Rajesh Singla	Associate Professor	PhD (NITJ)	singlar@nitj.ac.in

# Academic Programmes

# **Undergraduate Programme**

B Tech in Instrumentation and Control Engineering

# **Postgraduate Programmes**

MTech (Full-Time) in Control and Instrumentation Engineering, MTech (Part-Time) in Control and Instrumentation Engineering, PhD Programmes - Full Time and Part Time

# Laboratories

- Analytical Instrumentation Laboratory
- Biomedical Instrumentation Laboratory
- Control Engineering Laboratory
- **Electrical Machines Laboratory**
- Fabrication Unit and Transducers Laboratory
- Measurement and Circuit Laboratory
- Microprocessor based Instrumentation Laboratory
- Computing Laboratory
- Process Control Instrumentation Laboratory
- Robotics Laboratory
- Signal Processing Laboratory
- Virtual Instrumentation Laboratory
- **Human Machine Interface Laboratory**
- Wireless Networks Laboratory

### **Research and Development**

The faculty members of the department have interest in the following research areas: Wireless Network, Bio Medical Instrumentation and Signal Professing, Medical Imaging, Wireless Sensor Network, Applications and Virtual Instrumentation, Power System Operation and Control/ Artificial Intelligence, Artificial in Human Machine Interface, Robotics.

# **Sponsored Projects**

- Collaborative Project on ECG data base for Indian Healthy Population with IITR and University of Glasgow (Completed)
- Laboratory up gradation under TEQIP-II grant (Ongoing)
- Robot for cleaning the surface below the railway tracks at Railway Platform (Completed)
- INDO-KOREAN joint R&D Project entitled "Real time shared autonomy systems for field mobile robots" (Joint research collaboration between NIT- Jalandhar and School of Electrical Engineering, Korea University, Seoul) (In process)

#### Consultancy

- Collaborative consultancy on performance testing of small Hydroelectric plants with AHEC, IIT Roorkee.
- R&D consultant to Steinbeis GmbH & Co. KG fur Technologietransfer, Willi-Bleicher-Strasse 19, Germany.

# **IPR (Intellectual Property Rights)**

### **Patents**

- Mechanism to Clean Bird Dropping (Garbage) within a Cage type Poultry Farm, Indian Patent no 210090, Granted on 18/9/2007, Inventor: KS Nagla
- An Intelligent Leg Exercise Machine, Patent application no 427/del/2007, First examination over, inventors: K S Nagla, Dr Moin Uddin, Amandeep Singh Kalra, Akshay Kathiyal.
- A Method and Mechanism to Control the Position and Orientation of Cleaning Nozzle of Robot, 2489/DEL/2009, Inventors: K S Nagla, Dr. MoinUddin, Dr. R Jha
- Patent applied entitled "Induction Hardening Machine" with DAV Institute of engineering and Technology, Jalandhar, Patent application number 2269/del/2012, inventors Amit Kohli, KS Nagla, Hari Singh

### **Designs**

- Decorative Article, Indian Design No 207315, Granted on 6th Dec., 2006, Designer: KS Nagla
- Industrial design Heat treatment tray, Indian Design No 254948, Granted on 3/7/2013
- Indian design patent titled "Door Handle", Indian Design no 265973, Granted on 20-02-2015

### Copy Rights

- Gralu kam karj lai bhawikh which robots the jogdan ©L-37672/2011 Dt. 18/03/2011, Copy Right of Dr KS Nagla
- Solar water heating system ate is the mohatav @L-37671/2011, Dt. 18/03/2011, Copy Right of Dr KS Nagla
- IPR Ki Hai ©L-37370/2011, Dt. 18/03/2011, Copy Right of Dr KS Nagla
- Soorji photovoltaic upkarn @L-37669/2011, Dt. 18/03/2011, Copy Right of Dr KS Nagla
- Pani de shudikharn dealn navian vidian ©L-36944/2011. Dt. 06/01/2011. Copy Right of Dr KS Nagla
- Discovering a twist on the stem of eucalyptus plants, Discovered by: KS Nagla, ©L-29494/2007 Dt. 12/11/2007
- Discovering a Unique Twist Pattern in of Nassella Neesiana, Discovered by: KS Nagla, ©L-35431/2010, Dt. 09/02/2010
- Discovering Buoyancy Force Based Perpetual Motion Machine, Discovered by: KS Nagla, @L-35432/2010, Dt. 09/02/2010

# **Computer Software Developed**

Program tool Multi-Sensor Data Fusion: focused on mobile robots mapping, Copy Right © Diary no 3390/2015-co/SW dated 08/04/2015

 Program tool corner extraction using laser range finder focused on mobile robot mapping applied for copy right © Diary Number 3390/2015-CO/SW, April, 2015.

# 12 MECHANICAL ENGINEERING

# Faculty

Name	Designation	Qualification	Email
Dr R S Bharj	Associate Professor& Head	PhD (NITJ)	bharjrs@nitj.ac.in
Dr Rakesh Chandra	Professor	PhD (IITD)	chandrar@nitj.ac.in
Dr Joseph Anand Vaz	Professor	PhD (IITKh)	anandvaz@nitj.ac.in
Dr Subhash Chander	Associate Professor	PhD (IITD)	chanders@nitj.ac.in
Dr Rajeev Kukreja	Associate Professor	PhD(IITD)	kukrejar@nitj.ac.in
Dr Pramod Kumar	Associate Professor	PhD (NITJ)	kushwahapramod@nitj.ac.in
Er. Ajay Trehan	Associate Professor	MTech (NITJ)	trehana@nitj.ac.in
Dr Dinesh K Shukla	Associate Professor	PhD (IITD)	shukladk@nitj.ac.in
Dr.Raman Bedi	Associate Professor	MTech (NITJ)	bedir@nitj.ac.in
Sh S K Tiwari	Associate Professor	MTech (NITJ)	tiwarisk@nitj.ac.in
Dr Sarbjot Singh Sandhu	Assistant Professor	PhD (IITD)	sandhuss@nitj.ac.in

# Academic Programmes Undergraduate Programme

B Tech in Mechanical Engineering

# **Postgraduate Programmes**

Full and Part Time MTech in Mechanical Engineering Full and Part Time PhD Programmes in Mechanical Engineering

### Laboratories

- Strength of Materials Laboratory
- Fluid Machinery Laboratory
- Heat Transfer and Heat Engine Laboratory
- Theory of Machines Laboratory
- Computer Aided Design Laboratory
- Refrigeration and Air Conditioning Laboratory

- Mechanical Measurements Laboratory
- Vibrations Laboratory
- Automobile Engineering Laboratory
- Experimental Stress Analysis Laboratory
- Automation and Mechatronics Laboratory

### **Research and Development**

The faculty of the department has interest in the following research areas: Mechatronics and Automation, Dynamics & Control, Vibrations, Composite Materials, IC Engines, Refrigeration and Air Conditioning and Combustion ,Machine Design, Robotics, CFD, Alternative fuels for IC Engines, Thermal System Design, Alternative Refrigerants, Heat Exchanger Design, Power Plant Engineering, Welding, Renewable Energy, Bulk Material Handling, Synthesis of carbon Nano tubes and Nano- composite materials, Fatigue of Composite Materials.

# **Sponsored Projects**

- Modernization of Fluid Machine Laboratory
- Modernization and Removal of Obsolescence of Thermal Laboratory
- Establishment of CAD Laboratory
- Modernization and Development of Automobile Laboratory
- Augmentation of Facilities for Industrial Automation and Mechatronics Laboratory
- Modernization of Thermal Laboratory
- Study of Dynamic Behavior of Composite Materials (Thrust area project)
- Investigation of Damping in Fiber Reinforced Composites (R&D)
- Evaluation of in cylinder Combustion of Bio-diesels (R&D)

# 13 TEXTILE TECHNOLOGY

# Faculty

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Name	Designation	Qualification	Email
Dr S K Sinha	Professor& Head	PhD (NITJ)	sinhask@nitj.ac.in
Dr S Ghosh	Professor	PhD (IITD)	ghoshs@nitj.ac.in
Dr J N Chakraborty	Professor	PhD (IITD)	chakrabortyjn@nitj.ac.in
Dr A Mukhopadhyay	Professor	PhD (TITS)	arunangshu@nitj.ac.in

Dr A Chatterjee	Associate Professor	PhD (IITD)	chatterjeea@nitj.ac.in
Dr N Bhowmick	Associate Professor	PhD (NITJ)	bhowmickn@nitj.ac.in
Sh M D Roy	Associate Professor	MTech (TITS)	roymd@nitj.ac.in
Dr A K Choudhary	Associate Professor	PhD (NITJ)	choudharyak@nitj.ac.in
Dr Vinay Midha	Associate Professor	PhD (IITD)	midhav@nitj.ac.in
Dr Monica Sikka	Associate Professor	PhD (NITJ)	sikkam@nitj.ac.in
Dr KVP Singh	Assistant Professor	PhD (NITJ)	singhkv@nitj.ac.in

### Academic Programmes Undergraduate Programme

B Tech in Textile Technology

### **Postgraduate Programmes**

MTech (Full Time) in Textile Engineering and Management, MTech (Part Time) Textile Technology

PhD Programmes- Full Time and Part Time

#### Laboratories

- Yarn Manufacture Laboratory
- Fabric Manufacture Laboratory
- Textile Chemical Processing Laboratory
- Textile Testing Laboratory

- Fiber Science Laboratory
- Garment Manufacturing Laboratory
- Advanced Fabric Research Laboratory

# **Research and Development**

The department conducts upbeat research in basic spinning, weaving, chemical processing, fibre reinforced composites, sewing threads, seam characterization, compression bandages, fibre shedding during knitting, friction spun yarns, garment manufacturing techniques and also on technical textiles like aerosol filtration, geotextiles surgical gowns, antimicrobial textiles, etc.

### **Sponsored Projects (Completed)**

- Study of fiber characteristics to optimize the mixing proportion to improve yarn quality and productivity- MHRD Govt. of India.
- Engineering Design of Friction Spun Yarn suitable for Knitted Fabric MHRD, Govt, of India.
- Development of Needle punched non-woven blanket fabric MHRD, Govt. of India.
- Designing Non-woven Fabric for pulse jet filtration MHRD, Govt. of India.
- Optimization of Production Process of PP / Carbon Nano-fibre composite Filament MHRD, Govt. of India.
- Technology Gap Analysis Study in the Bicycle parts manufacturing cluster in Ludhiana, TIFAC, Govt. of India.
- Technology Gap Analysis Study of Sewing Machine Cluster at Ludhiana, TIFAC, Govt. of India.

### Projects (Ongoing)

- Fund for improvement of S&T infrastructure in universities, and higher education (FIST) project DST Govt. of India.
- Design of Pulse-jet Filtration Apparatus- DST Govt. of India

# **CENTRES & OTHER FACILITIES**

# 14. PHYSICAL EDUCATION & SPORTS

### Faculty & Staff

Name	Designation	Qualification	Email
Dr G S Dhaliwal		B.A, D.P.Ed, M.P.Ed, N.I.S (Athletics) & Ph.D (GNDU)	dhaliwalgs@nitj.ac.in
Sh S K Syal	Physical Training Officer	(D. P. Ed.)	Syal_59@yahoo.com

A sport is an important activity for overall development of the students. It has to be carried out in order to promote spirit of sportsmanship amongst the students and is essentially an activity, which encourages sense of healthy competition feeling of love and to work in unison. Further the sports calendar crowded with sporting games/events is promoting enthusiasm in the day-to-day campus life of the students. The is geared to achieve the following motives.

- a) Healthy mind in a healthy body
- b) Fit people Fit Nation
- c) Make-sports a way of life
- d) Every human being has a fundamental right to access to physical education and sport, which are essential for the full development of his personality. The freedom to develop physical, intellectual and moral powers through physical education and sports must be guaranteed both within the educational system and in other aspects of social life.

By: - The UNESCO

e) Health and physical education and sports should be an integral part of the learning process and be included in the evaluation performance.

By: - The National Policy on Education

The institute at present is providing facilities in number of outdoor and indoor games to be the budding engineering students.

### 2. OUTDOORS GAMES FACILITIES (BOYS & GIRLS)

SR. NO.	OUTDOOR GAMES	FACILITIES AVAILABLE	
1	Athletics	400 meter Standard Track & Field	
2	Cricket	Standard Cricket ground	
3	Football	Standard Football ground	
4	Basket ball	Two Basket Ball Standard Cemented Courts with Full Flood Lights & Sitting Arrangement	
5	Volley ball	Three Volleyball standard grounds with Full Flood Lights & Sitting Arrangement	
6	Lawn Tennis	Two Lawn Tennis Cemented courts With Full Flood Lights	

# 3. INDOOR GAMES FACILITIES (BOYS & GIRLS)

SR. NO.	INDOOR GAMES	FACILITIES AVAILABLE
1	Badminton	Four Wooden Badminton Courts With Light, Sitting Arrangement and
		Specific Gym Equipment in Badminton Indoor Hall
2	Table Tennis	T.T. Table is available in each hostel in addition to that Six tables are
		available in the Indoor Badminton hall with Lights.
3	Carom	Covered space is available in each hostel in addition to that Carom Boards
		are available in the Indoor Badminton Hall with Lights.
4	Chess	Covered space is available in each hostel in addition to that Chess Boxes
		are available in the Indoor Badminton Hall with Lights.

#### 4. WEIGHT TRAINING GYM. FACILITY

1	Multipurpose Modern Weight Training	Weight training gymnasium is available in the students Activity Centre,
	Facilities	Fully equipped with Modern Weight Training equipment.

### 5. RESEARCH AND DEVELOPMENT

The faculty member of the are actively engaged in guiding research in the areas of Physical Education and Sports i.e. Olympics games, Asian Games, National Games, Inter-University Games, Psychology Study, Physiology Study, Heart Rate

Variability Study, Measurement Study, Height Weight and Strength Study and Physical Fitness etc. indifferent games.

### 6. UPCOMING GAME FACILITIES

- 1. Sports Stadium
- 2. New Building of Physical Education & Sports
- 3. Squash Courts Two

- 4. Shooting Range
- Synthetic Lawn Tennis Courts Two
- 6. Addition of Cricket & Football Play Grounds

### 15. NCC (National Cadet Corps)

# Faculty

Name	Designation	Qualification	Email
Dr Dinesh Kumar Shukla	Professor In-charge	PhD	shukladk@nitj.ac.in

The institute had the NCC with the SD (Senior Division) wing with cadet's strength of 105 (both Boys & Girls). The NCC is a youth development movement. It has enormous potential for nation building. The NCC provides opportunities to the youth of the country for their all-round development with sense of duty, commitment, dedication, discipline and moral values so that they become able leaders and useful citizens. The NCC provides exposure to the cadets in a wide range of activities with a distinct emphasis on social services, discipline and adventure training. The NCC is open to all regular students of the institute on a volunteer basis. The students have no liability to active military service. Based on the aims of NCC, the organization has laid down Training Syllabi for the cadets. The syllabus for the Senior Division is three years. Except for minor variations, the syllabus is similar for both Boy and Girl cadets. The training year is w.e.f. 01 Apr to 31 March. Training schedules planned for cadets ensure that the optimum benefits of the organization reach maximum number of cadets. On successful completion of the laid down syllabi, cadets of Senior Division are eligible for 'B' & 'C' certificate examinations.

# **Eligibility Conditions for Certificate Examinations**

#### Certificate 'B'

- The cadet must have attended a minimum of 75 of total training period laid down in the syllabus for the first and second years
  of Senior Division Wing NCC (All Wings).
- ii. Break in the NCC Service of the cadets prior to his appearing in the examination should not exceed more than 12 months at one time.
- iii. The candidate must have attended one ATC.
- iv. Cadets possessing 'A' certificate will be awarded 10 bonus marks.

#### Certificate 'C'

The candidate must be in possession of certificate 'B'.

The cadet must be in the third year of SD/SW NCC training.

The cadet must have attended a minimum of 75% of the periods of 3<sup>rd</sup> year syllabus during the academic session.

Break in the NCC service of the cadet SD/SW prior to appearing in the exam should not exceed more than 18 months at one time. The cadet must have attended one ATC and one of the other listed national camps.

# 16 NSS (National Service Scheme)

#### **Faculty**

Name	Designation	Qualification	Email
Dr Rizwan A Khan	Professor In-charge	PhD	rizwankhan1@gmail.com

NSS is a non-credit mandatory requirement towards the completion of B Tech degree. Total hundred hour's activities are to be completed in the first year of registration. The Main objectives of National Service Scheme (NSS) are:

- Understand the community in which they work
- Understand themselves in relation to their community
- Identify the needs and problems of the community and involve them in problem-solving
- Develop among them a sense of social and civic responsibility
- Utilize their knowledge in finding practical solutions to individual and community problems
- Develop competence required for group-living and sharing of responsibilities
- Gain skills in mobilizing community participation
- Acquire leadership qualities and democratic attitudes
- Develop capacity to meet emergencies and natural disasters and
- Practice national integration and social harmony

The various activities which were undergone by the students are:

- i. First Aid Training (Red Cross Society)
- ii. Polio Camp vaccination campaign
- iii. Blood Donation
- iv. Horticulture
- v. Eye-check-up Camp
- vi. Expert Lectures on various social issues
- vii. Transforming Society by Imparting Social Values
- viii. Cultural Activities
- ix. Yoga and Meditation
- x. Physical Education
- xi. Recreating Activities
- xii. Adoption of children (poor background) for education
- xiii. Campus cleaning
- xiv. Tree plantation

# 17. COMPUTER CENTRE

#### **Faculty**

Name	Designation	Qualification	Email
Dr Harsh K Verma	Head	PhD (PTU)	vermah@nitj.ac.in
Ms Daljeet Kaur	System Analyst	MCA (GNDU)	daljeetkaur@nitj.ac.in

The main assignments and activities of this centralized facility are to:

- · Managing the operation of computing & networking facilities for the students, departments and administration
- · Providing technical assistance to various users regarding operating system, security issue
- Maintaining computing as well as peripheral devices
- Managing ERP operations
- Managing institute website as well as e-mail facility on jitj domain
- Providing field level network maintenance throughout the campus

For conducting these tasks satisfactorily, computer center make use of a wide range of computer facilities. The institute has chosen a system based on work stations under Sun Solaris, Windows, Linux, which provide the interconnection and exchange of data between the various systems and enable us to provide our users with working environments adapted to their requirements and the students with tools reflecting the standards of the computer industry.

The Dr B R Ambedkar National Institute of Technology visualizes centralized computing facility, campus wide networking and information technology as a means to enrich the educational experience and invigorate emerging areas of scholarly research and education. Telecommunication and IT is a mixture of tools that can improve the nature and efficiency of country and institute as well.

The campus wide Networking consisting of Academic Zone, Hostel Zone and Residential Zone with fiber optics as backbone along with Managed Layer 3/4 switches is installed. There are approximately 2250 nodes. In addition two new hostels have also been added (Girls Hostel on Wi-Fi) and extension of Hostel No.7) Internet bandwidth 300 Mbps (1.1) with fibre connecting leased line is being used to cater the demand of Internet facility of the institute

For the Computational Services Centre has High End Computational Servers on which accounts are given to students, staff and faculty. The Campus Wide Network connects to Departments, and Centre. Network connectivity is also provided to the remote locations, which include both boys and girls Hostels and residential area. Computer Centre manages and administers the Internet links and the internet services such as electronic mail, World Wide Web, DNS, FTP and other services. Centre manages the Proxy servers' ad mail relay servers for the above services. Recently Cyberoam UTM has been installed for authenticity and managing users' connectivity to the internet connection. Computer Centre has created the facility of video conferencing for the students, faculty and staff members.

Center provides various advanced and special purpose software such as Oracle 10g, NMS etc. for all the campus users. Centre also provides computer and network facilities to various festivals, events and seminars held at institutelecture theatre and at department and centers.

### **Hardware and Software**

15 Sun Servers & 05 HP Servers Powered on Red Hat Enterprise Linux 4.0/5.0 Enterprise Server, Microsoft Windows 2003 Server and Fedora. In additional Sun Storage Server StorEdge 3500 acts as storage Server. The various softwares catering to the needs of the students such as Oracle 10g, Visual Basic, .Net, Visual C++, C++, Prolog; MS Office etc. are installed on the machines. 10 Sun Spark Workstations and 150 Nos High end 64-bit machines, 50 P V Duo Core and other infrastructure such as High end printers, Plotter and scanners constitute to the students need. Computer Centre has also signed MSDN academic alliance for 3 years with Microsoft. Network Anti-Virus Quick Heal secures the machines from virus.

Working Hours (Monday to Friday) : 08.30 AM to 05.30 PM

### 18 CENTRE OF TRAINING AND PLACEMENT

The Centre of Training & Placement of Dr B R Ambedkar National Institute of Technology, Jalandhar, which started its activities in December 1990, serves as a central facility for all the departments.

### **Faculty**

Name	Designation	Qualification	Email
Dr. Partap Singh	Professor & Head	PhD	singhp@nitj.ac.in
Sh. Rajeev Trehan	Assistant Professor	MTech(NITJ)	trehanr@nitj.ac.in

### 2014-15 Placements (Till 1.05.2015)

Discipline	No. of Eligible Students	No. of Job Offers	No. of Double Job offers	No. of Students Actually Placed
ECE	76	103	27	76
CSE	81	100	24	76
CHE	69	68	15	53
ICE	69	83	18	65
CIVIL	72	52	7	45
IPE	81	84	25	59
ME	74	84	22	62
BT	31	27	2	25
TT	49	48	5	43
Total	602	646	142	504

# 19. LIBRARY

Name	Designation	Qualification	Email
Dr Sarbrinder Kaur	Librarian	PhD (GNDU)	kaurs@nitj.ac.in

Library is housed in a multi storied air conditioned building situated in the midst of all departments and hostels and is easily accessible to all /everyone in the campus. The total carpet area of library is 1540 sq. feet. All students' faculty members and staff of the instituteare entitled to make use of the library facilities. Industrial establishment/corporate houses can also avail the library services on taking institutional/corporate membership of the library. Library consultation facilities are also available to faculty and students of outside institute/organization on request.

Library Hours: 9.00 AM to 9.00 PM.

Extendable till 12.00 midnight during examinations days

**Library Resources and Membership**: The library has **1**, **28**,635 volumes comprising of books, standard, theses, CD–ROM, bound volumes of journals and videocassettes pertaining to various disciplines of Science, Engineering and Technology. Central library catered to the information needs of about 3995 members during the current academic year

Video Library and E-media resources center: The institute library is equipped with video viewing facility also. Audio –visual section is equipped with 29" T.V. & VCP, multimedia projector, projection screen etc. It has a collection of about 1994videocassettes, CDs and DVDs. Library has a well-equipped e-media resources center to provide access to virtual resources.

**Print Journals and Access to Electronic Journals**: The institute library subscribes to about 89 current journals and magazines in print form and almost all dailies. In addition to the above, with the help of special financial aid from MHRD, library provides the online access to the various electronic resources being published by almost all the major publishers of the world in all subjects of engineering, technology, sciences, and management etc.

# 20. CENTRAL WORKSHOP

### Faculty

Name	Designation	Qualification	Email
DrRakesh Chandra	Chairman (Workshop)	PhD (IITD)	chandra@nitj.ac.in
Dr Sarbjot Singh Sandhu	Workshop Superintendent (I/C)	PhD (IITD)	snadhuss@nitj.ac.in

- In this dynamic world, technology plays a significant role in the learning. It is an established fact that one can have a strong grip on the concept of science and technology by seeking logic and reasoning behind them rather than just mugging them up. The youth of today is brimming with curiosity and inquisitiveness. They are perpetually on the move. The rapid pace of technological advancement has made it imperative for us to be well informed in the global scenario. Each day in our life dawns with new challenges to be faced. One needs to be geared up to face these challenges with determination, righteousness and well directed thoughts. All these geared mechanisms are boosted only with the help of practical aspects which are only possible on the floor of "workshop". A workshop is an informative or instructional class focused on teaching specialized skill or exploring a particular subject.
- The workshop has eight constituent shops viz, Carpentry Shop, Electrical Shop, Fitting Shop, Foundry Shop, Machine Shop, Sheet Metal Shop, Smithy Shop, Welding Shop and a part from the Tool Room facilities available in the department of Industrial and Production Engineering. The Tool Room has CNC Lathe, EDM Wire-Cut and EDM Spark Erosion Machines. Tool and Cutter Grinder is also available in the workshop.
- B Tech I<sup>st</sup> year students undergo two weeks training program during summer vacation at thecentral workshop after the completion of second semester. This is mandatory non-credit course for students. B Tech major and minor projects of especially Mechanical engineering and Industrial & Production Engineering are Manufacture and Fabricated in the central workshop. In addition to the above mentioned programmes. The BTech, MTech, PhD students are enrolled in central workshop to complete their projects, thesis work respectively.

# **ABBREVIATIONS**

AMU	Aligarh Muslim University, Aligarh	NJL	NIT Jalandhar
BITS	Birla Institute of Technology and Science,	NU	Nagpur University, Nagpur
Pilani		OBC	Other Backward Class
CU	Calcutta University, Calcutta	PAU	Punjab Agricultural University, Ludhiana
CLRI	Central Leather Research Institute,	РВ	Punjab
Chennai		PBIU	Punjabi University, Patiala
DAV	Devi Ahilya Viswavidyalaya, Indore	PTU	Punjab Technical University, Jalandhar
DU	Delhi University, Delhi	PU	Punjab University, Chandigarh
GNDU	Guru Nanak Dev University, Amritsar	PWD	Persons with disabilities
GU	Gulbarga University, Karnataka	SC	Schedule Caste
HBTI	HBTI Kanpur	ST	Schedule Tribe
HS	Home State	SUK	Shivaji University, Kolhapur
IITD	Indian Institute of Technology, Delhi	TIET	Thapar Institute of Engineering
IITK	Indian Institute of Technology, Kanpur	1121	&Technology, Patiala
IITKh	Indian Institute of Technology Kharagpur	TITS	Technological Institute of Textile and
IITR	Indian Institute of Technology, Roorkee		Science, Bhiwani
IU	Indore University	UOR	University of Roorkee, Roorkee
ISM	Indian School of Mines, Dhanbad	RU	Ranchi University, Ranchi
JNU	Jawahar Lal Nehru University	UR	University of Rajasthan, Rajasthan
KU	Kanpur University, Kanpur	VTU	Visvasraya Technological University,
KUK	Kurukshetra University, Kurukshetra	Belgaum	
MU	Marathwada University, Aurangabad		

### NIT Jalandhar IT infrastructure usage policy

NIT Jalandhar endeavors to provide faculty, students and staff with a modern, fully networked computing and IT environment for academic use. Users of NITJ computing, networking and IT facilities are expected to abide by the following rules, which are intended to preserve the utility and flexibility of the system, protect the privacy and work of students and faculty, and preserve our right to access the international networks to which the system is connected. In case of complaints, appropriate action to be taken will be decided and taken by the person in-charge of the facility in consultation with the Director, Dean Planning & Development, Dean Students Welfare and System Administrator as appropriate.

- 1. Faculty, staff, and students with authorized accounts may use the computing and IT facilities for academic purposes, official institute business, and for personal purposes so long as such use
  - i. does not violate any law, Institute policy or IT act of the Government of India.
  - ii. does not interfere with the performance of institute duties or work of an academic nature (as judged by the NIT, Director).
  - iii. does not result in commercial gain or private profit other than that allowed by the institute.
- 2. Users are expected to respect the privacy of other users and they may not allow any other person to use their password or share their account. It is the users' responsibility to protect their account from unauthorized use by changing passwords periodically and using passwords that are not easily guessed. Sharing of passwords for any purpose whatsoever is strictly prohibited. Users may share the required files through sharing software with proper ACL(Access control list).
- Any attempt to circumvent system security, guess others' password, or in any way gain unauthorized access to local or network resources is forbidden. Users may not use another person's computing account, attempt to forge an account identity, or use a false account or e-mail address.
- 4. Transferring copyrighted materials to or from the NITJ system without express consent of the owner is a violation of international law. In addition, use of the internet for commercial gain or profit is not allowed from an educational site. If done so, it will be sole responsibility of the user.
- Downloading and installing of new software has to be done with the explicit consent of the respective facility in-charge.
   Installation of unlicensed software on NITJ facilities, or on individual machines connected to the NITJ network, is strictly prohibited.
- 6. Setting up of any facility requiring password transmission over clear text is prohibited.
- 7. To the extent possible, users are expected to use only their official email address provided by NIT Jalandhar for official communications with other members of the institute.
- 8. It is forbidden to use electronic mail and other network communications facilities to harass, offend, or annoy other users of the network, including impeding their computing systems, software, or data. Chain letters are not allowed. Neither is any form of commercial advertising, or soliciting allowed. Spamming is strictly disallowed. Subscribing to mailing lists outside the institute is an individual's responsibility. Subscribing someone else to any group outside NIT Jalandhar is illegal.
- 9. It is forbidden to send frivolous or academically unimportant messages to any group. Broadcast of messages to everyone in the system is allowed only for academic purposes and emergencies. Violations of this (as decided by concerned authorities) will result in immediate freezing of user's account for an extended period as determined by the authorities.
- 10. Shared email accounts for any purpose whatsoever are not allowed. Any special accounts, if need to be set up for conferences and other valid reasons as determined by the institute authorities, must have a single designated user.
- 11. Recreational downloads and peer to peer connections for recreational purposes are banned.
- 12. To the extent possible, users are expected to connect only to the official NITJ Wi-Fi network for wireless access. Setting up of unsecured Wi-Fi systems on the NITJ network is prohibited in accordance with a Government of India ban.
- 13. Users are expected to take proper care of equipment, and are expected to report any malfunction to the staff on duty or to the in-charge of the facility. Users should not attempt to move, repair, reconfigure, modify, or attach external devices to the systems.
- 14. No food or drink is permitted in the laboratories. Smoking is strictly prohibited. Also making noise either through games/ music or even talking and/ or singing loudly is prohibited.
- 15. Playing of games in institute laboratories or using institute facilities is strictly prohibited. Internet chat is also banned.
- 16. Display of offensive material (either on computer screens or through posters etc.) is strictly disallowed and serious action will be taken against offenders.
- 17. Violations of policy will be treated as academic misconduct, misdemeanor, or indiscipline as appropriate. Depending upon the nature of the violation, the institute authorities may take an action by issuing a warning through disabling the account. In extreme cases, the account may be completely deleted and/ or the user prohibited access to IT facilities at NITJ, and/ or sent to the institute disciplinary committee as constituted by the institute authorities.
- 18. The policy may change as and when it is considered appropriate and new policies or the changes in policy will take effect immediately after a brief announcement by any means, e-mail, printed notices, or through the news groups.

# Dr B R A National Institute of Technology, Jalandhar

#### **Computer Centre**

# Undertaking with respect to NIT, Jalandhar IT Usage Policy

#### Whom this Document Concerns

All Users of IT infrastructure (Computers and the Network) at NIT, Jalandhar.

### Reason for Policy

This policy outlines the responsible use of the Information Technology Infrastructure at NIT, Jalandhar.

### Statement of Policy

All users of NIT, Jalandhar will be subject to the following Acceptable Use Policy

- 1. **[Content]** I shall be responsible for all use of this network. In case I own a computer and decide to connect it to NIT, Jalandhar network, I will be responsible for all the content on it, especially that which I make available to other users. (This provision will also apply to any computer or device for which I am responsible, and is included in the meaning of "my computer".) In case I do not own a computer but am provided some IT resources by NIT, Jalandhar, I will be held responsible for the content stored in the designated workspace allotted to me (examples: file storage area, web pages, stored/archived emails, on Computer Centre or Department machines).
- 2. **[Network]** I will be held responsible for all the network traffic generated by "my computer". I understand that network capacity is a limited, shared resource. I agree that physically tampering with network connections/equipment, sending disruptive signals, or making EXCESSIVE USE of network resources is strictly prohibited. Repeated offenses of this type could result in permanent disconnection of network services. I shall not share the network connection beyond my own use and will not act as a forwarder/ masquerader for anyone else.
- 3. **[Academic Use]** I understand that the IT infrastructure at NIT, Jalandhar is for academic use and I shall not use it for any commercial purpose or to host data services for other people or groups. Also, I shall not host or broadcast information that might harm others or may be otherwise considered objectionable or illegal as per Indian law.
- 4. **[Identity]** I shall not attempt to deceive others about my identity in electronic communications or network traffic. I will also not use NIT, Jalandhar IT resources to threaten, intimidate, or harass others.
- 5. **[Privacy]** I will not intrude on privacy of anyone. In particular I will not try to access computers (hacking), accounts, files, or information belonging to others without their knowledge and explicit consent.
- 6. **[Monitoring]** I understand that the IT resources provided to me are subject to monitoring, with cause, as determined through consultation with the NIT, Jalandhar administration, when applicable. The monitoring may include aggregate bandwidth usage to effectively manage limited IT resources as well as monitoring traffic content in response to a legal or law enforcement request to do so. I authorize NIT, Jalandhar administration to perform network vulnerability and port scans on my systems, as needed, for protecting the overall integrity and efficiency of NIT, Jalandhar network.
- 7. **[Viruses]** I shall maintain my computer on this network with current virus detection software and current updates of my operating system, and I shall attempt to keep my computer free from viruses, worms, Trojans, and other similar programs.
- 8. **[File Sharing]** I shall not use the IT infrastructure to engage in any form of illegal file sharing (examples: copyrighted material, obscene material). In particular, I have noted the following:
  - Electronic resources such as e-journals, e-books, databases, etc. made available by the Central Library, NIT, Jalandhar are for academic use. These resources can be searched, browsed, and material may be downloaded and printed as single copies of articles as is done in the case of printed library material. Downloading or printing of a complete book or an entire issue or a volume of one or more journals (called systematic downloading) is strictly prohibited. Use of robots, spiders or intelligent agents to access, search and / or systematically download from the e-resources is also prohibited. Any violation of this policy will result in penal action as per the rules and regulations of the Institute. I am aware that Systematic downloading will result in the publisher blocking the entire community of users at NIT, Jalandhar from accessing these resources.
- 9. [Security] I understand that I will not take any steps that endanger the security of the NIT, Jalandhar network. Specifically, I will not attempt to bypass firewalls and access rules in place. This includes <u>not</u> setting up servers of any kind (examples: web, mail, proxy) that are visible to the world outside the NIT, Jalandhar campus. In critical situations, NIT, Jalandhar authorities reserve the right to disconnect any device or disable any account if it believed that either is involved in compromising the information security of NIT, Jalandhar.
- 10. **[Penalties]** I understand that any use of IT infrastructure at NIT, Jalandhar that constitutes a violation of NIT, Jalandhar regulations could result in administrative or disciplinary procedures.

# TELEPHONE DIRECTORY (ALPHABETICAL) Director Office: 1000/1002

٨			Davi Davit	0070004400	0004
A A Agnihatri	0076002077	2204	Dev Dutt	9876261192	3901
A. Agnihotri	9876082977	2304	Dilbag Singh	9888492132	2906
A. Bhardwaj	9465758362	2804	Dimple Sharma	181-2690048	9
A. Chatterjee	9417091644	3305	Dinesh	9501165469	4004
A. Chaturvedi	9464886034	4001	Dinesh Shukla	9478128407	3109
A. Mukhopadya	9463283698	3307			
A.K. Chowdhary	9417710385	3308	G		
A.K. Jain	9815425163	2904	Ganesh Parsad	9463230633	3557
A.K. Jana	9417710388	2101	Geeta Partap	9463932479	3007
A.K. Tiwari	7508663569	3002	Geeta Sikka	9888582299	2505
A.P. Singh	9915849178	2303	Gian Chand	9646564691	2653
Abhay Sharma	9815944194	1621	Gurbhachan Singh	9872356984	3901
Abhinav P Singh	9915240730	3250	Gurdeep Singh	9417115855	1311
Aditya Prakash	9988600156	2703	Gurmail Singh	9872331970	3254
Ajay Bansal	9417223839	2404	Gurmej Singh	9872218066	3701
Ajay Gupta	9501030373	2810	Gurnam Singh	9872666628	1900
Ajay K. Trehan	9872462782	3106	Gurpreet	9465145877	4003
Ajay Kumar	9256342789	2954	Gurpreet Singh	9988694840	2951
Alka Bhalla	9878545272	3006			
Amarjeet	9915121334	4052	Н		
Amarjit Singh	9779420055	1002	H. M. Mittal	9417119665	3205
Amit Kumar	9878523087	1807	Hardiyal Singh	9463538430	2302
Anand Kumar	9417223818	1612	Harinder Ram	9915789981	1211
Anish Sachdeva	9501019873	2808	Harleen Dahiya	9888980154	3208
Anita	9501554432	3002	Harmesh Bhatt	0000000101	1232
Anju Bala	3301337732	1272	Harpreet Singh	9872813073	1808
Anshu Sharma	8437046634	2402	Harsh Malhotra	9216055240	1713
Anup Gupta	9464383867	1803	Harsh Manchanda	9876498660	2207
Arun Khosla	9888068332	2604	Harsh Verma	9463001601	2504
Arun Ram		1213	Harvinder Singh	9501551761	2153
Aruna Rani	9417307889 9815319393	2402		9878889419	3505
			Hement Thaper	9070009419	3303
Arvinder	9464013491	4006	IIndu Saini	0076050244	2608
Arvinder Singh	9988803134	3203		9876950214	
Ashish Raman	9888217273	2611	Ish Sharma	9876694777	3155
Ashok Kumar	9478364618	2902			
Ashwani Sharma	9855589610	3502	J	0.4474.00000	0004
Avtar Chand	9779401577	1311	J. N. Chakrborty	9417139036	3304
_			Jagdish Kumar	9876920903	1802
В	0700004000		Jagir Singh	9876948839	3158
B. S. Kaith	9780684883	2205	Jagwinder Singh	9501103708	2704
B. S. Saini	9872660337	2606	Jaidev Sharma	9878504568	2902
Bahadur Chand	9779782886	4045	Jaspal Aujla	9463364744	3003
Balbir Singh	9465236872	3302	Jaspreet Rajput	9464620971	2208
Balkar Singh	9780946826	1810	Jaswant Singh (Lib)	9465593708	3601
Balwinder Raj	7589480655	2612	Jaswant Singh(Mech)	9815975783	3154
Bhisham Arora	9914594880	1002	Jatinder Kumar	9876850908	2408
Bhupinder Singh	9417822409	1712	Jatinder Singh	9888439836	1711
Bikram Chand	9888691913	2502	Jeevan Lata	9815388333	3601
Bikram Singh	9876372544	2302	Jitender Kumar	9876850908	2408
Bimla Saini		3559	Joga Singh	9815779508	1802
			Joseph Anand Vaz		3104
С			Jyoti Bharaj	9872852158	3207
Chaman Lal	9988541520	1211	•		
Chinderpal Kaur	9878399756	2656	K		
•			K. V. P. Singh	9592108338	3313
D			Kamboj Chauhan	9815909328	2405
D. K. Gupta	9464126241	2506	Kamta Parsad	9463768723	1701
Daljeet Kaur	9872222443	3503	Khushpal Singh	9417016293	2302
Daljit Singh		3901	Krishan	9569912687	4005
	9779530088		*********		
	9779530088 9872861220		Krishan Giri	9464791468	3102
Damanjeet Kaur	9872861220	3005	Krishan Giri Kuldeep Nagla	9464791468 9417744002	3102 2911
Damanjeet Kaur Darshan Ram	9872861220 9872868629	3005 2557	Kuldeep Nagla	9417744002	2911
Damanjeet Kaur	9872861220	3005			

Kulwinder Kaur	9914142319	1232	R. R. Sinha	9417326496	3008
Kulwinder Singh	9463726352	3601	R. S. Bharj	9779284553	3110
Kumar Parag	9988600485	2705	Rachpal Singh	9478018112	3901
ramar rarag	0000000100	2700	Raghu Sharma	9988361517	1202
L			Rahul Aggarwal	9478128764	2511
L. P. Singh	8288947954	2811	Rajbir Saini	9463253231	2051
M	0200011001	2011	Rajeev Arora	0100200201	1252
M. D. Roy	9417361680	3310	Rajeev Kukreja	9872070037	3108
M. K. Jha	9417290668	2403	Rajesh Sharma	0012010001	1272
Madan Lal	9463574728	1701	Rajinder Kumar	9872884560	2655
Mahesh Sharma	9872772510	2955	Rajinder Pathak	9872607114	2020
Malkiat Singh	9463539209	3302	Rajinder Uniyal	9463359837	1002
Malkit Singh	9888148219	2402	Rajiv Jindal	9779914264	2206
Mamta Khosla	9888604632	2605	Rajiv Trehan	8146500951	3803
Mani Ram Yadav	9463248195	3601	Rajneesh Rani	8146800757	2509
Manish	9508511551	4007	Rajni	9914111570	3202
Manjit Kaur		3502	Rakesh	9463535975	4002
Manjit S. (Electrical)	9876941799	1805	Rakesh Kakkar	9988902882	1271
Manjit S. (Textile) 988810	05467 3302		Rakesh Kumar	9501938193	2051
Manju	8427511914	4008	Ram Kewal	9988342654	3802
Manmohan Bhala	9876435940	1212	Ram Kirpal	9417223865	1712
Mathura Parsad	9815724009	2802	Ram Pal Sharma	9463007880	2502
Milap Dogra	9888152525	1311	Ram Parsad	9872649809	1232
Mohd. Alim	9888435852	2502	Raman Bedi	9815981054	3112
Mohinder Pal	9876290612	2657	Ramesh Kumar		
Monica Sikka	9872995546	3312	(Photostat)	9463056288	1236
Monu Sharma	9464012062	4009	Ramesh Kumar		
			(Physics)	9256092822	3252
N			Raminder Kaur	9988265914	1712
N. Basak	9417338290	2104	Ranbir Singh	9465236907	1311
N. Bhowmik	9357321822	3309	Ranjit Singh	8427433911	1152
N. C. Kothiyal	9417274496	2204	Ravi Dogra	9217832046	2856
N. K. Srivastava	9888712889	2409	Ravinder Singh	9463359119	3156
Nachhattar Singh	9872486648	2251	Renu Dhir	9417199050	2508
Narinder Kumar	9463088957	3408	Renu Gupta	8283022833	2405
Narinder Singh	9872272255	2905	Renu Kakkar	8054803848	1232
Navneet Sharma	9463708930	3302	Renu Verma	9780489052	1902
Neetu Divya	7837588326	3405	Rizwan A. Khan	9876497242	2308
Neetu Sood	9501311644	2609	Rohit Mehra	9888534590	3206
Nidhi Khanna	9872223384	2502	Roop Pahuja	9988651877	2908
			Rubal Preet	9878664119	2410
Р					
Palvinder Singh	9463708635	3302	S		
Paramjit Mahey	9888000211	3253	S. Badhuria	9779030399	2812
Paramvir Singh	9915664446	2510	S. Bajpai	9888895253	2411
Pardeep Kumar	9465762564	2554	S. Chander	9417864015	3105
Pargat Singh	9463935315	1311	S. Ghosh	9463553727	3303
Parmod Kumar	9465242268	3107	S. J. S. Bedi	9815270971	2701
Partap Singh	9417694044	2306	S. K. Pahuja	9888482910	2907
Parveen Malik	9888382021	3209	S. K. Sinha	9417366906	3306
Parvinder Kumar	9888280124	2152	S. K. Syal	9872011170	4040
Poonam Arora	9876902961	3802	S. K. Tiwari	9815987789	3111
Poonam Chadha	9855098226	2407	S. P. Singh	9814088475	2305
Pramod Kumar	9465242268	3107	S.K. Pahuja	9888482910	2907
Pratibha	9915715897	1711	Sangeeta Garg	9872826903	2406
В			Sangeeta Handa	9463141755	1272
R B. Chandra	00606666554	2102	Sangeeta Oberoi	9814245310	2209
R. Chandra	8968666351	3103	Sanjeev Jethi	9780724886	1212
R. K. Bansal	9463251233	2807	Sansar Chand	9417861208	1311
R. K. Bhardwaj	9915939562 9417549528	3601 2803	Sant Singh Sarabjit S. Bal	9464383854 9872867347	1311 2809
R. K. Garg R. K. Mishra	9915581811	1202	Sarabjit Singh	9988013870	3204
R. K. Sarin	9501289845	2603	Sarabjot S. Sandhu	9988892511	320 <del>4</del> 3113
R. K. Sann R. K. Shukla	9815977921	3901	Sarbrinder Kaur	9988783715	3601
R. K. Singla	9815998767	2910	Sarita	9463060565	1213
R. K. Singia R. K. Sunkaria	9780979984	2607	Satish Kumar	9872727999	1802
Camana	37 0007 0007	2001	Cation Ramai	3012121300	1002

Satish Walia Shailja Bawa Shankuntla Devi Shawinder Singh Sheela Tiwari Sheo Kumar Sher Singh Shinder Pal Singh Shinder Pal Singh Shiv Kumar Sudesh Sharma Sudhir Kumar Sukhjit Kaur Sukhminder Singh Sukhvinder S. Sukhvinder S. Sukhvinder Singh Sunil Arora Sunil Joshi Sunil Kumar Sunita Sunita Arora Sunita Rani Suresh Kumar Surinder Kumar Surinder Sandhu Surinder Singh	9915576752 8283821380 9463764812 9779090688 9876125185 9872043416 9888022132 9317547560 9464383820 9780248424 9463632917 9888013838 9815540624 9988295103 8146528989 9780721054 9872617129 9465236861 9888128257 9023340974 9417293006 9915932286 9465754548	1311 2309 1641 2652 2909 3004 3002 3901 2402 1232 2102 1900 2959 3901 3155 1712 1311 4103 2556 3202 1214 1701 1802 2254 2302
T Talwinder Singh Tarlok Chand Tarro Tarsem Lal Tarun Sehgal Tejinder Singh Tejvinder Singh	9872632726 9876554611 9465238172 9814753537 9915766293 9988250721	1805 3555 1211 2402 1901 1271 3602
U Uday Bhan Uma Shankar Umesh Ram	8054476239 7837588168 9501470990	3701 2258 1252
V Vijay Vijay Kumar Vijay Takhi Vinay Midha Virender Singh Vishal S. Sharma	9592954485 9463186208 9463088979 9815948608 9780998060	3159 1806 2956 3311 2259 2806
Y Yash Pal Arora	9872662789	1272



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