

PROSPECTUS – 2017

Admission to

M.E. PROGRAMMES (Both Regular & Modular)



Academic Cell

**National Institute of Technical Teachers
Training and Research,
Sector – 26, Chandigarh – 160 019**

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NATIONAL INSTITUTE OF TECHNICAL TEACHERS TRAINING AND RESEARCH, SECTOR-26, CHANDIGARH

Vision

To be a lead resource Institute for promoting excellence in technical education system.

Mission

- **To offer continuing education and training programs for the faculty and staff of the technical education system.**
- **To develop need based curricula for technical education programs.**
- **To develop instructional material to enhance effectiveness of teaching-learning process.**
- **To undertake research and development in engineering & technology and technical education.**
- **To provide extension and consultancy services to technical education.**

Core Values

- **Quality** - Focusing on standards of performance and continuous improvement
- **Professionalism** - Demonstrating highest level of performance with highest standards of ethical behavior, intellectual honesty and professional conduct.
- **Accountability** - Owning responsibility for academic work
- **Innovation** - Promoting and encouraging creativity
- **Collaboration** - Encouraging and supporting networking, within and outside the institute at national and international level
- **Transparency** - Ensuring openness in policies, rules and regulations and working

Quality Policy

Institute is committed to provide high quality and customized education, training, research & development and extension services to technical and vocational education system, industry and community. The institute shall develop leadership in technical teacher training and provide educational products and services to enable the technical education system to achieve excellence internationally.

ADMISSION TO M.E. PROGRAMMES (Both Regular & Modular)

GENERAL INFORMATION

1. The Institute

In realization of the need for training better quality technicians to meet the large scale industrialization of the country, the Ministry of Human Resource Development (the then Ministry of Education), Government of India established four Regional Technical Teachers Training Institutes (now National Institute of Technical Teachers Training & Research, NITTTR at Bhopal, Chandigarh, Chennai and Kolkata in 1967. The Institute at Chandigarh is one of these four NITTTRs, started in collaboration with Royal Netherlands Government (upto 1974). It was established to meet the requirements for the growth and development of polytechnic education in the northern region covering the states of Jammu and Kashmir, Himachal Pradesh, Punjab, Haryana, Rajasthan, Uttar Pradesh, Uttarakhand, Delhi and Union Territory of Chandigarh. The institute is registered under the Societies Registration Act, 1860 and is managed by a Board of Governors.

The institute started with long term teachers' training programmes for polytechnic teachers in 1967 and was also entrusted with the responsibility of promoting curriculum development work for the states in the region. To improve the competence of teachers for implementing new curricula designed by this institute, short term courses are being offered since 1967. The institute established a Media Centre in 1981 for preparing print and non-print instructional materials.

The institute also set up the department of Rural Development and the department of Entrepreneurship Development to assist polytechnics in promoting entrepreneurship and community development activities. The Educational Television and Computer Science departments were established in the year 1981 and 1982 respectively. Since 1983, the institute has been guiding and assisting the states in the areas of Educational Planning and Management. Since 1992, the institute started offering Regular Master of Engineering Programmes in (i) Engineering Education and (ii) Manufacturing Technology. In the year 1994, two more programmes namely Master of Engineering in Construction Technology and Management and Computer Science and Engineering were added. In the year 1998, two more Master of Engineering Programmes in Instrumentation and Control and Electronics and Communication Engineering were added. Since 2005, the institute started offering these Master of Engineering Programmes in all the above disciplines on Modular basis also. **All these ME programmes, being offered for teachers of technical institutions and their administrators, working professionals from industry and fresh engineering graduates, are duly approved by AICTE, New Delhi and Permanently affiliated to Panjab University, Chandigarh.**

Since June 2001, this institute has been conducting short term courses in various subjects for faculty of Engineering Colleges in addition to organizing AICTE sponsored Training Programmes.

Upgradation of the Institute

The institute has been upgraded and renamed as National Institute of Technical Teachers Training and Research on 18 November, 2003 with an objective to play a wider role for the improvement of Technical Education in the country. Director is the Executive Head of the institute. **Presently, Director-in-Charge of the institute is Professor (Dr.) PK Tulsi.**

ISO Certification

The institute is ISO 9001-2008 certified.

Programmes and Activities

To achieve its stated objectives, the institute undertakes the following spectrum of activities:

- i) Education and Training Programmes
- ii) Curriculum Development

- iii) Instructional Material Development
- iv) Research and Development
- v) Extension Services
- vi) Consultancy in Technical Education and Technology areas

Keeping in tune with the various emerging needs of the country, the institute presently extends its services in the following areas as well:

- i) Media Development including information resources, their acquisition, storage and retrieval
- ii) Entrepreneurship Development
- iii) Industry Institute Interaction
- iv) Continuing Education for working engineers/technicians
- v) Transfer of Appropriate Technology to rural areas
- vi) Integrating Persons with disabilities with the mainstream of Technical and Vocational Education

The institute also offers consultancy services to international, national and state level organizations in the above areas.

Research Programmes

The institute has been recognized as a ‘Research Centre’ by Panjab University, Chandigarh (in 2006) as well as by Punjab Technical University, Jalandhar, Punjab (in 2005) for pursuing research work leading to the degree of Doctor of Philosophy i.e. Ph.D. At present, 75 candidates are pursuing their Ph.D. work in various disciplines under Faculty of Engineering & Technology & other Faculties of Panjab University, Chandigarh as well as PTU, Jalandhar. Of 75 candidates admitted, 13 candidates are pursuing Ph.D. programmes under QIP (Poly) scheme of AICTE, New Delhi and 2 candidates under INSPIRE. Candidates admitted under **QIP (Poly) Scheme** are eligible to receive Scholarship as per AICTE norms. As on date, 33 candidates have already completed their Ph.D. programmes (as on 31.03.2017). Details regarding admission under this scheme will be notified by AICTE, New Delhi separately through an advertisement and shall also be available on their website.

Names of the Departments/Centres

1.	Applied Science Department	8.	Electronics & Communication Engineering Department
2.	Civil Engineering Department	9.	Entrepreneurship Development and Industrial Coordination Department
3.	Computer Science & Engineering Department	10.	Information Management & Coordination Unit
4.	Curriculum Development Centre	11.	Library
5.	Education & Educational Management Department	12.	Mechanical Engineering Department
6.	Educational Television Centre	13.	Media and Continuing Education Centre
7.	Electrical Engineering Department	14.	Rural Development Department

2. Rationale for Introduction of Master of Engineering Programmes

To keep pace with rapid advancement in technology, the country requires high quality manpower with technical and managerial capabilities in 21st century. There are primarily *three* distinct categories of technical manpower needed by the industry in the country, i.e., engineers, technicians and skilled workers. Personnel of each of these categories play an equally important role in the day-to-day running as well as the development and growth of industry. The institutions which are producing technical manpower, therefore, need teachers who have the required knowledge and skills to train good technicians and engineers.

Thus, there is a great need to reorient and upgrade the knowledge and skills of existing teachers of technical institutions through **Industry oriented and Practice based Programmes in Engineering and Technology at Master’s Degree level**. These programmes will help develop the professional capabilities desired by teachers for training technicians/engineers that would meet the changing requirements of industry.

Apart from teaching, there are some very significant aspects of technical education management and training towards which the people are working in the technical education system. To meet the training requirements of such personnel engaged in the planning and management of technical education, curriculum development, instructional material development, rural and community development, entrepreneurship development, industry-institute interaction etc. at various levels, there was an urgent need that a Master's degree programme in Engineering Education which provides different specializations matching the emerging requirements be instituted. In view of the foregoing, the institute started offering the following programmes:

a) Master of Engineering Programmes (Regular)

Recognizing the need to provide professionally trained teachers and administrators for the technical education system as also to offer professional development opportunities to working technical and training personnel in the industry, NITTTR Chandigarh started offering Master of Engineering Programmes since 1992. These programmes, being offered in five disciplines, are affiliated to Panjab University, Chandigarh.

b) Master of Engineering Programmes (Modular)

Towards facilitating qualification enhancement of teachers in technical institutes who hold a Bachelor's degree in their respective disciplines, the institute designed and developed a new path breaking system and approached All India Council for Technical Education, New Delhi and Panjab University, Chandigarh for approval of **Master of Engineering Modular Programmes**. With approvals secured, the institute started offering these programmes in *five* disciplines namely (i) ME in Mechanical Engineering (Manufacturing Technology) (ii) ME in Civil Engineering (Construction Technology and Management) (iii) ME Computer Science & Engineering (iv) ME Electrical Engineering (Instrumentation & Control) (v) ME Electronics & Communication Engineering w.e.f. June, 2005, thus creating a new era in technical education in the country.

Accreditation of ME Programmes

Three ME Programmes, viz., **ME in Computer Science & Engineering, ME in Electrical Engineering (Instrumentation and Control), and ME in Electronics & Communication Engineering** are accredited by **National Board of Accreditation (NBA), New Delhi** for the Academic Years 2016-2017 and 2017-2018 up to 30.06.2018 vide its letter No. 31-49-2014-NBA dated 04.02.2017.

3. Master of Engineering (both Regular and Modular) Programmes – Sanctioned Intake and Reservation

Total number of seats in each of the ME Regular Programmes is given below:

S. No.	Branch of Master of Engineering (Regular) Programme	Sanctioned Intake	Distribution of seats		
			Sponsored Poly./Engg. College Regular teachers, officials of DTEs/BTEs	Sponsored working professionals from industry/ other organizations including universities	Fresh engineering graduate candidates
i.	ME in Mechanical Engineering (Manufacturing Technology)	28	19	04	05
ii.	ME in Civil Engineering (Construction Technology & Management)	28	19	04	05
iii.	ME in Computer Science & Engineering	28	19	04	05
	Branch of Master of Engineering (Regular) Programme	Sanctioned Intake	Sponsored Poly./Engg. College Regular teachers, officials of DTEs/BTEs	Fresh engineering graduate candidates and working professionals from industry/ other organizations including universities	
iv.	ME in Electrical Engineering (Instrumentation and Control)	26	20	06	
v.	ME in Electronics & Communication Engineering	19	11	08	

ME Regular Programmes:

Total number of seats in each of the **ME Regular programmes** at Sr. Nos. (i), (ii) and (iii) above are 28.

- 19 seats in each programme are for **full time sponsored** Polytechnic/Engineering College Regular teachers, officials of Directorates and Boards of Technical Education
- 4 seats in each programme are for **full time sponsored** working professionals from industry/other organizations including technical staff of universities and
- 5 seats are for fresh engineering graduate candidates. Fresh Engineering graduates shall be admitted on the basis of valid GATE score or OCET (Other Common Entrance Test, if conducted by PU, Chandigarh) merit of PU, Chandigarh {as per criteria approved by Panjab University, Chandigarh}. **All such candidates must apply for these programmes in the institute by the last date on the application form downloaded from www.nitttrchd.ac.in. In addition, they (candidates without valid GATE score) are also required to apply to Panjab University, Chandigarh for appearing in the OCET (Rules & Regulations and date of OCET can be checked from website of Panjab University, Chandigarh: www.pu.ac.in).**

Total number of seats in **ME Regular programmes** at Sr. Nos. (iv) and (v) above are 26 and 19 respectively.

- 20 and 11 seats respectively in these programmes are for **full time sponsored** Polytechnic/Engineering College Regular teachers, officials of Directorates, Boards of Technical Education, and
- 6 seats and 8 seats respectively in these programmes are for fresh engineering graduates and candidates from industry/ other organizations including technical staff of universities. Fresh Engineering graduates and candidates from industry/ other organizations including universities in these programmes shall be admitted on the basis of valid GATE score or OCET merit of PU, Chandigarh {as per criteria approved by Panjab University, Chandigarh}. **All such candidates must apply for these programmes in the institute by the last date on the application form downloaded from www.nitttrchd.ac.in. In addition, they (candidates without valid GATE score) are also required to apply to Panjab University, Chandigarh for appearing in the OCET (Rules & Regulations and date of OCET can be checked from website of Panjab University, Chandigarh: www.pu.ac.in).**

Vacant seats, if any, under sponsored category candidates in all ME (Regular) programmes will be filled up from amongst corresponding eligible fresh engineering graduates (with valid GATE score or through CET of PU, Chandigarh).

Due credit will be given to GATE qualified fresh engineering candidates for these ME Regular programmes only (and shall be offered the seat at the first instance as per Panjab University rules & regulations). **GATE qualified candidates shall be paid scholarship as per AICTE guidelines.**

ME Modular Programmes:

Total number of seats in each of the ME (Modular) Programmes is given below:

S. No.	Branch of Master of Engineering (Modular) Programme	Number of seats
		Modular
i.	ME in Mechanical Engineering (Manufacturing Technology)	40
ii.	ME in Civil Engineering (Construction Technology & Management)	40
iii.	ME in Computer Science & Engineering	40
iv.	ME in Electrical Engineering (Instrumentation and Control)	40
v.	ME in Electronics & Communication Engineering	40

Total number of seats in each of the five ME (Modular) programmes at Sr. Nos. (i) to (v) above are 40, for sponsored Polytechnic/Engineering College Regular teachers, officials of Directorates, Boards of Technical Education, Universities and official/staff of NITTTRs. **However, sponsored candidates from industry & other organizations may also apply in these ME (Modular) programmes as vacant seats, if any, under sponsored teacher category candidates in all ME (Modular) programmes will be filled up from amongst corresponding eligible sponsored candidates from industry and other organizations.**

Reservation

15% seats are reserved for SC candidates, 7.5% seats for ST candidates, 3% for disabled candidates and 27% seats for OBC candidates as per instructions of Govt. of India applicable to Central Educational institutions.

The institute reserves **the right of admission entirely and the decision of NITTTR authorities on admission will be final** in all the cases.

The institute reserves the right to make any amendment in the prospectus as and when it is deemed necessary.

4. Qualifications and Experience for Admission

(i) ME in Mechanical Engineering (Manufacturing Technology) Programme

A Bachelor's Degree in Mechanical Engg./Manufacturing Engineering (or Technology)/Production Engg./Industrial Engg./Automobile Engineering from a recognized University or its equivalent with at least 60% marks in aggregate and post qualification experience of at least 1 year (2 years in case of AMIE) in teaching/industry/research organization.

(ii) ME in Civil Engineering (Construction Technology & Management) Programme

A Bachelor's Degree in Civil Engineering from a recognized University or its equivalent with at least 60% marks in aggregate and post qualification experience of at least 1 year (2 years in case of AMIE) in teaching/industry/research organization.

(iii) ME in Computer Science and Engineering Programme

A Bachelor's Degree in Computer Science & Engineering/Electronics Engineering/ Electrical Engineering/ Instrumentation & Control Engineering/Information Technology from a recognized University or its equivalent with at least 60% marks in aggregate and post qualification experience of at least 1 year (2 years in case of AMIE) in teaching/industry/research organization.

(iv) ME in Electrical Engineering (Instrumentation and Control) Programme

A Bachelor's Degree in Electrical Engineering /Electronics Engineering/ Instrumentation and Control Engineering from a recognized University or its equivalent with at least 60% marks in aggregate and post qualification experience of at least 1 year (2 years in case of AMIE) in teaching/industry/research organization.

(v) ME in Electronics and Communication Engineering Programme

A Bachelor's Degree in Electronics and Communication Engineering from a recognized University or its equivalent with at least 60% marks in aggregate and post qualification experience of at least 1 year (2 years in case of AMIE) in teaching/industry/research organization.

A certified copy of conversion formula, in case of marks in grade points (i.e., CGPA to %), is essential.

No Experience is required for admission of Fresh Engineering Graduates to ME (Regular) programmes.

5. Admission under QIP (Poly) scheme only for ME Regular Programmes

- This institute is **one of the ten centers** in the country to run QIP (Poly) Scheme of AICTE, New Delhi. Since October, 2007, the institute has been coordinating the admission of M.E. and Ph.D. Programmes in all ten QIP (Poly) Centres as Principal Coordinator.
- Only permanent faculty members of AICTE recognized polytechnics can apply for admission.

Admission to ME Programmes at NITTTR Chandigarh under QIP (Poly) scheme are as per the AICTE Norms & Regulations.

Candidates admitted under QIP (Poly) Scheme are eligible to receive a scholarship and a contingency grant as per AICTE norms. The detail regarding the admission under this scheme is notified every year separately by AICTE, New Delhi through an advertisement as well as on their website in due course of time.

6. Admission under DASA only for ME Regular Programmes

Two seats in each of ME Mechanical Engineering (Manufacturing Technology) ME Civil Engineering (Construction Technology & Management) and ME Electrical Engineering (Instrumentation & Control) and three seats in each of ME Computer Science & Engineering and ME Electronics & Communication Engineering Regular programmes are available under DASA-2017 in respect of foreign nationals/PIOs and NRIs.

7. Special Features of ME Programmes

- The nature of programmes offered are flexible, allowing self pacing and taking up courses of study in a sequence and at the time convenient to the students within the maximum time frame as stipulated by the University for the completion of the programme.
- The focus is on the mastery of minimum essential competencies, enhancement of knowledge and development of capabilities such as learning to learn, problem solving, management skills etc.
- The focus is on to update knowledge base of teachers/students in specialized field(s) through these programmes. In addition to classroom teaching and laboratory work, the programmes make use of a combination of instructional techniques such as group discussion, home assignments, individual and group projects, independent study, remedial instruction, industry-based instruction, seminars, expert lecture sessions, field visit to industry etc.
- Assessment of students' performance is based on both continuous evaluation and end-semester evaluation with the use of a variety of assessment techniques matching the learning objectives of different courses of study. Completion of course work is followed by a thesis.
- Almost all courses contain practical/laboratory tasks. These tasks form an essential component of the curriculum implementation. Thesis work is based on problems of technical education system and practical 'on – job Problems' of Industries.

8. Duration of the Programmes

i) For ME Regular Programmes

The normal duration of ME (Regular) Programmes including thesis will be 2 academic years (4 semesters). The maximum period of completion of the programme including thesis shall be 3 academic years (6 semesters).

ii) For ME Modular Programmes

The normal duration of ME (Modular) Programmes including thesis will be 3½ academic years (7 spells, each spell of 5 weeks' duration). The maximum period of completion of the programme including thesis shall be 5½ academic years (11 spells).

9. Number of Theory Papers Allowed in a Semester/Spell

i) For ME Regular Programmes

All students will be required to qualify in 12 theory papers (50 credits) as per study and evaluation scheme during the course. In addition, all students will be required to qualify preliminary thesis-based project work (10 credits) in third semester and, thesis work (15 credits) in fourth semester. There shall be at least ten hours of lectures/tutorials/practicals/drawing classes during the semester, for every hour of lecture/tutorial/practical per week. 1st and 3rd Semester (end-semester) examinations will usually be held in the month of December, and 2nd and 4th Semester (end-semester) examinations in the month of June every year. A candidate will be promoted to second year only if he/she has earned 50% of the total credits of first year.

ii) For ME Modular Programmes

All students will be required to qualify in 12 theory papers (50 credits) as per study and evaluation scheme. No student will be allowed to register for more than two theory subjects in each spell. In addition, all students will be required to qualify preliminary thesis work (10 credits) in sixth spell, and thesis work (15 credits) in seventh spell. There shall be at least ten hours of lectures/tutorials/practicals/drawing classes during the spell, for every hour of lecture/tutorial/practical per week. 1st, 3rd and 5th Spell (end-spell) examinations will usually be held in the month of December, and 2nd, 4th and 6th Spell (end-spell) examinations in the month of June every year. A candidate will be promoted to subsequent spell only if he/she has earned 50% of the total credits of the preceding spells.

10. Migration (for both ME Regular & Modular programmes)

All the candidates seeking admission to ME Programmes **from other universities shall be granted provisional admission subject to the condition that his/her BTech/BE/B.Sc Engineering Examination has been recognized equivalent in the list of 'Equivalence of Examination' of Panjab University, Chandigarh. If the admission is NOT confirmed by the Panjab University, the candidate's name shall be removed from the institute rolls and he/she shall not be allowed to continue his/her studies at the institute.** He/she shall have no claim for any dues (except refundable security).

In addition, it will be the responsibility of the candidate to get the equivalence of his/her qualifying degree for the purpose of admission to ME programmes, In case, the qualifying degree of a candidate is NOT accepted as equivalent to the corresponding degree of Panjab University, Chandigarh for admission to Master's degree programme, the institute will not be held responsible for any delay or loss arising thereof.

Every student is required to submit his Degree and Detailed Marks Certificates in original immediately at the time of counseling, if selected for admission to ME Programme at the institute. In addition, they are also required to **submit their migration certificate (in original) within a period of one month from the date of commencement of classes.** Those who fail to submit the documents (i.e., degree, DMCs and migration) shall be liable to pay a fine as per rules & regulations of the Panjab University, Chandigarh and his/her admission is liable to be cancelled.

11. Conditions for Appearing in End-Semester/Spell Examinations

i) Periodic Tests for ME Regular Programmes

Every student has to appear in two periodic tests (60% of total sessional marks) and Assignments/class projects/presentations/group discussions (40% of total sessional marks) as approved by the Panjab University, Chandigarh and must qualify the same. **There will be NO 'special reappear examination'.**

ii) Periodic Tests for ME Modular Programmes

Every student has to appear in one periodic test (60% of total sessional marks) and Assignments/class projects/presentations/group discussions (40% of total sessional marks) as approved by the Panjab University, Chandigarh and must qualify the same. **There will be NO 'special reappear examination'.**

iii) Attendance for ME Programmes (both Regular and Modular)

A candidate shall be eligible to appear in the university examination only if he/she has attended for each subject, not less than **85%** of lectures. A deficiency in the required number of lectures and practicals may be condoned up to 10% by the Director of the institute only in the genuine cases. A candidate who does not fulfill the attendance requirements in any subject will have to repeat the course of instruction in that subject. Students who are absent from the institute continuously for 7 days without permission from the HOD/Director may not be allowed to join back the programme.

12. Examination and Result for ME Programmes

- ME Programmes are organized on Credit System of study. Performance/progress of a candidate is measured by the number of credits that he/she has earned (completed satisfactorily, at least 'D' grade). Based on the course credits and grades obtained by the candidate, grade point average is calculated. The study and scheme of evaluation as approved by Panjab University, Chandigarh in this respect shall be followed.
- Minimum Earned Credits: Completion of 75 earned credits including 25 credits for thesis work.
- Weightage in each subject: Equal weightage will be given to internal assessment (sessional) and end semester/spell examination (major examination).**
- A candidate with CGPA of 8.5 and above will be awarded **ME degree with Honours.**
- Separate examination forms are to be submitted with the University for end- semester/spell and re-appear examinations.**

Preliminary Thesis Work/Thesis Work

Four neatly typed or printed copies of Thesis properly bound, out of which two copies shall be submitted to the Head of the concerned Department through Guide and a copy to Faculty Incharge, Academic Cell of the institute for keeping a record in the institute library. The thesis grades shall be awarded as per criteria approved by Panjab University, Chandigarh given in Table 1 (w.e.f. 2015-16 session vide meeting of the Faculty of Engineering & Technology, PU, Chandigarh held on 28th March, 2015):

Table 1

S. No.	Grade	Condition
1.	A+	Publication from Thesis in SCI indexed journal
2.	A	Publication from Thesis in Scopus indexed journal
3.	B+	Publication from Thesis in proceedings of Conferences which is Scopus indexed
4.	B	Presented paper in International Conference
5.	C+	Presented paper in National Conference

The grades and their respective description, along with grade points are listed in the Table-2 given below:

Table 2

Grade	Grade Point	Description
A+	10	Outstanding
A	9	Excellent
B+	8	Very Good
B	7	Good
C+	6	Average
C	5	Below average
D	4	Marginal
F	0	Very Poor
R	-	Shortage of Attendance
I	-	Incomplete
NP	-	Audit Pass
NF	-	Audit Fail
W	-	Withdrawal
X	-	Unsatisfactory
S	-	Satisfactory Completion
Z	-	Course continuation

Method for the Award of Grades is given in Table 3.

Table 3

Marks	Grade	Grade Point
≥ 90	A+	10
≥ 80 & < 90	A	9
≥ 70 & < 80	B+	8
≥ 60 & < 70	B	7
≥ 50 & < 60	C+	6
≥ 45 & < 50	C	5
≥ 40 & < 45	D	4
< 40	F	0

The F-Grade denotes very poor performance, i.e., failing the course. If a candidate gets F grade, he/she will have to reappear in subsequent university examination as well as internal assessment examination for that subject.

R-Grade will be awarded in case of poor class/lab attendance (<75%). A candidate who does not fulfill the attendance (<75%) in any subject, he will get R grade and he/she will have to repeat the course of instruction in that subject.

13. Evaluation and Improvement for ME Programmes

Subject wise result in the form of grades awarded to each student at the end of each spell/semester shall be prepared by the respective departments/institutes and sent to the university examination branch for the declaration of result and issuance of grade cards. Before sending the awards to the university, subject teacher will display the grades awarded to the students on the notice board after showing the answer sheets to the students within **TEN working days**. The process of evaluation is completed within **FIFTEEN days** from the date of conduct of examination. If a candidate is not satisfied with the award of marks in a particular paper(s), he/she may approach the concerned ME Coordinator for rechecking, if any as per the rules and regulations of Panjab University, Chandigarh.

The performance of a student shall be evaluated in terms of two indices, viz. Semester/Spell Grade Point Average (SGPA) and Cumulative Grade Point Average (CGPA).

SGPA is the grade point average for the semester/spell and CGPA is the cumulative grade point average for all the completed semesters/spells at any point in time.

The earned credits (EC) are defined as the sum of course credits for course in which A+ to D grade has been obtained. Credits from courses in which NP or S grade has been obtained are also added.

Points earned in a semester =

$\sum (\text{Course Credits} \times \text{Grade Points})$ for courses in which A+ to D grade has been obtained

The SGPA is calculated on the basis of grades obtained in all courses, except audit courses and courses in which S/Z grade is awarded, registered for the particular semester.

$$SGPA = \frac{\sum (\text{Course Credits} \times \text{Grade Point s})_{\text{for all courses except audit and S / Z grade Courses}}}{\sum (\text{Course Credits})_{\text{except audit and S / Z grade Courses}}}$$

SGPA

$$= \frac{\text{Points Secured in the Semester}}{\text{Credits Registered the Semester, excluding audit and S/Z grade courses}}$$

The CGPA is calculated as below:

$$CGPA = \frac{\sum_{\text{All Semester}} (\text{Course Credits} \times \text{Grade Points})_{\text{for all courses with pass grade except audit and S/Z grade Courses}}}{\sum_{\text{All Semester}} (\text{Course Credits earned})_{\text{except audit and S/Z grade Courses}}}$$

Conversion formula from CGPA to Percentage = 10 x CGPA as per letter No. 12057-75/GM dated 08.10.2013 received from Assistant Registrar (General), Panjab University, Chandigarh.

There shall be no 'special reappear examination' for any student.

14. Courses of Study and Evaluation Scheme

a) ME Regular Programmes

In each of these ME Regular programmes, all students will be required to qualify in 12 theory subjects (50 credits), i.e., five theory subjects in first semester, five theory subjects in second semester and two theory subjects in third semester as per study and evaluation scheme during the course. In addition, all students will be required to qualify preliminary thesis-based project work (10 credits) in third semester and, thesis work (15 credits) in fourth semester. No numerical marks will be assigned to Preliminary Thesis and Thesis work. It will be either 'Satisfactory' (S Grade) or 'Unsatisfactory' (X Grade). The thesis grades shall be awarded as per criteria approved by Panjab University, Chandigarh as given in Table 1 (Page No. 9). The courses of study and evaluation scheme in respect of each of ME Regular programmes are given here:

i) ME in Mechanical Engineering (Manufacturing Technology) Regular Programme

Code No	Course of Study	Hours		Credits
		L	P/T	
SEMESTER -I				
MMT 6101	Manufacturing Technology - I	4	-	4
MMT 6102	Materials for Manufacturing	4	-	4
MMT 6103	Computer Based Production Management	4	-	4
MMT 6106	Advanced Manufacturing Methods	4	-	4
MMT 6151	Manufacturing Lab – I	-	4	2
-----	Elective Subject - I	4	-	4
SEMESTER -II				
MMT 6201	Manufacturing Technology - II	4	-	4
MMT 6202	Design for Consumer	4	-	4
MMT 6204	Tool Engineering	4	-	4
MMT 6209	Industrial Automation & Control	4	-	4
MMT 6251	Manufacturing Lab – II	-	4	2
-----	Elective Subject - II	4	-	4
SEMESTER- III				
MMT 7105	Computer Integrated Manufacturing Systems	4	-	4
MMT 7151	Preliminary Thesis	-	20	10
-----	Elective Subject - III	4	-	4
SEMESTER- IV				
MMT 7251	Thesis work	-	30	15

List of Elective Subjects (Any THREE of the following)				
MMT 6107	Industrial Instrumentation	4	-	4
MMT 6108	Computer Programming & Applications	3	2	4
MMT 6109	Optimization Techniques	4	-	4
MMT 7101	Welding Technology	4	-	4
MMT 7102	Artificial Intelligence in Manufacturing	4	-	4
MMT 7103	Computer Aided Design for Manufacturing	4	-	4
MMT 7104	Industrial Project Management	4	-	4
MTE 6202	Research Methodology	4	-	4
MTE 7103	Technology Management	4	-	4
CSE 8306	Project Management	4	-	4
CSE 8307	Business Process Re-engineering	4	-	4
CSE 8309	Human Resource Development & Training Methods	4	-	4

Note:

1. A student is required to earn 75 credits (42 credits for core courses, 10 credits for elective courses, 10 credits for preliminary thesis and 15 credits for Thesis work) with a minimum CGPA of 6.0 and successful completion of thesis work.
2. The courses of study for the session 2017-18 are subject to approval by Panjab University Chandigarh.

ii) ME in Civil Engineering (Construction Technology & Management) (Regular) Programme

Code No	Course of Study	Hours		Credits
		L	P/T	
SEMESTER - I				
Core Courses of Study				
MCT 6101	Construction Management	3	2	4
MCT 6102	Concrete Construction Technology	3	2	4
MCT 6103	Pavement Design Construction & Maintenance	3	2	4
MCT 6105	Construction Costing and Financial Management	3	-	3
MCT 6107	Pavement Laboratory	-	3	2
Elective Subjects (Any one of the following)				
MCT 6106	Advanced Structural Design and Detailing	3	2	4
MMT 6109	Optimization Techniques	4	-	4
MCE 6171	Computer Applications in Civil Engineering	2	4	4
MCT 7103	Design of Pre-stressed Concrete Structures	3	2	4
MTE 7103	Technology Management	4	-	4
SEMESTER- II				
Core Courses of Study				
MCT 6201	Environmental Engineering & Management	3	2	4
MCT 6202	Building Maintenance	3	2	4
MCT 6206	Advanced Construction Technology	3	2	4
MCT 6208	Foundation Design and Construction	3	2	4
MCT 6209	Foundation Engineering Laboratory	-	3	2
Elective Subjects (Any one of the following)				
MCT 6203	Construction Equipment	3	2	4
MCT 6204	Green Buildings and Services	3	2	4
MCT 6205	Bridge Engineering	3	2	4
SEMESTER -III				
Core Courses of Study				
MCT 7104	Transportation Engineering	3	2	4
MCT 7151	Preliminary Thesis Work	-	20	10
Elective Subjects (Any one of the following three)				
MCT 6104	Rural Construction Technology	3	-	3
MCT 6207	Design & Construction of Hydraulic Structures	3	-	3
MCT 7101	Steel Construction Technology	3	-	3
MTE 6202	Research Methodology	3	2	4
SEMESTER -IV				
MCT 7251	Thesis work	-	30	15

Note:

1. A student is required to earn 75 credits (40 credits for core courses, 10 credits for elective courses, 10 credits for preliminary thesis and 15 credits for Thesis work).
2. The courses of study for the session 2017-18 are subject to approval by Panjab University Chandigarh.

iii) ME in Computer Science and Engineering (Regular) Programme

Code No	Course of Study	Hours		Credits
		L	P/T	
SEMESTER- I				
Core Courses of Study				
CS 8101	Advance Algorithms	4	-	4
CS 8102	Advance Databases	4	-	4
CS 8103	Advance Computer Networks	4	-	4
CS 8150	Software Lab – I	-	6	3
CS 8151	Principles of Designing (Optional)	-	-	-
Elective – I Bucket: Courses of Study (Any one of the following five):				
CS 8104	Software Testing & Quality Management	4	-	4
CS 8105	Advance Software Engineering	4	-	4
CS 8106	Project Management	4	-	4
CS 8107	Business Intelligence	4	-	4
CS 8108	Building Enterprise Applications	4	-	4
Elective – II Bucket: Courses of Study (Any one of the following four):				
CS 8109	Advanced Computer Architecture	4	-	4
CS 8110	Parallel & Distributed Computing	4	-	4
CS 8111	Cloud Computing	4	-	4
CS 8112	Modeling & Simulation	4	-	4
SEMESTER- II				
Core Courses of Study				
CS 8201	Digital Image Processing	4	-	4
CS 8202	Research Methodology	4	-	4
CS 8203	Soft Computing	4	-	4
CS 8250	Software Lab – II	-	6	3
CS 8251	Research Seminar (Compulsory)	-	2	1
Elective – III Bucket: Courses of Study (Any one of the following three):				
CS 8204	Data Warehousing and Mining	3	-	3
CS 8205	Machine Learning	3	-	3
CS 8206	Data Acquisition and Hardware Interfacing	3	-	3
Elective – IV Courses of Study (Any one of the following four):				
CS 8207	Network Security	3	-	3
CS 8208	Multimedia Computing & Communications	3	-	3
CS 8209	Wireless Networks	3	-	3
CS 8210	Telecommunication Technologies	3	-	3
SEMESTER- III				
CS 8350	Preliminary Thesis Work	-	18	10
Elective – V Bucket: Courses of Study (Any one of the following four):				
CS 8301	Natural Language Processing	3	-	3
CS 8302	Machine Vision	3	-	3
CS 8303	Open Source Software	3	-	3
CS 8304	Information Retrieval	3	-	3
Elective – VI Bucket: Courses of Study (Any one of the following four):				
CS 8305	Cyber Laws and IPR	3	-	3
CS 8306	Business Process Re-engineering	3	-	3
CS 8307	Technology Management	3	-	3
CS 8308	HRD and Training Methods	3	-	3
SEMESTER- IV				
CS 8450	Thesis work	-	25	15

Note:

1. A student is required to earn 75 credits (40 credits for core courses, 12 credits for elective courses, 10 credits for preliminary thesis and 15 credits for Thesis work).
2. The courses of study for the session 2017-18 are subject to approval by Panjab University Chandigarh.

iv) ME in Electrical Engineering (Instrumentation and Control) (Regular) Programme

Code No	Course of Study	Hours		Credits
		L	P/T	
SEMESTER- I				
Core Courses of Study				
MEI 6101	Measurement Sciences and Techniques	3	2	4
MEI 6102	Process Dynamics and Control	3	2	4
MEI 6103	Digital Signal Processing	3	2	4
MEI 6104	Power Electronic Devices and Circuits	3	2	4
MEI 6105	Industrial Instrumentation	3	2	4
SEMESTER- II				
Core Courses of Study				
MEI 6201	Microcontroller Based Embedded System	3	2	4
MEI 6202	Advance Control Theory	3	1	4
MEI 6203	Opto-Electronic Instrumentation	3	2	4
MEI 6204	Soft Computing Techniques	3	2	4
MEI 6205	Instrumentation & Computational Laboratory	-	4	2
Elective Courses of Study (Any One of the following four):				
MEI 6206	Power System Analysis	3	2	4
MEI 6207	Instrumentation for Environmental Engineering	3	2	4
MEI 6208	Analytical Instrumentation	3	2	4
MEI 6209	Modeling of Electrical Machines	3	1	4
SEMESTER- III				
MEI 7151	Preliminary Thesis Work	-	20	10
Elective Subject – I (Any One of the following four):				
MEI 7101	Virtual Instrumentation	3	2	4
MEI 7102	Digital Communication	3	2	4
MEI 7103	Bio-Medical Instrumentation	3	2	4
MEI 7104	Advance Digital Signal Processing	3	2	4
Elective Subject – II (Any One of the following four):				
MTE 6202	Research Methodology	4	-	4
CSE 8309	HRD and Training Methods	4	-	4
MEI 7105	Energy Management	4	-	4
MMT 6109	Optimization Techniques	4	-	4
SEMESTER- IV				
MEI 7251	Thesis work	-	30	15

Note:

1. A student is required to earn 75 credits (40 credits for core courses, 10 credits for elective courses, 10 credits for preliminary thesis and 15 credits for Thesis work).
2. The courses of study for the session 2017-18 are subject to approval by Panjab University Chandigarh.

v) ME in Electronics and Communication Engineering (Regular) Programme

Code No	Course of Study	Hours		Credits
		L	P/T	
SEMESTER -I				
Core Courses of Study				
ECE 6101	Advanced Digital Signal Processing	3	2	4
ECE 6102	Fiber-Optic Communication Systems	3	2	4
ECE 6103	Advanced Digital Communication	3	2	4
ECE 6105	Digital System Design	3	2	4
ECE 6110	Research Seminar – I	-	3	2
Elective – I Courses of Study (Any One of the following four):				
ECE 6104	Advanced Mathematics	3	-	3
ECE 6107	Bio Informatics	3	-	3
ECE 6108	Modeling & Simulation of Communication Systems	3	-	3
ECE 6109	Information Theory & Coding			
SEMESTER- II				
Core Courses of Study				
ECE 6201	Embedded System Design	3	2	4
ECE 6202	Digital Image Processing	3	2	4
ECE 6203	Wireless & Mobile Communication	3	2	4
ECE 6217	Research Seminar – II	-	3	2
Elective – II Courses of Study (Any One of the following three):				
ECE 6205	Network Programming	3	2	4
ECE 6207	PLCs and SCADA	3	2	4
ECE 6211	VLSI Design	3	2	4
ECE 6213	Nano Electronics	3	-	3
Elective – III Courses of Study (Any One of the following four):				
ECE 6204	Advanced Computer Networks	3	-	3
ECE 6214	Multimedia Communication	3	-	3
ECE 6215	Satellite Communication	3	-	3
ECE 6216	Design & Applications of New Materials	3	-	3
ECE 6218	RF & Microwaves	4	-	4
SEMESTER –III				
ECE 7106	Preliminary Thesis Work	-	20	10
Elective – IV Courses of Study (Any One of the following four):				
ECE 7101	Neural Networks & Fuzzy Logic	4	-	4
ECE 7103	Simulation & Modeling	4	-	4
ECE 7104	Smart Systems Technologies	4	-	4
Elective – V Courses of Study (Any One of the following five):				
ECE 7107	Advanced Antenna Systems	4	-	4
ECE 7108	Cryptography and Network Security	4	-	4
ECE 7109	Imaging & Additive Manufacturing	4	-	4
MTE 7201	HRD & Training Methods	4	-	4
MTE 7202	Research Methodology	4	-	4
SEMESTER IV				
ECE 7201	Thesis work	-	30	15

Note:

1. A student is required to earn 75 credits (40 credits for core courses, 10 credits for elective courses, 10 credits for preliminary thesis and 15 credits for Thesis work).
2. The courses of study for the session 2017-18 are subject to approval by Panjab University Chandigarh.

b) ME Modular Programmes

In each of these ME Modular programmes, all students will be required to qualify in 12 theory subjects (50 credits), i.e., two theory subjects in each of the six spells as per study and evaluation scheme during the course. No student will be allowed to register for more than two theory subjects in each spell. In addition, all students will be required to qualify preliminary thesis work (10 credits) in sixth spell, and thesis work (15 credits) in seventh spell. No numerical marks will be assigned to Preliminary Thesis and Thesis work. It will be either 'Satisfactory' (S Grade) or 'Unsatisfactory' (X Grade). The thesis grades shall be awarded as per criteria approved by Panjab University, Chandigarh as given in Table 1 (Page No. 9). **The courses of study and evaluation scheme for ME Modular programmes are the same as described for ME Regular programmes above.**

15. Admission Procedure for ME (both Regular & Modular) Programmes

Applications for admission to ME Programmes (both Regular & Modular) for the session 2017, **duly sponsored by the competent authority** should reach the institute as per detail given below:

ME Modular Programmes:

Last Date for Receipt of duly sponsored Applications	: 15.05.2017 upto 5.00 P.M.
Date of loading of Merit List on Institute Website	: 22.05.2017
Date of Counseling for ME Modular Programmes	: 30.05.2017 at 10.00 A.M.
Date by which Fee to be deposited	: 01.06.2017
Date by which classes will begin	: 08.06.2017

ME Regular Programmes:

Last Date for Receipt of duly sponsored Applications	: 28.06.2017 upto 5.00 P.M.
Date of loading of Merit List on Institute Website	: 07.07.2017
Date of Counseling for ME Regular Programmes	: 17.07.2017 at 10.00 A.M.
Date by which Fee to be deposited	: 18.07.2017
Date by which classes will begin	: 17.07.2017

No separate call letters will be issued for attending the counseling. Application downloaded from the institute website must accompany a demand draft ₹ 1,000/- drawn in favour of Director, NITTTR, Chandigarh. Incomplete applications (i.e., without application fee and documents) will not be entertained. The institute reserves the Right of Admission entirely and the decision of institute authorities on admission will be FINAL. Complete Application along with copies of all certificates and bank draft must reach, Director, National Institute of Technical Teachers Training & Research, Sector 26, Chandigarh - 160 019 by speed post as per last date given above and that the institute shall not be responsible for postal delay, if any.

Note: Candidates shall attend the counseling interviews for admission to ME programmes **at their own expenses**. All admissions to these programmes made during the counseling shall be provisional and subject to approval by the Director of the institute and affiliating Panjab University, Chandigarh.

Candidates should enclose attested photocopies of the following documents along with their applications failing which their applications will not be considered for admission:

- i) Certificate of Matriculation/Senior Secondary Leaving Certificate as a proof of date of birth.
- ii) Certificates of Bachelor's Degree or its equivalent.
- iii) Certificates of claim under SC/ST/OBC/Physically handicapped category seats.
- iv) Certificate of sponsorship (No Objection) from the competent authority.
- v) Semester/year-wise **all Detailed Marks sheets** (along with degree certificate) of Bachelor's Degree or its equivalent. **Valid GATE Score card in case applying under Fresh Engineering Graduates categories.**
- vi) All experience certificates {on organization's letter head bearing letter No. & date and clearly stating date of joining and leaving; Appointment letter/salary slips as proof will not be considered}. **However, weightage will be given only to the certificates received along with application by due date.**

- vii) Maximum marks, marks obtained in each semester/year should be given in the application form under Sr. No. 11. **A certified copy of conversion formula in case of marks in grade points is essential. Otherwise his/her name will be placed last in the merit list.**

Important Note:

1. Candidates may send an **advance copy of their application along with all DMCs, Experience certificates and a demand Draft of ₹1,000/- drawn in favour of Director, NITTTR Chandigarh** to avoid delay. However, final consideration of application will be subject to their being sponsored by the competent authority at the time of counseling at this Institute.
2. The fresh engineering graduate candidates who have appeared in the final semester/year of their BE/B.Tech examinations may also send an advance copy of their application (s) attaching therewith the detailed marks sheets of all 7 semesters/3 years but must send a copy of their detailed marks sheet of final semester/year on or before the last date of receipt of applications, otherwise their application (s) will not be considered for admission.
3. If a candidate wishes to apply for more than one programme or category, separate applications along with certificates will have to be sent for each programme/category. Photocopies of application form may be used for applying for more than one programme/category but a Demand Draft of ₹ 1,000/- in favour of Director, NITTTR, Chandigarh should be attached with the each application form.
4. Some of the Universities award divisions of Bachelor's degrees based only on the marks obtained by the students in 7th and 8th semesters/final year but all the candidates seeking admission are essentially required to give maximum marks and marks obtained in all the 8th semesters/4 years because **the merit of admission will be prepared on the basis of aggregate marks obtained in all the 8 semesters /4 years**. In case the BE/B.Tech result is declared in grade points, **an authenticated copy of the formula for conversion to percentage of marks should be attached, otherwise the application of the candidate is liable to be rejected.**
5. Candidates admitted for various **ME Programmes (Regular & Modular)** will have to **submit their Medical Fitness Certificate duly signed by Medical Officer** of any Govt. Dispensary/hospital **within 15 days** from the date of their admission (**in case of Regular programmes**) and **05 days** from the date of their admission (**in case of Modular programmes**).
6. Candidates who have applied for seeking admission to ME Programmes under **OBC category** are **required to furnish FRESH AFFIDAVIT (NOT MORE THAN SIX MONTHS OLD) from Executive Magistrate at the time of counseling** (along with OBC certificate; not more than six months old) that he/she belongs to OBC category (For an updated list of state-wise OBCs eligible for availing the benefit of reservation, please see the list maintained by NCBC at its website: <http://ncbc.nic.in/backward-classes/index.html> and that he/she does not belong to creamy layer (as per website <http://ncbc.nic.in/html/creamyayer.html> as well as the clarifications issued by the Department of Personnel & Training on the definition of creamy layer & income criteria at [http://persmin.gov.in/writeData/WMS/ScanDocument/36033-5-2004-01 April 2005.htm](http://persmin.gov.in/writeData/WMS/ScanDocument/36033-5-2004-01%20April%202005.htm)).
7. As per directions of Supreme Court of India, **Ragging in Educational Institutions in any form should be prevented. In order to ensure that the ragging does not take place in the institute in any form, the institute has constituted Anti Ragging Squads and Anti Ragging Committee which would conduct raids & detect the cases (if any) & suggest preventive measures.** If any incident of ragging comes to the notice of the authority, the concerned student shall be given liberty to explain and if his explanation is not found satisfactory, the authority would expel him from the institution. **It is mandatory as per the Hon. Supreme Court & UGC/AICTE Regulations that all students fill in an Anti Ragging Affidavit, each year. To make the process easy, MHRD has developed an ONLINE Facility.** Affidavits can be filled ONLINE at: www.amanmovement.org (OR) at www.antiragging.in. All students are required to fill their Affidavits on any of the two web sites. The procedure is very simple and explained on the web sites.

Preparation of Merit List

a) Sponsored Candidates

The Institute prepares a merit list of all sponsored eligible candidates based on the **aggregate percentage of marks obtained in all the semesters/years of qualifying examination** and the total experience. The admission is granted to candidates strictly according to the merit list, prepared as follows:

(i) Qualification	Multiplying Factor
Aggregate % of marks in BE or its equivalent	X 0.4

The candidates must write in the application form (under S.No. 11), the maximum marks, marks obtained in each of eight semesters/four years and the exact percentage of aggregate marks.

(ii) Experience

One score for each number of completed years of total experience on the last day of receiving application gained after obtaining minimum entry qualification subject to a maximum of ten. **Experience against leave vacancy, visiting/guest faculty will not be counted.**

Note: The total score calculated based on qualifications and experience as mentioned in (i) and (ii) above should not be less than 25. In case of a tie in the score of merit so calculated, seniority in age will be the deciding factor for their inter-se merit.

b) Fresh Engineering graduates for admission in ME Regular programmes at S.No. (i), (ii) and (iii) as stated on page 4 and 5

c) Fresh Engineering graduates and candidates from industry/other organizations including technical staff of universities for admission in ME Regular programmes at S.No. (iv) and (v) as stated on page 4 and 5

The candidates listed at (b) and (c) above shall be admitted on the basis of valid GATE score {obtained and shall be offered the seat at the first instance} or through CET merit {as per criteria approved by Panjab University, Chandigarh}.

16. Fee, Funds and Expenses for ME Programmes

a) Programme Fee

Fee Detail	For ME Regular Programmes (in ₹)	For ME Modular Programmes (in ₹)
Admission Fee (one time)	₹ 1,000/-	₹ 1,000/-
Programme Fee		
i) Sponsored Teachers of technical institutions, officials of State DTEs/ BTEs etc.	₹17,000/- per semester	₹12,500/- per spell
ii) Fresh Engineering Graduates	₹17,000/- per semester	-----
iii) Industry sponsored candidates	₹22,000/- per semester	₹14,000/- per spell
Continuation Fee	₹ 1,500/- per semester (after 4 th semester)	₹ 1,000/- per spell (after 7 th spell)
Security (refundable)	₹5,000/- (one time)	₹ 5,000/- (one time)

The following funds (Non-Refundable) are also payable by the students during each semester/spell:

Item	For ME Regular Programmes (in ₹)	For ME Modular Programmes (in ₹)
Campus Development Fee	₹ 650/- per semester	₹ 475/- per year
Student Activities Fee	₹ 400/- per semester	₹ 300/- per year
Medical Fee	₹ 300/- per semester	₹ 225/- per year
Students Welfare Fund	₹ 350/- per semester	₹ 275/- per year
Internal Examination Fee	₹ 400/- per semester	₹ 225/- per year
Library Fee	₹ 400/- per semester	₹ 300/- per year
Total	₹2,500/- per semester	₹1,800/- per year

Note: Every component of fees is subject to revision by the NITTTR, Chandigarh from time to time.

b) University Examination/Thesis/Extension Fee

Item	For ME Regular Programmes (in ₹)	For ME Modular Programmes (in ₹)
University Examination Fee	₹ 3,080/- per semester	₹ 1,760/- per spell
	or as prescribed by the Panjab University from time to time	
Thesis Fee	₹ 1,000/-	₹ 1,000/-
	or as prescribed by the Panjab University from time to time	
Fee for Extension of period for submission of thesis (per year or part thereof)	₹ 1,500/- (or as prescribed by the Panjab University from time to time)	₹ 1,500/- (or as prescribed by the Panjab University from time to time)

c) University Annual Charges (for both ME Regular & Modular Programmes)

Detail	Amount (in ₹)
College Development Council Fee	80/-
University Sports Fee	130/-
University Examination Form Fee (Two Forms)(for Modular Programmes)	300/-
Youth Welfare Fund	90/-
Student Holiday Home Fee	70/-
University Sports Development Fee	30/-
University Registration Fee (for those from other University/ Board/Council)	100/-
University Enrolment Fee (for those who are not registered with Panjab University, Chandigarh)	100/-
Migration Fee (for those candidates who have passed their lower examination from other than Panjab University, Chandigarh)	270/-
University Continuation Fee @ Rs. 25/- per semester	50/-
Panjab University Alumni House & Scholarship Fund	30/-
World University Service Fund	50/-
Service Tax fee @ Rs. 1 per month per year	20/-
Total	₹ 1,320/-

- Note:**
- All Institute fee, funds, expenses and university fee etc. whether recurring/ non- recurring are subject to revision by the Institute/Panjab University from time to time.
 - Any student who fails to pay institute/university fee by the prescribed date may be fined, suspended or ultimately removed from the institute rolls. The decision of the Director of the institute will be final in this regard.

d) Hostel Charges

Type of Accommodation	For all ME Regular Programmes	For all ME Modular Programmes
(i) Hostel Rooms in Amartya, Tagore, Chandrasekhar & Mother Teresa	₹ 5,500/- per semester; on single/shared basis ₹ 1,300/- pm OR ₹ 75/- per day during short stay/thesis work	₹ 1,950/- per spell on single/shared basis; ₹ 75/- per day during short stay/thesis work
(ii) P.G. Hostel (subject to availability) on shared basis	₹ 7,000/- per semester (including hostel maintenance and water charges) to be deposited at the time of admission; Electricity charges will be charged extra as per actual consumption; ₹ 1,500/- pm OR ₹ 100/- per day during short stay	₹ 4,500/- per room for family with kids only. ₹ 2,250/- on sharing by two students ₹ 1,500/- on sharing by three students Electricity charges will be charged extra.

- Note:** 1. Accommodation in Hostel will not be provided to the local students of Chandigarh, Panchkula, Mohali and nearby stations.
2. All students are required to conform to all Hostel/Mess Rules which may be enforced by Faculty Incharge Hostel/Mess from time to time as approved by the Director of the institute.
3. Hostel charges given above are subject to revision from time to time and students shall be required to deposit charges as applicable.

(e) Mess/Canteen Charges

- Mess : ₹ 2,700/- (per month) approximately subject to revision.
Canteen : As per approved prevailing rates

(f) Refund Rules:

Except for the refundable deposit of ₹ 5,000/-, no other amount will be refunded if a student leaves the institution after joining the programme. However, if a candidate does not join the institute or surrenders his/her seat without attending the classes, he/she will be refunded the fee as per AICTE guidelines.

17. Academic Prizes

(i) Academic Award

This award will be given in respect of each branch of ME Programme who gets maximum percentage of marks based on the performance in all theory subjects including thesis (all four semesters/seven spells) subject to a minimum of 75% marks provided that there are minimum 5 students appearing in the examination in the concerned ME programme. The condition of minimum 5 students appearing in the examination will not apply if a student gets 90% or more marks.

A merit certificate and ₹ 5,000/- cash are presented to all such students during Annual Day Celebrations of the Institute.

(ii) Dr. S.P. Luthra Memorial Gold Medal

Dr. S.P. Luthra Memorial Gold Medal and a certificate of merit is awarded during Annual Day Celebrations of the Institute every year to a student whose performance based on the complete course is **'the best performance' among all students of all ME Programmes** (separately for Modular and Regular) provided that there are minimum 5 students appearing in the examination of the concerned ME programme.

18. Library

The Institute library has over 52600 documents including books, journals/periodicals, and non-book material in science, engineering & technology, management, social sciences and humanities. It has open access system. It has circulation section, reference, textbook section, periodical section, and newspaper &

general reading section. Comfortable seating arrangement for 100 students/readers is available so as to inspire them to study independently and utilize their time in a constructive manner. The Institute is subscribing to e-resources viz., 3091 online journals: IEL, ASCE, ASME through INDEST/AICTE Consortia, SPRINGER Link, 876 Open Source Journals-DOAJ, around 52 journals, 13 recreational magazines and 12 newspapers. The Institute Library is computerized for the benefit of readers. Complete bibliographic record of book collection is accessible through the library OPAC. All students of ME programmes are entitled to draw maximum 06 books from institute library for a period of 14 days in one go.

19. Journal of Engineering and Technology Education

The institute publishes a bi-annual Journal of Engineering and Technology Education (**ISSN 2229 – 631X**), The Journal provides an interdisciplinary forum to teachers, students, officials/administrators of technical education system and working professionals in industries to share research & development in Engineering & Technology Education and express freely their ideas about various aspects of technical education. Published in January and July each year, the journal will include research papers/reports, articles and book reviews (if accompanied by a copy of the book reviewed) on engineering and technology education.

20. Medical Facilities

The Institute has its own dispensary where the medical facilities exist for the students, staff and their families. A part-time doctor and an attendant have been engaged to look after the patients.

21. Hostel

The Institute has five hostel blocks. In all, the institute has 93 single rooms in the main hostel block, 160 rooms in two new hostel blocks for men, 40 rooms in one hostel block for women and 45 family suites in the P.G. Hostel for accommodating nearly 350 trainees/students.

22. NITTTR, Chandigarh Alumni Association

It is mandatory for all ME students to become member of NITTTR- Chandigarh Alumni Association. They are required to submit their application forms along with life membership fee of ₹ 1,500/- at the time of submission of thesis. The membership fee may also be adjusted from security deposit with the institute.

23. Admission/Academic Calendar for the Session 2017-2018

(for ME Regular Programmes)

	First Semester (for new students, Batch 2017 – 19) and Third Semester (for students, Batch 2016 – 18)	Second Semester (for students, Batch 2017 – 19) and Fourth Semester (for students, Batch 2016 – 18)
Normal Admission/ Registration	17.07.2017 to 18.07.2017	15.01.2018 to 16.01.2018
Late admission to be allowed by the Director NITTTR, with late fee of ₹ 1,000/-	19.07.2017 to 14.08.2017	17.01.2018 to 22.01.2018
Late admission to be allowed by the Vice Chancellor with late fee as per University rules	16.08.2017 to 31.08.2017	-----
Registration	17.07.2017 to 18.07.2017	15.01.2018 to 16.01.2018
Commencement of Classes	17.07.2017	15.01.2018
Teaching	17.07.2017 to 28.08.2017	15.01.2018 to 27.02.2018
First mid-semester tests	29.08.2017 to 30.08.2017	28.02.2018 to 01.03.2018
Teaching	31.08.2017 to 13.10.2017	02.03.2018 to 13.04.2018
Second mid-semester tests	16.10.2017 to 17.10.2017	16.04.2018 to 17.04.2018
Teaching	18.10.2017 to 29.11.2017	18.04.2018 to 29.05.2018
End-semester examinations	01.12.2017 to 15.12.2017	01.06.2018 to 15.06.2018
Commencement of next semester	15.01.2018	16.07.2018

(For ME Modular Programmes)

	Spell June, 2017 7 th Spell for Batch, 2014, 5 th Spell for Batch 2015, 3 rd Spell for Batch 2016 and 1 st Spell for New Batch 2017	Spell December, 2017 6 th Spell for Batch 2015; 4 th Spell for Batch 2016 and 2 nd Spell for Batch 2017	Spell June, 2018 7 th Spell for Batch, 2015, 5 th Spell for Batch 2016, 3 rd Spell for Batch 2017 and 1 st Spell for New Batch 2018
Normal Admission	30.05.2017		30.05.2018
Registration for old students	30.05.2017 to 01.06.2017	30.11.2017 to 01.12.2017	30.05.2018 to 01.06.2018
Late admission to be allowed by the Director NITTTR, with late fee of ₹1,000/-	02.06.2017 to 12.06.2017	04.12.2017 to 08.12.2017	04.06.2018 to 11.06.2018
University Examination for previous batch (two papers)	01.06.2017 to 07.06.2017	01.12.2017 to 07.12.2017	01.06.2018 to 07.06.2018
Commencement of Classes	08.06.2017	08.12.2017	08.06.2018
Teaching	08.06.2017 to 11.07.2017 (34 working days including all Saturday & Sunday)	08.12.2017 to 11.01.2018 (34 working days including all Saturday & Sunday)	08.06.2018 to 11.07.2018 (34 working days including all Saturday & Sunday)
Class Test	12.07.2017	12.01.2018	12.07.2018
End of the spell	12.07.2017	12.01.2018	12.07.2018

Note: Academic Calendar and Schedule of End Semester/Spell University Examinations for ME Programmes (both Regular and Modular) is as per approval by Panjab University, Chandigarh (letter No. Misc./A-6/2428 dated 07.03.2017).

24. National Institute of Technical Teachers Training and Research, Chandigarh


Chandigarh, 'the City Beautiful', is situated at the foot hills of the Shivalik range. It is at present the capital of the states of Punjab & Haryana and the Union Territory of Chandigarh. The campus of NITTTR is in Sector 26 spread over an area of about 19.03 acres. The campus houses the various academic buildings including Computer Centre, Educational Television and Media Centre, Auditorium and Administrative Block; Student hostels, Student Centre and Staff Residences. Besides these, the institute has well equipped and modernized laboratories of engineering and technology departments, an excellent library and an Electronic Service Centre. The institute has a playground, tennis court, volleyball court, gymnasium etc. The facilities at the institute provide for an academic environment of high order.

The institute is about 5 km from the Chandigarh Railway Station as well as Inter-State Bus Terminus (Sector – 17). Places of interest around Chandigarh include Bhakra Dam (110 km), Moghul Gardens at Pinjore (25 km) and Shimla (110 km).



25. List of Faculty with their Designation/Qualification and Specializations

Sr. No.	Name of the Faculty	Designation/Qualifications	Specialization	Photograph
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Director-in-Charge

1.	PK Tulsi	Director-in-Charge, Professor & Head, Education & Educational Management; MA (Economics & Psychology); M.Ed., Ph.D. (Education)	Educational Technology; Research Methodology; HRD & Training Methods	
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Applied Science Department






1.	Bakhshish Chand	Professor & Head; M.Sc. (Phy), M.Phil (Phy); Ph.D. (Physics)	Fiber Optics; Radiation Physics	
2.	Kailash Chand Lachhwani	Assistant Professor, M.Sc. (Maths), M.Phil (Maths), Ph.D. (Maths), MBA	Operation Research, Mathematical Programming	

Civil Engineering Department




1.	Hemant Sood	Professor & Head; BE (Civil); ME (Highway) Ph.D. (Mgt.)	Concrete Technology; Pavement Design	
2.	Sanjay Sharma	Professor; B. Tech. (Civil) M.E (Irr. & Hydl.), Ph.D. Engg. (Civil.)	Hydraulics & Irrigation; Environmental Engineering; Building Maintenance; Repair & Rehabilitation	
3.	AK Duggal	Associate Professor; BE (Civil), ME (Civil); Ph.D. Engg. (pursuing)	Transportation Engineering; Foundation Engineering	
4.	Vinod Kumar	Associate Professor; B.Tech. (Civil) M.Tech. (Soil Mech. & Foundation Engg.); Ph.D. thesis submitted	Geo-technical Engineering; Construction Management	
5.	Himmi Gupta	Assistant Professor; BE Civil; ME Civil Engg. (Structures); Ph.D.Engg. (pursuing)	Structural Engineering; Bridge Engineering; Project Management	

Computer Science & Engineering Department





1.	C. Rama Krishna	Professor & Head; B.Tech. (ECE), M.Tech (Eltx.); Ph.D. Engg.	Wireless Communication & Networks; Cryptography & Cyber Security; Distributed Computing	
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2.	Maitreyee Dutta	Professor; ME Eltx., Ph.D. Engg.	Digital Signal & Image Processing; Data Warehousing & Data Mining; Advanced Computer Architecture; Software Testing & Quality Mgt	
3.	Shano Solanki	Assistant Professor; B.Sc.; MCA, ME (CSE); Ph.D. Engg. (Pursuing)	Algorithm Analysis & Design; Multimedia System Design; Web Based Training, Recommender Systems Data Mining	
4.	Amit Doegar	Assistant Professor; BE (Comp. Sc.); ME (Comp. Sc. & Engg.); Ph.D. Engg. (Pursuing)	Networking; Web Technologies; Open Source Technologies, Image Processing, Data Mining	
5.	Mala Kalra	Assistant Professor; BE (CSE), ME (CSE); Ph.D. Engg. (Pursuing)	Cloud Computing; Information Retrieval; Swarm Intelligence	
6.	Rakesh Kumar	Assistant Professor, BE (CSE), ME (IT), & Ph.D. Engg. (CSE)	Adhoc Networks, Cloud Computing	

Curriculum Development Centre



1.	AB Gupta	Professor & Head; BE, ME (Mech.); Ph.D. Engg. (Mech.)	Curriculum Development; Mechanical Engineering	
2.	PK Singla	Associate Professor and Faculty Incharge (Admn); BE (Civil), ME (Civil); Ph.D. Engg. (pursuing)	Curriculum Design, Curriculum Evaluation	
3.	Suresh Kumar Gupta	Associate Professor; BE (Civil); ME (Structural); Ph.D. Engg. (pursuing)	Curriculum Development; Civil Engineering	

Education and Educational Management





1.	PK Tulsi	Professor & Head; MA (Economics & Psychology); M.Ed., Ph.D. (Education)	Educational Technology; Research Methodology; HRD & Training Methods	
2.	SP Bedi	Professor and Dean (Research & Development); M.Sc. (Chemistry); M.Ed.; Ph.D. (Education)	Performance Evaluation; Research Methodology; Educational Technology; HRD & Training Methods	
3.	Sunil Dutt	Professor & Incharge, Academic Cell & CPIO; M.Sc. (Hons.) Chemistry; M.Ed., Ph.D. (Education)	Educational Technology; Research Methodology & Educational Management	
4.	TN Thukral	Assistant Professor; BE (Electrical Engg.), Master of Engg. Edu.; PG Diploma in Ind. Rels. & Personnel Mgt.)	Technical & Vocational Education; Curriculum Development; Electrical Engineering	

5.	Amandeep Kaur	Assistant Professor; BE (Chemical Engg), ME (Environmental Engg.)	Environmental Engineering	
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Educational Television Centre

1.	SS Pattnaik On lien to BPTU, Orissa	Professor & Head, ETV B.Sc. (Hons), M.Sc. (Physics with electronics specialization); Ph.D. in Engg.	Soft Computing; Multimedia, Antenna & Microwave;	
2.	AK Duggal	Faculty Incharge and Associate Professor; BE (Civil), ME (Civil); Ph.D. Engg. (pursuing)	Transportation Engineering; Foundation Engineering	



Electrical Engineering Department

1.	Lini Mathew	Associate Professor & Faculty Incharge ; BE (Elect.), ME (Elect.) Ph.D. Engg.	Digital Signal Processing; ANN and Fuzzy Logic; Virtual Instrumentation	
2.	Poonam Syal	Associate Professor; BE (Elect.), ME (Elect.); Ph.D. (Electrical Engg.)	Energy Management, Instrumentation for Environmental Engineering, Assistive Technologies; Research Methodology	
3.	Ritula Thakur	Assistant Professor; BE; ME (Elect.); Ph.D. Engg.	Power System, Microcontroller & Micro Processor, PLC and SCADA	
4.	Shimi SL	Assistant Professor; BE & ME (Power Electronics & Drives); Ph.D. (thesis submitted)	Power Electronics & Drives; Digital Control; FACTS, Artificial Intelligence and Optimization, MATLAB, LABVIEW & Its hardware interface	



Electronics & Communication Engg. Department

1.	Rajesh Mehra	Faculty Incharge and Associate Professor; B.Tech. (ECE), ME (ECE); Ph.D. Engg. (ECE)	VLSI Design; Advanced Digital Signal Processing, and Embedded Design	
2.	Kanika Sharma	Assistant Professor; BE (ECE), ME (ECE); Ph.D. Engg.	Embedded System Design; Digital System Design	
3.	Garima Saini	Assistant Professor; B.Tech. (ECE), ME (ECE); Ph.D. Engg. (pursuing)	Advanced Digital Communication; Wireless & Mobile Communication, Antenna	






Entrepreneurship Development & Industrial Coordination

1.	Suresh Dhameja	Professor & Head and Dean Academics & International Affairs; BE (Civil), ME (Civil), Ph.D. (Business Admn. & Commerce)	Entrepreneurship Development; Industry- Institute Interaction	
2.	Amardev Singh	Assistant Professor; B.Tech. (ECE), MBA (IT-Networking), Ph.D. in Business Mgt. (Pursuing)	IT - Networking Marketing Management, Technology Adoption	


IMCO

1.	Suresh Dhameja	Professor & Head and Dean Academics & International Affairs; BE (Civil), ME (Civil), Ph.D. (Business Admn. & Commerce)	Entrepreneurship Development; Industry- Institute Interaction	
2.	Rama Chhabra	Associate Professor; BE (Chemical), ME (Chemical); Ph.D. (pursuing)	Chemical Engineering; Information Management	




Mechanical Engineering Department

1.	SS Banwait	Professor & Head ; BE (Mech.), M.Tech (Design of Mech. Equip); Ph. D. (Mech. & Indl. Engg.)	Engineering Design; Production Management, Manufacturing Technology	
2.	BS Pabla	Professor and Dean Extension & Consultancy; B.Sc. Engg. (Mech), ME (Mech.) Ph.D. (Mech. Engg.)	Manufacturing Technology, CAD/CAM & CNC Machines, Optimization Techniques	
3.	SS Dhami	Professor; BE (Mech.), ME (Mech.); Ph.D.	Mechatronics, Automation & Control System, Modeling & Simulation	
4.	Sunil D. Jassal	Associate Professor; BE (Mech.); ME (Thermal)	Thermal Engineering	
5.	Sudhakar Rao	Assistant Professor; BE (Mech.), ME (Mech.); Ph.D. (pursuing)	CAD/CAM; Manufacturing Technology	


Media & Continuing Education Centre

1.	Rakesh K Wats	Professor & Head ; BE, ME (Civil), Ph.D.(Mgt.)	Quality Mgt. & General Mgt. Civil Engg. (Irrigation & Hydraulics)	
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Rural Development Centre

1.	UN Roy	Professor & Head ; B.Sc. Hon. (Phy.), PGD in Rural Mgt. Dev. Ph.D. (Faculty of Art)	Watershed Management ; Rural Sanitation; Climate Change & Disaster Management	
2.	JS Saini	Professor; B.Com, MBA, Ph.D. (Mgt)	Entrepreneurship and Small Business Development; Rural Development; Empowering the Disabled	
3.	Amit Goyal	Assistant Professor; BE (Civil), ME (Structures) Ph.D. Engg. (pursuing) at IIT, Roorkee	Structures	

Library

1.	Manmohan Singh	Chief Librarian (acting); MA (Economics, Public Administration); M.Lib. Science; PG Information Mgt., UK; LLB	Information Management & Digital Library	
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**NATIONAL INSTITUTE OF TECHNICAL TEACHERS TRAINING AND
RESEARCH, SECTOR-26, CHANDIGARH –160 019**

Application Form for Admission to ME MODULAR PROGRAMMES – 2017

Incomplete application, i.e., without photocopies of all certificates (DMCs, Experience, sponsorship/NOC and reservation etc.) and a demand draft of ₹ 1,000/- will not be considered.

Demand Draft No.:

Date: Amount: ₹ 1,000/-

Bank Name:

To be filled in by the office

Application No.:

Affix recent passport
size Coloured
photograph

Course for which Admission is sought (Please TICK the appropriate box)

- ME in Mechanical Engineering (Manufacturing Technology)
- ME in Civil Engineering (Construction Technology & Management)
- ME in Computer Science & Engineering
- ME in Electrical Engineering (Instrumentation & Control)
- ME in Electronics and Communication Engineering

Please read the prospectus carefully before filling each item of the Application Form.

1) Name (Block letters):

2) a) Marital Status: Married/Unmarried

b) Gender (Male/Female/Transgender):

3) a) Father's Name:

b) Mother's Name:

(Please write your name as well as names of your father & mother exactly as per Degree/DMCs of your qualifying examination)

4) Date of Birth (Attach certificate):

5) State the Minority Group to which you belong, if any: {Buddhists, Christians, Muslims, Sikhs, Zoroastrians (Parsis)}:

6) Address for Correspondence (including Pin Code):

7) Phones with Code (O):

(R):

Mobile No:

Email:

Mobile No. of parents/spouse in case of emergency:

8) Official Address:

9) Sponsoring Institute/Organization:

10) Belongs to SC/ST/Physical Handicapped/OBC Category (Tick Mark and **attach certificate**):

11) Educational Qualification (Diploma/Degree onwards):

S. No.	Examination with Branch	Passed	University	Year	Roll Number	Maximum Marks	Marks obtained
For B.Tech/BE students							
1	1 st Semester/1 st year						
2	2 nd Semester/2 nd year						
3	3 rd Semester/3 rd year						
4	4 th Semester/4 th year						
5	5 th Semester						
6	6 th Semester						
7	7 th Semester						
8	8 th Semester						
Total Marks							
Total Aggregate % of marks based on marks obtained in all Semesters/Years							

For A.M.I.E./I.E.T.E Branch/Subject:
University:

Year:
Marks obtained

Roll No.:
% of Marks

Max. Marks

Section A:
Section B:

- NOTE:** i) In case of B.Tech/BE, marks should be the sum of all eight semesters and, in case of AMIE, marks should be the sum of marks in Section A & B.
ii) In case the result is declared in Grade Points, an authenticated copy of the formula for conversion to percentage of marks should be attached.

Grade: _____ **Converted to Percentage:** _____

12) Teaching and practical experience (in chronological order) after acquiring entry qualification (attach authentic certificates on letter head bearing number & dates)

(Weightage of experience is given only if authentic certificates along with applications are received by 28.06.2017.)

S. No.	Name of Institute/ Organization & Address	Period (with date)		Designation	Nature of Duties
		from	to		
Total Experience = Years Months as on 28.06.2017					

I certify that the entries made by me in this form are correct to the best of my knowledge and I have not suppressed any information in any manner. I agree to observe and abide by all the rules & regulations of the NITTTTR, Chandigarh and the affiliating university that may be laid down from time to time during the period of my studies and not to associate myself with any activity prejudicial to the discipline of the institute.

Place:

Date:

Signature of applicant

RECOMMENDATIONS OF THE SPONSORING AUTHORITY

Certified that the particulars given by Mr./Ms _____

S/o / W/o / D/o _____ are correct to the best of my knowledge.

He/she is being sponsored for admission to Master's Degree programme in:

Date:

Place:

Signature

Name:

Designation:

Address of Sponsoring Authority (with Seal/Office Stamp)

IMPORTANT DATES

ME Regular Programmes:

Last Date for Receipt of duly sponsored Applications: 28.06.2017 upto 5.00 P.M.

Date of loading of Merit List on Institute Website: 07.07.2017

Date of Counseling for ME Regular Programmes: 17.07.2017 at 10.00 A.M.

Date by which Fee to be deposited: 18.07.2017

Date by which classes will begin: 17.07.2017

No separate call letters will be issued for attending the counseling. Candidates shall attend the counseling interviews for admission to ME programmes **at their own expenses. Complete Application along with copies of all certificates and bank draft must reach, Director, National Institute of Technical Teachers Training & Research, Sector 26, Chandigarh-160 019 by speed post as per the last date given above.**