INFORMATION BROCHURE

M. TECH. ADMISSION 2020
(2-Year M. Tech. Programmes)

Indian Institute of Technology
(Indian School of Mines)
Dhanbad - 826004, Jharkhand, India
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www.iitism.ac.in

1. ABOUT THE INSTITUTE

Indian Institute of Technology (Indian School of Mines) Dhanbad was established in 1926, and offers B. Tech., Dual-degree (B. Tech. and M. Tech.), Integrated M. Tech., M.Sc./M.Sc. Tech., M. Tech., MBA and Ph.D. in various areas of Science: Applied Geology | Applied Geophysics | Chemistry | Mathematics & Computing | Physics | and Engineering: | Chemical | Civil | Computer Science and Engineering | Electrical | Electronics | Environmental Science and Engineering | Fuel, Minerals & Metallurgical Engineering | Mechanical | Mining | Mining Machinery | Petroleum | Humanities | and Management. IIT (ISM) has centenary long credentials of outperforming achievements/contributions in academia and the industry. It has been focusing its academic and research activities on various aspects of science, technology and industry, occupying a unique position not only in India, but also abroad. It has substantially contributed to the development of Science, Engineering and Mineral sector through its in-house state-of-the-art facilities for advanced studies and research.

1.1 Location of the Institute

IIT(ISM) is located in the city of Dhanbad, the coal capital of India, which is at the heart of major Indian coalfields, in the state of Jharkhand. One can reach Dhanbad by rail and road. It is 260 km from Kolkata and 160 km from Ranchi. Nearby airports are in Kolkata, Durgapur and Ranchi. Deluxe and Express buses run regularly from Kolkata, Ranchi, Jamshedpur and Bokaro to Dhanbad. IIT(ISM) campus is just 3 km away from Dhanbad railway station where taxis and autos operate round the clock.

2. M. TECH. PROGRAMMES

The aim of the programmes is to train the students in high level of knowledge enabling them to tackle practical complex problems in industrial fields as well as to excel in further higher education through research. Enough flexibility is provided in the structure of the programme in respect of lecture courses, laboratory and project work to help the students to achieve their goal. All the Departments are equipped with sufficient facilities for this purpose. IIT(ISM) offers admission in M. Tech. in three different modes:
(1) Candidates with GATE score (may be called *GATE candidates*)
(2) IIT Graduates with B. Tech degree
(3) Candidates sponsored by government organizations/reputed Industrial Organization/ Academic Institutions (may be called *Sponsored candidates*).

Various M. Tech Programmes offered by IIT(ISM) and the names of the offering Departments are shown in Table 1.

This brochure is not for **Foreign / NRI / PIO** candidates, they are requested to see the institute website on 'Foreign Students' under 'Admission' and they may contact Dean (International Relations and Alumni Affairs) (*dean_iraa@iitism.ac.in*).

2.1 Financial Assistance

(a) The Financial assistance will be offered to M.Tech. Students (admitted under GATE and IIT Graduates with B Tech Degree) as per MHRD, GOI Norms/Institute rules. Students getting assistantship will be required to assist the department for 8 hours of work per week related to

academic activities of the department such as laboratory demonstration, tutorials, evaluation of assignments etc.

(b) Sponsored candidates are NOT eligible for any financial assistantships.

2.2 Programme Fee*

The existing structure of the Semester fees is given below. A candidate will be required to deposit the first semester fee including the Admission Fee, when the candidate, through online portal, finally accepts the admission:

Semester	UR/OBC/EWS**	SC /ST/PwD**
I	₹ 55,800/-	₹ 40,800/-
II	₹ 36,800/-	₹ 21,800/-
III	₹ 46,100/-	₹ 31,100/-
IV	₹ 36,800/-	₹ 21,800/-

*The semester fee is under revision and may increase.
** The above fee also includes ₹ 15,000/- as hostel mess fee advance per semester.

3. ELIGIBILITY OF CANDIDATES

3.1 For GATE Candidates

(a) Candidates must possess a Bachelor degree in Engineering/Technology or equivalent or a Master degree in Science, from the institutes recognized by UGC/AICTE/Government. The qualifying degrees for each of the M. Tech. Programmes are mentioned in Table 2.

(b) Candidates with equivalent degree and discipline of professional bodies (like Institution of Engineers (India), Institute of Chemical Engineers, Aeronautical Society of India, Institute of Electronics & Telecommunication Engineers, Indian Institute of Metals, etc.) are *not eligible* to apply in any M. Tech programmes of this institute.

(c) Candidates must have valid GATE score (remains valid at the time of Admission) in the appropriate GATE Paper as per Table 2.

(d) Candidates seeking admission to M. Tech. Programmes of the Institute should have
  o Minimum 60% or CGPA/CPI of 6.0 in 10 point scale (without rounding off) in the qualifying degree for UR/OBC/EWS candidates.
  o Minimum 55% or CGPA/CPI of 5.5 in 10 point scale (without rounding off) in the qualifying degree for SC/ST/PwD candidates.

3.2 For IIT Graduates

Candidates graduating/ graduated from IITs with B.Tech. Degree having CGPA 8.00 and above (on a scale of 10) can apply without GATE Score. The respective department as per allocated seats will review such applications. The number of seats for such candidates will be supernumeric.

3.3 For Sponsored Candidates

• A candidate working in an academic institution/PSU/Govt. R&D orginizations/Govt. recognized private R&D orginizations/industry, is considered as a sponsored candidate. Such a candidate must

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be sponsored by his/her employer and must have been in employment with the sponsoring organization for at least 2 years at the time of admission.

- Candidates working in private firms/organizations have to submit their latest Salary Bank Account statement/Employees' Provident Fund (EPF) statement during uploading documents as well as during the admission process.
- The applications of candidate sponsored by the organizations under a MoU between Institute and/or under QIP programme shall be eligible for admision.
- The employer must undertake to relieve the candidate to stay in the campus for the specified period to enable the candidate to complete the programme.
- The admission procedure consists of (i) shortlisting through GATE/NET/Appropriate National Level Examination and/or written examination conducted by the department, and/or (ii) interview.
- For sponsored candidates having Bachelors degree from Centrally Funded Technical Institutes (CFTIs) having a CGPA of 8.0 or above, the requirement of GATE/NET is waived off.
- The number of seats for sponsored candidates will be supernumeric, subject to a maximum limit of 10% of total sanctioned seats.

3.4 Selection Criteria

(A) For GATE Candidates and IIT Graduates

(i) The admission to different M. Tech. Programmes will be made on the basis of their GATE score for GATE candidates. For IIT Graduates, it will based on CGPA & Departmental Review.
(ii) In case of equal GATE score, the older candidate in terms of date of birth will get preference.

(B) For Sponsored Candidates

The admission to different M. Tech. Programmes for Sponsored candidates will be made on the basis of performance in Written Test/Interview conducted by the respective departments.

3.5 Reservation of seats

a) Reservation for SC/ST/OBC (Non-Creamy Layer)/PwD candidates will be as per Government of India rules.
b) The EWS Reservation for acdemic session 2020-21 has been taken as 10%.
c) Forms of OBC (Non-Creamy Layer) Certificate (given in Annexure I) must be produced by OBC (Non-Creamy Layer) candidates in the format for 'Admission to Central Educational Institutions (CEIS) under the Government of India' and **should be issued on or after September 01, 2019.**
d) Parental Income Certificate for EWS cateogory (as per GoI) must be produced by candidate in the format for 'Admission to Central Educational Institutions (CEIS) under the Government of India' and **should be valid and issued on or after April 01, 2019.**

3.6 Medical Fitness

(a) Candidates must be in good health. A candidate is required to submit a medical certificate (as per Annexure II) at the time of reporting at IIT(ISM) Dhanbad signed by the chief medical officer (CMO) or equivalent of a government hospital.
(b) The candidate must check his/her eligibility criteria (wherever applicable) as given in table 2 about colour blindness/uniocularity.

(c) A candidate will be allowed to take admission only if the certificate produced by the candidate is verified to be satisfactory by IIT(ISM) officials, whose decision in this regard will be final.

4. ADMISSION PROCEDURE

(a) Online application form is required to be submitted through online portal, which will remain available on the IIT(ISM) website *www.iitism.ac.in* from March 10, 2020 to April 20, 2020. The GATE candidates will also have to register themselves at GATE COAP 2020. The admission of IIT Graduates and Sponsored candidates will be carried out through online portal of IIT (ISM) Dhanbad. After filling the form, the candidates are advised to take a print of the application and keep the same for record.

(b) Candidates can apply for more than one programme and can select up to 10 preferences.

(c) Non-refundable application fee for each programme for GATE candidates/IIT Graduates is Rs. 500/- for UR/EWS/OBC candidates and Rs. 250/- for SC/ST/PwD/Women candidates. The application fee needs to be paid through online payment gateway only along with the online application.

(d) Non-refundable Application fee for each programme for all Sponsored candidates is Rs. 2000/-.

(e) It is the *__responsibility of the candidate__*, to ensure that he/she satisfies all eligibility criteria for a particular programme, as mentioned in this information brochure, and submit complete and correct information in the Institute admission portal accordingly.

(f) The M. Tech. admission will be through online counselling based on the GATE score and CGPA and Departmental Review (for IIT Graduates) as per schedule given in Table 5. The details of counselling procedure is given in Annexure-A.

(g) Image quality of the uploaded documents must be good enough to enable easy verification of the documents/items. Care should be taken to scan the documents (with file format jpg/jpeg) with the help of high quality scanner. The candidate should check the quality of the soft document before uploading.

(h) The following documents are to be uploaded during the document uploading.
   (i) Image files of your recent passport size photograph and signature.
   (ii) Qualifying Degree Marks-Sheet of final semester / final year (7th semester / pre-final year marks-sheet for the 'appearing candidates' whose final semester / final year results are pending).
   (iii) Valid GATE score card as indicated in the application form (for GATE-candidates).
   (iv) 2-year's experience certificate for candidates of M. Tech. in Mining Engineering/Opencast Mining (wherever applicable)
   (v) Caste certificate/EWS income certificate to avail seat reservation under respective reserved category. (The OBC(NCL) certificate as per Annexure I and issued on or after September 01, 2019).
   (vi) Persons with Disability (PwD) are required to upload a certificate of disability from the **authorized medical board** attached to one of the following - Vocational Rehabilitation Centre (VRC) for Physically Handicapped persons/ Special Employment Exchange for Physically Handicapped/ Government Hospital (District and State level).
   (vii) Endorsement certificate from the present employer (*for Sponsored candidates*).
   (viii) Salary Bank Account statement/Employees' Provident Fund (EPF) statement (*for Sponsored candidates working in private firms/organizations*)

(i) The admission of selected candidates through online counselling will be **provisional** after the payment of admission fee.

(j) The candidate is to Report in-person at IIT(ISM), Dhanbad on the scheduled date, time and venue for completing his/her admission. If the candidate fails to report at the admission venue in-person along with the requisite documents in original by that date and time, he/she will not be considered afterwards for admission.

(k) In addition to original copy of above mentioned documents following original documents must be produced by the candidate at the time of **reporting** to IIT (ISM) to complete his/her Admission:
   (i) Copy of the online application form.
   (ii) Copy of the seat allotment letter.
   (iii) Copy of Admission fee payment receipt.
   (iv) The Migration Certificate or College Leaving Certificate.
   (v) Medical fitness certificate as per Annexure II.
   (vi) 4 passport size and 10 stamp size colour photographs.
   (vii) Undertaking regarding not claiming scholarship *for sponsored candidate.*
   (viii) 2-year's experience certificate for candidates of M. Tech. in Mining Engineering Opencast Mining.
   (ix) It is important for the **'Appearing candidates'** to note that their admission will be provisional even after completing all other procedures & formalities which will be confirmed only after submission of final semester / final year marks-sheet of qualifying degree and college leaving certificate / migration certificate in original to the Academic Section through the coordinators of the respective M. Tech. Programmes latest by September 01, 2020 (Tuesday). Such candidates will not be entitled for any scholarship till confirmation of their admission, if otherwise eligible. Failure to submit the requisite document by the stipulated date will lead to cancellation of admission of all such candidates and names of all such candidates will be deleted from the rolls of the Institute w.e.f. September 02, 2020 (Wednesday) without further notice. In such cases the candidates will be refunded only caution money deposited at the time of admission.
   (x) Salary Bank Account statement/Employees' Provident Fund (EPF) statement (*for Sponsored candidates working in private firms/organizations*)

(l) The documents of the candidates will be verified by IIT(ISM) officials. Admission of only those candidates, whose documents are found in order and verified as satisfactory, will be confirmed.

(m) All other formalities related to identity card, hostel and bank account, etc. will be completed subsequently by the candidate.

(n) Mess fee for the first semester have to be paid at the time of Reporting to IIT(ISM). Caution money and security deposits are refundable only after completion of the Programme.

4.1 Withdrawal of Admission

After admission/provisional admission, a candidate may withdraw his/her admission. Withdrawal may be requested through online portal only.

i. If the withdrawal request reaches the office of Assistant Registrar (Exam & Academic), IIT (ISM) Dhanbad through online portal **before** the final main round of COAP, the entire fee collected from the student will be refunded after a deduction of processing fee of Rs.1000/-.

ii. If a student withdraws his/her offer of admission **after** the final main round of COAP, he/she will be refunded only the caution money.

5. OTHER IMPORTANT POINTS

(a) In the event of any information being found false or incorrect or incomplete or non-eligibility being detected at any time before or after admission, his/her candidature is liable for rejection without further communication.

(b) An applicant once admitted in a particular postgraduate programme will not be allowed to shift to any other programme, even if seats remain available in other courses. However, if adequate number of students is not available in a particular programme, IIT(ISM) may not run that Programme. In such case, a candidate who has taken admission in that Programme may be allowed to change his/her admission to other M. Tech. Programme (even if the candidate has not applied for that Programme), where vacant seat is available in the respective categories and matches the qualifications of the candidate with the eligibility condition of that Programme.

(c) Students are required to observe prescribed Rules & Regulations and orders issued by the IIT(ISM) authorities from time to time.

(d) The rules for GATE scholarship are as follows:
  (i) The Assistantship will be awarded to the candidates on the basis of GATE score.
  (ii) Assistanship will also be applicable for IIT Gaduates.
  (iii) The students are required to provide teaching assistance of 8 hours/week.
  (iv) The continuation of the Assistantship during each semester is contingent upon Academic performance.
  (v) The scholarship will be resumed once SGPA requirement is attained.
  (vi) If a student whose scholarship was stopped for the second semester due to poor academic performance in the first semester achieves Cumulative Grade Point Average (CGPA) and Semester Grade Point Average (SGPA) as per the institutes' norms, the arrears for the stopped period will also be paid.
  (vii) Maximum duration of scholarship is 4 Semesters for M Tech.

(e) A separate entrance test will be conducted only for **non-GATE** candidates having B. Tech/B.E in Mineral Engineering for admission in M. Tech in Mineral Engineering. The test will be conducted by the Department of Fuel, Minerals and Metallurgical Engineering. **Such admitted non-GATE students will not be eligible for scholarship.** For more details, please visit the Department of Fuel, Minerals and Metallurgical Engineering website and contact the Head of the department (hod_fme@iitism.ac.in, fme@iitism.ac.in); Phone no. +91-326-2235276.

6. DISCLAIMER

This website has been launched to provide candidates and public-at-large, information about IIT(ISM) M. Tech Admission. If you do not agree to the terms and conditions given below, do not access this site or any pages thereof.

TERMS AND CONDITIONS

No Warranty

Information displayed on the site, including text, graphics, links or other items - are provided on an "As Is" and "As Available" basis. Although, IIT(ISM) M. Tech. Admission Committee–2020 which organizes puts their best effort to provide information accurately it expressly disclaims the liability for errors or omissions thereon. No warranty of any kind, implied, express or statutory, including but not limited to the warranty of fitness for a particular purpose and freedom from computer virus, is given in conjunction with the information.

Limitation of Liability

In no event, IIT (ISM) will be liable for any damages, including without limitation, direct or indirect, special, incidental, or consequential damages, losses, or expenses arising in connection with this site or use thereof or inability to use by any persons, or in connection with any failure of performance, error, omission, interruption, defect, delay of operation or transmission, computer virus or line or system failure, even if IIT (ISM) or any representative thereof is advised of the possibility of such damages, losses or expenses.

Network Services

The IIT(ISM) M. Tech. Admission Committee 2020 cannot be held responsible for reduced access speeds due to bandwidth overloads especially close to the deadlines of any online activity.

Jurisdiction

In case any claim or dispute arises in respect of M. Tech. admission, it is hereby made absolutely clear that the Courts at Dhanbad and Dhanbad alone shall have the exclusive jurisdiction to entertain and settle any such dispute or claim.

COMMUNICATION WITH IIT(ISM) DHANBAD

1. Communication regarding M. Tech. 2020 should be done at the following address with the envelope superscribed with "*Ref: 2-YEAR M. TECH. ADMISSION – 2020*":

    ASSISTANT REGISTRAR (EXAM & ACADEMIC)
    INDIAN INSTITUTE OF TECHNOLOGY
    (INDIAN SCHOOL OF MINES)
    DHANBAD–826004
    Email: *ar_acad@iitism.ac.in*
    　　　　　&
    mtechadm@iitism.ac.in

2. *Any email communication should be addressed with full identification of the candidate, i.e., name, email, mobile, Programme name(s), category, GATE/Sponsored and other identifying codes given by IIT(ISM) (such as registration number, etc.). For electronic communication the candidate should use the email/mobile registered in the online application only. Before asking a query a candidate must go through this Information Brochure / instructions in the online portal properly.*

3. For withdrawal purpose, a candidate must follow the guidelines as indicated in 4.1of this brochure.

4. IIT(ISM) Dhanbad will not issue any letter by post to any candidate regarding any admission related activity. The candidate must visit the institute website (*www.iitism.ac.in*) regularly in this regard for any update / instruction / result / announcement. Candidates will also be informed important instructions through SMS/email.

TABLE-1: M. TECH. PROGRAMMES [SESSION: 2020-21]

Sl. No.	M. Tech Programme	Programme Code	Offering Department
1.	Engineering Geology	**GL**	Applied Geology
2.	Geoexploration	**GLGP**	Applied Geology and Applied Geophysics
3.	Earthquake Science & Engineering	**GP**	Applied Geophysics
4.	Chemical Engineering	**CH**	Chemical Engineering
5.	Pharmaceutical Science and Engineering	**CY**	Chemistry
6.	Geotechnical Engineering	**CE1**	Civil Engineering
7.	Structural Engineering	**CE2**	
8.	Computer Science and Engineering	**CS1**	Computer Science and Engineering
9.	Computer Science and Engineering [Specialisation in Information Security]	**CS2**	
10.	Power Electronics and Electrical Drives	**EE1**	Electrical Engineering
11.	Power System Engineering	**EE2**	
12.	Communication and Signal Processing	**EC1**	Electronics Engineering
13.	Optoelectronics and Optical Communication Engineering	**EC2**	
14.	RF & Microwave Engineering	**EC3**	
15.	VLSI Design	**EC4**	
16.	Environmental Science & Engineering	**ES**	Environmental Science & Engineering
17.	Fuel Engineering	**FM1**	Fuel, Minerals and Metallurgical Engineering
18.	Mineral Engineering	**FM2**	
19.	Industrial Engineering & Management	**MS**	Management Studies
20.	Data Analytics	**MA**	Mathematics & Computing
21.	Mechanical Engineering [Specialisation in Machine Design]	**ME1**	Mechanical Engineering
22.	Mechanical Engineering [Specialisation in Manufacturing Engineering]	**ME2**	
23.	Mechanical Engineering [Specialisation in Maintenance Engineering & Tribology]	**ME3**	
24.	Mechanical Engineering [Specialisation in Thermal Engineering]	**ME4**	
25.	Geomatics	**MN1**	Mining Engineering
26.	Opencast Mining	**MN2**	
27.	Mining Engineering	**MN3**	
28.	Tunnelling & Underground Space Technology	**MN4**	
29.	Mining Machinery Engineering	**MM**	Mining Machinery Engineering
30.	Petroleum Engineering	**PE**	Petroleum Engineering

TABLE-2: QUALIFYING DEGREES, DISCIPLINES & GATE PAPER CODES FOR M. TECH. PROGRAMMES.

Sl. No.	M. Tech Programme and Programme Code	GATE Paper Codes	Eligibility Criteria
1.	Engineering Geology (GL)	**CE/GG**	Any one of the following: • Any one of the followings: M.Sc./M.Sc.Tech. degree in Geology/Applied Geology/Geoscience/Marine Geology with 3-year B.Sc. (Honours/Major/Main) in Geology • B.E./B.Tech. degree in Civil Engineering • 5-year integrated M.Sc./M.Sc.Tech./M.Tech. in Applied Geology/Geology/5-year integrated M. Tech. in Geological Technology **Note: *Candidates with colour blindness/uniocularity are not permissible.***
2.	Geoexploration (GLGP)	**GG/MN/MT/ PE**	Any one of the followings: • M.Sc./M.Sc. Tech. degree in Geology/Applied Geology/ Geoscience/Exploration Geology/Marine Geology with 3-year B.Sc. (Honours/Major/Main/Equivalent) in Geology • M.Sc./M.Sc. Tech. degree in Geophysics/Applied Geophysics/Exploration Geophysics/Marine Geophysics with any two subjects out of Mathematics/Physics/Chemistry at B.Sc. level. • 5-year integrated M.Sc./M. Sc. Tech./M. Tech in Applied Geology/5-year integrated M.Tech. in Geological Technology/Geoexploration/Geoexploration Technology/ Exploration Geology • 5 year integrated M.Sc./M.Sc. Tech. in Applied Geophysics/ 5-year integrated M. Tech. in Geophysical Engineering/ Geophysical Technology • B.S-M.S. in Earth Sciences/Geosciences • B.E./B. Tech. in Mining/Opencast Mining/Mineral/ Metallurgy Engineering • B.E./B. Tech. in Petroleum Engineering/Applied Petroleum Engineering/Petroleum Studies/Petroleum Technology/Petroleum Science/Petroleum Science and Engineering. **Note: *Candidates with colour blindness/unlocularity are not permissible.***
3.	Earthquake Science & Engineering (GP)	**CE/GG/MN**	Any one of the followings: • 2-years M.Sc./3-years M.Sc. Tech./5-years integrated M.Tech. in Applied Geophysics/Exploration Geophysics/Geology/Applied Geology/Marine Geophysics • 5-years integrated M.Tech. in Geophysical Technology • B.E./B.Tech. degree in Mining Engineering/ Civil Engineering.
4.	Chemical Engineering (CH)	**CH**	B.E./B.Tech. in Chemical Engineering/ Petrochemical/ Biochemical Engineering/Polymer Science & Engineering.

Sl. No.	M. Tech Programme and Programme Code	GATE Paper Codes	Eligibility Criteria
5.	Pharmaceutical Science and Engineering (CY)	CY/CH/BT/XL	Any one of the following with Mathematics at 10+2 level: • B.E./B. Tech. in Chemical Engineering/ Biotechnology/ Chemical Technology • M. Sc. in Chemistry/Biochemistry • B. Pharma
6.	Geotechnical Engineering (CE1)	CE	B.E./B.Tech or equivalent degree in Civil Engineering.
7.	Structural Engineering (CE2)	CE	B.E./B.Tech or equivalent degree in Civil Engineering.
8.	Computer Science and Engineering (CS1)	CS/EC/EE/IN	B.E./B.Tech. or equivalent in Computer Science and Engineering/ Information Technology/Electronics and Communication/ Telecommunication/ Electronics and Instrumentation/Electronics/ Electronics and Electrical/Electrical Engineering.
9.	Computer Science and Engineering [Specialisation in Information Security] (CS2)		
10.	Power Electronics and Electrical Drives (EE1)	EC/EE/IN	B.E./B.Tech or equivalent degree in Electrical/ Electronics/ Electrical & Electronics/Electrical & Communication/Electronics & Communication/Instrumentation/Electronics & Instrumentation/Power Electronics & Drives.
11.	Power System Engineering (EE2)	EE	B.E./B. Tech or equivalent degree in Electrical / Electrical & Electronics Engineering.
12.	Communication and Signal Processing (EC1)	EC	B. Tech./B.E. or equivalent degree in Electronics Engineering/Electronics & Communication Engineering/Electronics & Telecommunication Engineering/Telecommunication Engineering/Information Technology/Electronics and Instrumentation Engineering.
13.	Optoelectronics and Optical Communication Engineering (EC2)		B. Tech./B.E. or equivalent degree in Electronics Engineering/ Electronics & Communication Engineering/Electronics & Telecommunication Engineering/Telecommunication Engineering/Electronics and Instrumentation Engineering **OR** M. Sc. in Electronics/Electronics & Communication.
14.	RF & Microwave Engineering (EC3)		B.E./B.Tech in Electronics Engineering/Electronics and Communication Engineering/Electronics and Telecommunication Engineering/Telecommunication Engineering **OR** M.Sc. in Electronics/Electronics & Communication **OR** M. Sc. (Physics) with Specialization in Electronics.
15.	VLSI Design (EC4)		B.E./B.Tech. or equivalent degree in Electronics Engineering/Electronics & Communication Engineering/Electronics & Telecommunication Engineering/Telecommunication Engineering **OR** M.Sc. in Electronics/Electronics & Communication.

Sl. No.	M. Tech Programme and Programme Code	GATE Paper Codes	Eligibility Criteria
16.	Environmental Science & Engineering (ES)	BT/CE/CH/ EY/MN/XE (with Section H), XL	Any one of the following: • M.Sc. Degree in Environmental Science/Chemistry/Zoology/ Botany/Geology/Microbiology/Atmospheric Science/ Biochemistry/Biotechnology/Earth Science/Geochemistry/ Remote Sensing and GIS • M.Sc. Tech. Degree in Environmental Science/ Biotechnology/Atmospheric Science/Remote Sensing and GIS • B.E./B.Tech or equivalent degree in Environmental/Civil/ Chemical/Mining/Biotechnology.
17.	Fuel Engineering (FM1)	CH / MN / MT / XE	B.E./B.Tech. or equivalent degree in Mineral/Mining/ Metallurgy/ Chemical/Ceramic Engineering.
18.	Mineral Engineering (FM2)	CH/MN/ME/ MT/XE	B.E./B.Tech. or equivalent degree in Mineral/Mining/Metallurgy/ Chemical Engineering/Mecahnical/Ceramic Engineering.
19.	Industrial Engineering & Management (MS)	AE/AG/BT/ CE/CH/CS/ EC/EE/IN/ ME/MN/MT/ PE/PI/TF/XE	B.E./B.Tech. or equivalent degree in any branch of Engineering.
20.	Data Analytics (MA)	CS/MA/ST	Any one of the following: • B.E./B. Tech. in Computer Science and Engineering • B.E./B.Tech. in Information Technology • Four year B.S./B.Tech. in Mathematics & Computing • M.Sc. in Computer Science • MCA • M.Sc./MS In Mathematics/Mathematics & Computing/ Statistics/Statistics & Informatics • 5 Year Integrated M.Sc./M.Tech. in Mathematics & Computing • 5 Year Integrated M.Sc. in Statistics & Informatics.
21.	Mechanical Engineering [Specialisation in Machine Design] (ME1)	AE/ME	B.E./B.Tech. or equivalent degree in Mechanical Engineering/ Aerospace Engineering/Aeronautical Engineering/Automobile Engineering/Manufacturing Engineering.
22.	Mechanical Engineering [Specialisation in Manufacturing Engineering] (ME2)	PI/ME	B.E./B.Tech. or equivalent degree in Mechanical Engineering/ Manufacturing Engineering/Production Engineering/Production and Industrial Engineering.
23.	Mechanical Engineering [Maintenance Engineering & Tribology] (ME3)	PI/ME	B.E./B.Tech. or equivalent degree in Mechanical Engineering/ Aerospace Engineering/Aeronautical Engineering/Automobile Engineering/Manufacturing Engineering/Production Engineering.
24.	Mechanical Engineering [Specialisation in Maintenance Engineering & Tribology] (ME4)	AE/ME	B.E./B.Tech. or equivalent degree in Mechanical Engineering/ Aerospace Engineering/Aeronautical Engineering/Automobile Engineering/Energy Engineering.

Sl. No.	M. Tech Programme and Programme Code	GATE Paper Codes	Eligibility Criteria
25.	Geomatics (MN1)	CE/CS/EC/GG/MN/XE	Any one of the following: • B.E./B.Tech. or equivalent degree in Mining Engineering/ Computer Science Engineering/Information Technology/Environmental Science & Engineering/ Civil Engineering/Electronics and Communication Engineering/ Engineering Sciences/Geomatics/Geo Informatics/Geo Sciences/Earth Sciences. • M.Sc.Tech. in Geology/Applied Geology/Applied Geophysics with minimum 50% marks in Mathematics at graduate level. • M.Sc. in Geospatial Sciences/GIS/Geography with 60% marks in Mathematics at graduate level.
26.	Opencast Mining (MN2)	CE/GG/EE/ME/MN	Any one of the following: • B.E./B.Tech. or equivalent degree in Mining/Opencast Mining/Mining Machinery Engineering/Civil. • B.E./B.Tech.or equivalent degree in Mechanical/Electrical Engineering with at least 2 years working experience in surface mining. • M.Sc.Tech. (Geology/Applied Geology) with 60% marks in Mathematics at graduate level and at least 2 years working experience in surface mining. **Note:** *Candidates with colour blindness / uniocularity are not permissible.*
27.	Mining Engineering (MN3)	CE/GG/EE/ME/MN	Any one of the followings: • B.E./B.Tech. or equivalent degree in Mining/Opencast Mining/Mining Machinery Engineering. • B.E./B.Tech. or equivalent degree in Civil/Mechanical/Electrical Engineering with 2 years working experience in mines. • M.Sc. Tech. (Geology/Applied Geology) with 60% marks in Mathematics at graduate level and 2 years working experience in mines. **Note:** *Candidates with colour blindness / uniocularity are not permissible.*
28.	Tunnelling& Underground Space Technology (MN4)	CE/GG/ME/MN	Any one of the followings: • B.E./B.Tech. or equivalent degree in Mining/Opencast Mining/Mining Machinery/Civil/Mechanical Engineering. • M.Sc. Tech. in Geology/Applied Geology with 60% marks in Mathematics at graduate level. **Note:** *Candidates with colour blindness / uniocularity are not permissible.*
29.	Mining Machinery Engineering (MM)	ME/MN/MT/PI	B.E./B.Tech./B.Sc Engineering in Mining Machinery Engineering/Mechanical Engineering/Mining Engineering/ Automobile Engineering/Production Engineering/ Manufacturing Engineering/Mineral Engineering/ Metallurgy and Material Engineering/Mechatronics.
30.	Petroleum Engineering (PE)	PE	B. E./B. Tech. or equivalent degree in Petroleum Engineering/ Applied Petroleum Engineering/Gas Engineering/Petroleum Management/Petroleum Studies/Petroleum Technology/Petroleum Science/Petroleum Science and Engineering. **Note**: *Candidates with colour blindness / uniocularity are not permissible*.

TABLE-3: GATE PAPERS AND CODES 2020

GATE Paper	Code	GATE Paper	Code
Aerospace Engineering	AE	Instrumentation Engineering	IN
Agricultural Engineering	AG	Mathematics	MA
Architecture and Planning	AR	Mechanical Engineering	ME
Bio-medical Engineering	BM	Mining Engineering	MN
Biotechnology	BT	Metallurgical Engineering	MT
Civil Engineering	CE	Petroleum Engineering	PE
Chemical Engineering	CH	Physics	PH
Computer Science and Information Technology	CS	Production and Industrial Engineering	PI
Chemistry	CY	Statistics	ST
Electronics and Communication Engineering	EC	Textile Engineering and Fibre Science	TF
Electrical Engineering	EE	Engineering Sciences	XE*
Ecology and Evolution	EY	Life Sciences	XL**
Geology and Geophysics	GG		

*XE Paper Sections	Code	**XL Paper Sections	Code
Engineering Mathematics (Compulsory)	A	Chemistry (Compulsory)	P
Any two optional sections		Any two optional sections	
Fluid Mechanics	B	Biochemistry	Q
Materials Science	C	Botany	R
Solid Mechanics	D	Microbiology	S
Thermodynamics	E	Zoology	T
Polymer Science and Engineering	F	Food Technology	U
Food Technology	G		
Atmospheric and Oceanic Sciences	H		

TABLE-4: SEAT DISTRIBUTION OF M. TECH. PROGRAMMES 2020-21

Sl. No.	Name of Programme (Progamme code)	UR	SC	ST	OBC	EWS	Total
1.	Engineering Geology (GL)	7	2	1	5	2	17
2.	Geoexploration (GLGP)	7	2	1	5	2	17
3.	Earthquake Science & Engineering (GP)	10	4	2	7	2	25
4.	Chemical Engineering (CH)	10	4	2	7	2	25
5.	Pharmaceutical Science and Engineering (CY)	11	4	2	7	3	27
6.	Geotechnical Engineering (CE1)	7	2	1	5	2	17
7.	Structural Engineering (CE2)	10	4	2	7	2	25
8.	Computer Science and Engineering (CS1)	20	7	4	13	5	49
9.	Computer Science and Engineering [Specialisation in Information Security] (CS2)	19	7	4	12	5	47
10.	Power Electronics and Electrical Drives (EE1)	16	6	3	11	4	40
11.	Power System Engineering (EE2)	16	6	3	10	4	39
12.	Communication and Signal Processing (EC1)	10	4	2	7	2	25
13.	Optoelectronics and Optical Communication Engineering (EC2)	10	4	2	7	2	25
14.	RF & Microwave Engineering (EC3)	7	3	1	4	2	17
15.	VLSI Design (EC4)	12	5	2	8	3	30
16.	Environmental Science & Engineering (ES)	17	6	3	12	4	42
17.	Fuel Engineering (FM1)	8	3	2	5	2	20
18.	Mineral Engineering (FM2) Through GATE	7	3	1	4	2	17
	Mineral Engineering (FM2) *Through Entrance Exam	4	2	1	2	1	10
19.	Industrial Engineering & Management (MS)	16	6	3	11	4	40
20.	Data Analytics (MA)	7	3	2	4	1	17
21.	Mechanical Engineering [Specialisation in Machine Design] (ME1)	16	6	3	11	4	40
22.	Mechanical Engineering [Specialisation in Manufacturing Engineering] (ME2)	16	6	3	11	4	40
23.	Mechanical Engineering [Specialisation in Maintenance Engineering & Tribology] (ME3)	9	3	2	6	2	22
24.	Mechanical Engineering [Specialisation in Thermal Engineering] (ME4)	18	7	3	12	4	44
25.	Geomatics (MN1)	7	2	1	5	2	17
26.	Opencast Mining (MN2)	7	3	1	4	2	17
27.	Mining Engineering	7	2	1	5	2	17
28.	Tunnelling & Underground Space Technology (MN4)	7	2	1	5	2	17
29.	Mining Machinery Engineering (MM)	11	4	2	7	3	27
30.	Petroleum Engineering (PE)	15	5	3	10	4	37
Grand Total		**344**	**127**	**64**	**229**	**85**	**849**[†]
		UR	SC	ST	OBC	EWS	Total

[†] Number of seats for sponsored/IIT graduate candidates will be supernumeric, subject to a maximum limit of 10% of total sanctioned seats.

NOTE: UR- Unreserved, **SC**- Scheduled Caste, **ST**- Scheduled Tribe, **OBC**- Other Backward Classes (Non-Creamy Layers) **EWS**-Economically Weaker Sections.

** A separate notification for admission through written test in M.Tech (Mineral Engineering) for non-GATE candidates will be issued on the Institute website (http://iitism.ac.in). The entrance examination will be conducted by the Department of Fuel, Minerals and Metallurgical Engineering of IIT(ISM) Dhanbad only for those students who are B. Tech in Mineral Engineering. For more details, please contact concerned Head of Department (**hod_fme@iitism.ac.in, fme@iitism.ac.in**); Phone no. +91-326-2296626, +91-326-2235276.*

TABLE-5: SCHEDULE OF M. TECH. ADMISSION 2020

Procedure	Date
Online Application Form available for submission	March 10, 2020 to April 20, 2020
Opening of COAP portal for registration	March 20, 2020 (Tentative)
Date of Written Test/Interview **for Sponsored Candidates only**	June 24, 2020
COAP Counselling schedule	May 11, 2020 to July 12, 2020
Reporting at IIT(ISM) Dhanbad	July 22, 2020 (Tentative)
Commencement of Semester for all M.Tech. courses for the Session 2020–21	July 27, 2020
IIT (ISM) online portal will be active till July 27, 2020	

ANNEXURE – A

Important Dates for Counselling at COAP

Please visit the COAP website:

https://learning.tcsionhub.in/coap

FORM OF CERTIFICATE TO BE PRODUCED BY OBC (NON-CREAMY LAYER) APPLYING FOR **ADMISSION TO CENTRAL EDUCATIONAL INSTITUTIONS (CEIs)**, **UNDER GOVERNMENT OF INDIA**

This is to certify that Shri/Smt./Kum. _____ Son/Daughter of

Shri/Smt._____ of Village/Town _____ District/Division

_____ in the _____ State belongs to the _____ Community

which is recognized as a backward class under:

(i) Resolution No. 12011/68/93-BCC(C) dated 10/09/93 published in the Gazette of India Extraordinary Part I Section I No. 186 dated 13/09/93.
(ii) Resolution No. 12011/9/94-BCC dated 19/10/94 published in the Gazette of India Extraordinary Part I Section I No. 163 dated 20/10/94.
(iii) Resolution No. 12011/7/95-BCC dated 24/05/95 published in the Gazette of India Extraordinary Part I Section I No. 88 dated 25/05/95.
(iv) Resolution No. 12011/96/94-BCC dated 9/03/96.
(v) Resolution No. 12011/44/96-BCC dated 6/12/96 published in the Gazette of India Extraordinary Part I Section I No. 210 dated 11/12/96.
(vi) Resolution No. 12011/13/97-BCC dated 03/12/97.
(vii) Resolution No. 12011/99/94-BCC dated 11/12/97.
(viii) Resolution No. 12011/68/98-BCC dated 27/10/99.
(ix) Resolution No. 12011/88/98-BCC dated 6/12/99 published in the Gazette of India Extraordinary Part I Section I No. 270 dated 06/12/99.
(x) Resolution No. 12011/36/99-BCC dated 04/04/2000 published in the Gazette of India Extraordinary Part I Section I No. 71 dated 04/04/2000.
(xi) Resolution No. 12011/44/99-BCC dated 21/09/2000 published in the Gazette of India Extraordinary Part I Section I No. 210 dated 21/09/2000.
(xii) Resolution No. 12015/9/2000-BCC dated 06/09/2001.
(xiii) Resolution No. 12011/1/2001-BCC dated 19/06/2003.
(xiv) Resolution No. 12011/4/2002-BCC dated 13/01/2004.
(xv) Resolution No. 12011/9/2004-BCC dated 16/01/2006 published in the Gazette of India Extraordinary Part I Section I No. 210 dated 16/01/2006.

N.B. Strikeout whichever resolutions (i-xv) is/are not applicable.

Shri/Smt./Kum. _____ and/or his family

ordinarily reside(s) in the _____ District/Division of

_____ State. This is also to certify that he/she **does not belong to the persons/sections (Creamy Layer)** mentioned in Column 3 of the Schedule to the Government of India, Department of Personnel & Training O.M. No. 36012/22/93-Estt.(SCT) dated 08/09/93 which is modified vide OM No. 36033/3/2004 Estt.(Res.) dated 09/03/2004 and further modified vide OM No. 36033/3/2004-Estt. (Res.) dated 14/10/2008 and OM36033/1/2013-Estt. (Res.) dated 27/05/2013 or the latest notification of the Government of India.

Dated:

District Magistrate/Deputy Commissioner/Competent Authority
(Seal)

*Please delete the word(s) which are not applicable.

NOTE:

a) The term 'Ordinarily' used here will have the same meaning as in Section 20 of the Representation of the People Act, 1950.

b) The authorities competent to issue Caste Certificates are indicated below:

- District Magistrate/Additional Magistrate/Collector/Deputy Commissioner/Additional Deputy Commissioner/ Deputy Collector/Ist Class Stipendiary Magistrate/Sub-Divisional magistrate/Taluka Magistrate/Executive Magistrate / Extra Assistant Commissioner (not below the rank of I[st] Class Stipendiary Magistrate).
- Chief Presidency Magistrate/Additional Chief Presidency Magistrate/Presidency Magistrate.
- Revenue Officer not below the rank of Tehsildar' and
- Sub-Divisional Officer of the area where the candidate and/ or his family resides.

MEDICAL FITNESS CERTIFICATE OF APPLICANT
FOR ADMISSION IN M. TECH. IN IIT(ISM) DHANBAD

(To be provided by a Chief Medical Officer (CMO) or Equivalent of a Government Hospital)

I, Dr…………………………………………… after examining (with necessary investigations)

Mr./Ms………………………………………….Son/Daughter of Mr./Mrs……..……..………..…..………..

born on…………………………………, certify that he/she has fairly sound constitution, and that he/she has no disease or physical or mental infirmity unfitting him/her now, or likely to unfit him/her in future, for active outdoor work as practical Engineer/Technologist which involves considerable fatigue and exposure.

The following are the results of tests, measurements, etc.:-

1. Mark of identification   :
2. Weight   :
3. Height (in cm)   :
4. Blood Pressure   :
5. Pulse rate (beats/min)   :
6. Blood Group   :
7. Abuse of substances (if any)   : Smoking / Alcohol / Drugs / Any other
8. Chest measurements   : Contracted: ....cm   Expanded:……...cm
9. Vision: Right Eye: Near: Distant:

                                   Left Eye: Near: Distant:

10. Colour Blindness, congenital or other disease of eye (if any):

11. Hearing: Right ear: GOOD / FAIR / POOR

                                   Left ear: GOOD / FAIR / POOR

12. X-ray PA view of chest with proper identification mark : Satisfactory / Not satisfactory
    If not satisfactory, then specify why:

13. If any other abnormality noticed:
14. Remarks / Special Recommendations, if any:

Conclusion: Certified that the above mentioned student is free of any communicable disease and fit to stay in hostels provided by IIT(ISM) Dhanbad and attend classes with co-students.

Date   :
Place   :

                                                                          (**Signature and Seal**)

Declaration by the candidate: I declare that all the statements above are true and correct to the best of my knowledge. I fully understand that I am responsible for the accuracy of all statements given.

Candidate's Signature with date: