LIST OF IMPORTANT NOTIFICATIONS ISSUED IN 2024

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Creation of APAAR ABC ID for all students

**INDIAN INSTITUTE OF TECHNOLOGY (INDIAN SCHOOL OF MINES) DHANBAD**
**(OFFICE OF THE DEAN ACADEMIC)**

No.IITISM/DAC/692 07.03.2024

**NOTICE**

**CREATION OF APAAR/ABC ID NECESSARY FOR ALL STUDENTS**

Launched by Ministry of Education, Govt. of India, Automated Permanent Academic Account Registry (APAAR) is a unique id assigned to the students of all schools and colleges, upon registering for the same, to get their academic data, degrees, scholarships, credits and other aspects recorded under it. Students APAAR/ABC Id will be linked to their Aadhaar Id but will be a separate Id. It is a lifelong ID that tracks students' academic journey and achievements and make transfer from one school/college to another easier. The students can download their APAAR card after doing registration.

ABC / APAAR Id can be created by logging on to https://nad.digilocker.gov.in/students or through https://www.abc.gov.in/

Steps for Registration for APAAR Id

1. Pre-requisite - For registration for APAAR Id, a student needs his/her Aadhaar number and the mobile phone number that has been registered with Aadhaar for receiving OTP.
2. Students can first create their digilocker account using their Aadhaar details.
3. Digilocker can then be used to open an ABC/APAAR Account.
4. Students can then provide the admission number/roll number assigned to them by the Institute in MIS as identifier and enter it for ABC/APAAR registration and also choose the name of IIT Dhanbad as their Institute.
5. The form needs to be submitted online on the same portal, the APAAR/ABC Card will then be generated. The same can be downloaded by the student.

For the long term benefit of the students, registering for ABC/APAAR Id is necessary for Institute students. The students of the batch graduating in 2024 are necessarily required to complete their registration for ABC / APAAR Id by the end of March 2024.

The provision to enter this id in MIS will be provided to the students soon.

9/3/24
Dean (Academic) (i/c)

Copy to –
1. Director / Dy.Director
2. Dean (Infra)/Assoc.Dean (IT & N)
3. DR (Acad) / AR (UG) / AR (PG)
4. All Students

Notification Delaying reforms for Int M Tech Dual degree

**INDIAN INSTITUTE OF TECHNOLOGY (INDIAN SCHOOL OF MINES)**
**DHANBAD**

**OFFICE OF THE DEAN (ACADEMIC)**

No. IITISM/DAC/694 06 March 2024

## NOTIFICATION

## DELAYING THE IMPLEMENTATION OF ACADEMIC REFORM OF REMOVAL OF THEORY COURSES FROM THE FINAL YEAR OF INT. M. TECH. / DUAL DEGREE STUDENTS

The Senate in its 31st meeting held on 20th February 2024 has approved delaying the implementation of Academic Reform of removal of theory courses from the final year of Int. M. Tech. / Dual Degree students.

The senate in its 28th meeting held on 24th July 2023 approved the academic reforms wherein a modification of existing PG Course structure including 5th year Int. M. Tech. and Dual Degree was to be made applicable from the fresh (PG) batch admitted in MS 2023-24. The elective courses were to be dropped from the final semester and the thesis credits were to be adjusted accordingly for such students.

The approved changes will be implemented in the PG batch admitted from MS 2023-24 as decided. However, as many Int. M. Tech. / Dual Degree students of the batch admitted in 2020 are yet to complete their mandatory MS and HSS courses and some are even required to complete their Minor in the final semester, the approved changes is delayed and it will not be implemented for the students of Int. M. Tech. / Dual Degree of 2020 admitted batch. The changes may be made applicable to Int. M. Tech. / Dual Degree students from the 2021 admitted batch.

06/03/2024

**Dean (Academic)**

Copy to:

1. Director, Deputy Director
2. Registrar
3. Associate Dean (IT & NI)
4. All Faculties
5. All Students

Modification of conversion of Phd from FT to PT

**INDIAN INSTITUTE OF TECHNOLOGY (INDIAN SCHOOL OF MINES) DHANBAD**

**OFFICE OF THE DEAN (ACADEMIC)**

No. IITISM/DAC/697 06 March 2024

**NOTIFICATION**

**MODIFICATION OF RULES FOR CONVERSION OF PH. D. FROM FULL TIME TO PART TIME**

The Senate in its 31st meeting held on 20th February 2024 has approved the following modification in rules for conversion of Ph. D. from full time to part time –

In case of conversion of existing full time Ph. D. program of scholars to a part time Ph. D., an undertaking may be obtained from all such scholars instead of the required NoC from the employer.

8/3/24

**Dean (Academic)** (CO)

**Copy to:**

1. Director, Deputy Director
2. Registrar
3. All Faculties
4. All Scholars

Modification of UG/PG/PhD Leave Rules for students/scholars

**INDIAN INSTITUTE OF TECHNOLOGY (INDIAN SCHOOL OF MINES)**
**DHANBAD**

**OFFICE OF THE DEAN (ACADEMIC)**

No. IITISM/DAC/698 06 March 2024

**NOTIFICATION**

**MODIFICATION OF UG / PG / PH.D. LEAVE RULES FOR STUDENTS / SCHOLARS**

The Senate in its 31st meeting held on 20th February 2024 has approved the following modification in the UG / PG / Ph. D. leave rules for the students / scholars –

(i) In Ph. D. / PG, the academic leaves required to be taken for field visits may be allowed to be taken upto the limit provided for the leaves under section 9.1 of the manual. However, the procedure required to be followed for approval for such leaves may remain the same i.e. as provided in section 9.2 of the Ph.D./PG manual.

(ii) For Ph. D. scholars, leaves such as Vacation Leave and Medical Leave (Sr. no. A & B in the Table given in Chapter 8 of the Ph.D. Manual) may be recommended by Supervisor and approved by Convenor DPGC.

(iii) For PG students, leaves such as Vacation Leave, Short Leave and Medical Leave (Sr. no. A, B & C in the Table given in Chapter 8 of the PG Manual) may be recommended by Supervisor and approved by Convenor DPGC. For PG students whose supervisor is not appointed, the leave may be recommended by Convenor DPGC and approved by the HoD.

(iv) For UG students, leaves such as Short Leave and Medical Leave (Sr. no. A and B in the Table given in Chapter 9 of the UG Manual) may be recommended by Convenor DUGC and approved by the HoD.

In addition to the above, the peculiar cases that are not covered under the leave rules would also be dealt with separately.

5/3/24

**Dean (Academic)** (I/C)

Copy to:

1. Director, Deputy Director
2. Registrar
3. Associate Dean (IT & NI)
4. All Faculties
5. All Students

Modifications in Rules for Deficiency in Academic Performance

**INDIAN INSTITUTE OF TECHNOLOGY (INDIAN SCHOOL OF MINES)**
**DHANBAD**
**OFFICE OF THE DEAN (ACADEMIC)**

No. IITISM/DAC/699 11 March 2024

## NOTIFICATION

## MODIFICATION OF RULES FOR DEFICIENCY IN ACADEMIC PERFORMANCE OF STUDENTS / SCHOLARS

The Senate in its 31st meeting held on 20th February 2024 has approved the following modification of rules for deficiency in Academic performance of students / scholars –

(i) In UG / PG, a student with deficient academic performance may be allowed to continue his program up to the maximum prescribed duration to complete the respective program. Such students may be allowed to take lesser course credits in the subsequent semester, if they so wish. The restrictions regarding not taking any position in gymkhana etc. will continue to apply. The academic program of all such students will automatically be discontinued upon completion of the maximum duration, if they fail to fulfil the minimum CGPA criteria or minimum earned credits or still have pending/ backlog courses.

(ii) For Ph. D scholars, obtaining/ accumulation of a 4X grade in registered thesis credits may lead to a semester drop in the subsequent semester. Such scholars may submit an appeal in the Office of Dean (Academic) within ten days of announcement of semester result. The appeal should be complete in all respects citing the reasons for poor grades, and duly recommended by their supervisor. Only upon explicit approval of the Chairman, Senate, such scholars may be allowed to re-register in the program.

In addition to the above, the Automation centre shall provide:

(a) Provision to generate list of academically deficient students/ scholars upon publication of the semester results fulfilling the criteria of academic deficiency.
(b) A provision to remove the names from the generated list may also be provided in order to remove the names of students/ scholars who have left, have withdrawn, are on semester leave, other peculiar cases, etc.
(c) A provision to send an Auto mailer to all the selected academically deficient students/ scholars, their guardians, HoD, etc. on single click may also be provided.

The suitable changes made to the respective academic manuals is enclosed.

**Enclosure:** as above

11/03/2024
Dean (Academic)

**Copy to:**

1. Director, Deputy Director
2. Registrar
3. Associate Dean (IT & NI)
4. All Faculties
5. All Scholars/students

Revision in minimum no of students to run an elective course

**INDIAN INSTITUTE OF TECHNOLOGY (INDIAN SCHOOL OF MINES) DHANBAD**

**OFFICE OF THE DEAN (ACADEMIC)**

No. IITISM/DAC/ 700 11 March 2024

**NOTIFICATION**

**REVISION IN MINIMUM NUMBER OF STUDENTS REQUIRED TO REGISTER IN AN ELECTIVE COURSE**

The Senate in its 31st meeting held on 20th February 2024 has approved the revision in minimum no. of registered students required to run an elective course in UG /PG /Ph. D. programs to 10 (ten).

Further, in case of courses where number of registered students are only 10, no student will be allowed to drop such course(s) after the commencement of classes, unless there are any pressing circumstances that demand allowing the student to do that.

The following exceptions are allowed to this rule:

(i) Exception in minimum requirement may be made for the course Research Methodology.

(ii) Exception in minimum requirement may be made for the courses to be offered in Summer Semester in case the concerned faculty member is ready to offer the course.

The suitable changes made to the respective academic manuals is enclosed.

**Enclosure:** as above

11/03/2024
**Dean (Academic)**

**Copy to:**

1. Director, Deputy Director
2. Registrar
3. Associate Dean (IT & NI)
4. All Faculties
5. All Scholars/students

Modalities For Attendance Relaxation For Internships In Global / Reputed Organizations For The Under Graduate Students

**INDIAN INSTITUTE OF TECHNOLOGY (INDIAN SCHOOL OF MINES)**
**DHANBAD**
**OFFICE OF THE DEAN (ACADEMIC)**

No. IITISM/DAC/ 702 27 March 2024

**NOTIFICATION**

## MODALITIES FOR ATTENDANCE RELAXATION FOR INTERNSHIPS IN GLOBAL / REPUTED ORGANIZATIONS FOR THE UNDER GRADUATE STUDENTS

The Senate in its 32nd meeting held on 20th March 2024 has approved that the under graduate students who wish to undergo or have secured internships (either through on-campus or off-campus modes) in reputed and renowned companies in physical mode may be allowed for additional 10% attendance relaxation over the mandatory 75% attendance criterion, subject to fulfilment of the following conditions -

1. The students securing off-campus internships in global/ reputed organizations (in physical mode) will have to **report** to both the CDC and the Office of Dean, Academic about the **accepted internship offer** as and when they accept the offer or before leaving for the internship, whichever is earlier, by **submitting a copy of offer acceptance** document. Failure to fulfil this condition would lead to non-acceptance of their request for the additional 10% attendance relaxation.

2. The students securing internships (on-campus or off-campus) in global / reputed organizations and attending it in **physical mode** will be allowed additional 10% attendance relaxation if the number of **missed classes** (due to internship) is **beyond 25% of the total number of classes in a course**, then s/he shall be **eligible for the additional 10% attendance relaxation.**

3. In case the **internship is extended** beyond the initially intimated date of completion, the student will have to **immediately inform** the Office of Dean, Academic with a copy to CDC and Dean, IRAA along with the official communication received from the concerned organization in this regard.

4. If the number of **missed classes** (due to internship) is **not beyond 25% of the total number of classes in a course** then the student shall **not be eligible for the additional 10% attendance relaxation.**

5. Such students will have to **report at the Office of Dean, Student Welfare** for joining / Physical Registration / Reporting **within 2 (two) days of completion of their internship.** In case of holiday / weekend, the student has to report on the next working day.

6. The **period** to be counted **for relaxation of attendance** of such students will be up to their **internship end date + 2 days (or in case of holiday / weekend, the next working day)** and they will be eligible for attendance relaxation **of only 10% up to this date**.

7. **Under no circumstances** any such student will be eligible for **attendance relaxation beyond 10%.**

8. If any student *(falling under para 2)* **misses** his / her **classes** beyond the additional 10% attendance relaxation provided, s/he will be **marked as an attendance defaulter** in the respective course(s).

   Example:

   For a 14 lecture hour course, if any student misses more than 4 classes – s/he will be treated as attendance defaulter in that course.
   For a 28 lecture hour course, if any student misses more than 9 classes – s/he will be treated as attendance defaulter in that course.
   For a 42 lecture hour course, if any student misses more than 14 classes – s/he will be treated as attendance defaulter in that course.
   For a 56 lecture hour course, if any student misses more than 19 classes – s/he will be treated as attendance defaulter in that course.

9. On their return, such students *(falling under para 2)* will also have to **submit** the copy of the **internship completion certificate bearing the start and end of their internship** i.e. their internship period to both the **CDC and the office of Dean, Academic.** If they **fail to do so**, they will **not** be provided additional 10% attendance relaxation.

10. **Under no circumstances** these students will be allowed to be **exempted from the mandatory evaluation process** of the Institute; such as Quizzes, Assignments, Mid-Semester, End Semester examination etc.

11. Such students will have to **mandatorily return** from their internship **before the Mid-Semester Examination**.

12. The student *(falling under para 2)* **who have been granted additional 10% attendance relaxation** for such internships **will not be eligible for any other kind of attendance relaxation** such as participation in either CDC related activities, representing the Institute, cultural/technological events, etc. in the same semester.

13. Such students *(falling under para 2)* will have to **submit Form A6** (available on the Institute's website) **for additional 10% attendance relaxation** in the Office of Dean, Academic **before the end of classes** of that semester, attaching the relevant Office Orders/ OMs issued in this regard to the concerned student along with the copy of the internship completion certificate; failing which they may not be granted attendance relaxation.

14. The students **proceeding for international internships** will have to **apply** for the same through the **relevant internship form** (available on the Institute's website) duly approved by the respective HoDs and forwarded by the Dean, IRAA.

15. The office order of such internships shall be issued by the Office of Dean, Academic with a copy to the Dean, IRAA; Dean, Student Welfare; CDC and the concerned HoD.

27/03/2019

**Dean (Academic)**

**Copy to:**

1. Director / Deputy Director / Registrar
2. Dean, Student Welfare / Dean, IRAA / PIC, CDC / All HoDs
3. Associate Dean (IT & NI) / Associate Dean, UG / FIC, UG
4. All UG students

Modification in the certain rules of Phd Program manual

**INDIAN INSTITUTE OF TECHNOLOGY (INDIAN SCHOOL OF MINES) DHANBAD**
**OFFICE OF THE DEAN (ACADEMIC)**

No. IITISM/DAC/707 09 April 2024

## NOTIFICATION

## MODIFICATION OF CERTAIN RULES IN THE PH. D. PROGRAM MANUAL

The Senate in its 32nd meeting held on 20th March 2024 has approved the following changes in the Ph. D. manual pertaining to UGC (Minimum Standards and Procedures for Award of Ph. D. degree) Regulations, 2022 –

1. For candidates seeking admission to Ph. D. after 4 year / 8 semester bachelor's degree, a minimum aggregate percentage / grade equivalent of 75% should have been obtained in the bachelor's degree. A relaxation of 5% marks or its equivalent grade may be allowed for those belonging to SC / ST / OBC (NCL) / PwD / EWS category.
2. The maximum duration for Ph. D will be six (6) years. A maximum of additional two (2) years may be given to scholars, after completion of their extension/re-registration process as per Institute rules, for completion of their Ph. D. program; Provided, the total period for completion of Ph. D program should not exceed eight (8) years from the date of admission in the Ph. D. program.
   Provided further that, Female Ph. D. scholars and Persons with Disabilities (having more than 40% disability) may be allowed an additional relaxation of two (2) years, i.e. the total period for completion of a Ph. D program in such cases should not exceed ten (10) years from the date of admission in the Ph. D. program.
   Consequently, existing Ph.D. scholars who are female or belong to PwD category (having more than 40% disability) having extension of Ph.D. upto 7th/8th year may apply for further extension three weeks before completion of their existing extension, as per rules.
   Other Ph.D. scholars who have got extension upto 7th year may also apply for further extension three weeks before completion of their existing extension, as per rules.
3. Female scholars may be provided Maternity Leave / Child Care Leave for up to 240 days in the entire duration of the Ph. D. program.
4. Only the permanent faculty members having a Ph.D. degree and appointed as Assistant Professor, Associate Professor or Professor in this Institute can become the Research Supervisor of a Ph.D. scholar enrolled in this Institute. Such recognized Research Supervisors cannot be the Research Supervisors of Ph.D. scholars enrolled in other institutions. They can only act as Co-supervisors in such cases.
5. Faculty members with less than three (3) years of service before superannuation shall not be allowed to take new research scholars under their supervision. However, such faculty members can continue to supervise Ph.D. scholars who are already registered until superannuation, and as a Co-Supervisor after superannuation, but not after attaining the age of 70 years.

09/04/2024
**Dean (Academic)**

**Copy to:**

1. Director / Deputy Director / Registrar
2. All HoDs / Associate Dean (IT & NI)
3. All Faculties / Chairperson, PG-Ph. D. Admission
4. AD (PG) / DR (Acad) / AR (PG)
5. Ph.D. scholars

Modalities for summer semester under NEP system

**INDIAN INSTITUTE OF TECHNOLOGY (INDIAN SCHOOL OF MINES) DHANBAD**
**(OFFICE OF THE DEAN ACADEMIC)**

No.IITISM/DAC/710 16.04.2024

**NOTIFICATION**

## MODALITIES FOR THE SUMMER SEMESTER UNDER NEP SYSTEM UNTIL THE EXISTING/OLD COURSES OF CBCS REGIME PHASE OUT

With the implementation of NEP 2020 for all the programs run in this Institute from MS 2024-25, it is imperative to gradually (semester-wise) phase out the existing/old CBCS regime to maintain uniformity of courses and templates in future.

For the students having **backlog/dropped courses** of **existing/old CBCS regime**, all such courses will be offered **only in the upcoming Summer Semesters** irrespective of their course category viz. IC, DC, DP, ESO, DE, OE, DC/DE, DC/OE, DE/OE etc. or the semester in which they were initially offered.

The restriction in min. no. of students required to run a course in the **summer semester** may also be waived for such courses. The max. limit of courses to be registered by a student having backlog/dropped courses of existing CBCS regime may be enhanced to three (03). [Two (02) modular course will be treated as one (01) full course]. They may also be allowed to take practical lab courses; audit course, like CCS, Internship, etc.; and/or one modular course over the enhanced limit of courses.

**Note - <u>All students having backlog/dropped courses in the existing/old CBCS regime may please take note of this new arrangement to clear their backlogs seamlessly.</u>**

16/04/2024
Dean (Acad)

Copy to:

1. Director / Dy. Director
2. All Faculty Members
3. Registrar / Dr (Acad)
4. All Students

Scholarship for Dual degree/ Int. M.Tech. students

**INDIAN INSTITUTE OF TECHNOLOGY (INDIAN SCHOOL OF MINES) DHANBAD**
**OFFICE OF THE DEAN (ACADEMIC)**

No: IIT(ISM)/DAC/720 Date: 10th Jun, 2024

**NOTICE**

**Scholarship for Dual Degree / Integrated M.Tech. Students**

Applications are invited for reimbursement of Financial Assistantship from the eligible students registered in the 9th Semester of Dual Degree / Integrated M.Tech. programs. To apply for availing the assistantship, the students are required to submit Form No. UG 1 (enclosed and available under the Forms section of the Academic page at the Institute's website) to **reg_pg@iitism.ac.in** latest by **10/07/2024**. Applications received after the last date will not be considered.

The criteria for availing the Financial Assistantship for Dual Degree / Integrated M.Tech. students are as follows:-

1. The Financial Assistantship will be awarded to the students in the 5th year if they have qualified GATE or have been awarded a CGPA of 8 or above at the end of the 4th year.
2. The students are required to provide teaching assistance of 8 hours/week.
3. A minimum SGPA of 6.5 on a scale of 10 for UR/OBC students and SGPA of 6.25 for SC/ST/PwD students are required for the continuation of Financial Assistantship. The continuation of assistantship during each semester is contingent upon academic performance and it will be stopped if the academic performance is poor.
4. The maximum duration of the Assistantship is 2(two) semesters for Dual Degree / Integrated M.Tech. students.

Dean (Academic)

Encl: Form No: UG1

Copy to
1. Director
2. Dy. Director
3. Associate Dean (PG)
4. Concerned HODs
5. DR (F&A)/DR (Acad)/AR (PG)
6. DR (Acad)- For uploading notice on the website

Form No: UG1

**INDIAN INSTITUTE OF TECHNOLOGY (INDIAN SCHOOL OF MINES) DHANBAD**
**OFFICE OF THE DEAN (ACADEMIC)**

# FORM FOR SCHOLARSHIP
# (DUAL DEGREE AND INT M.TECH STUDENTS)

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 1. | Name of Student | | | | | | | |
| 2. | Admission No. | | | | | Department | | |
| 3. | Program (Put √ Mark) | Dual Degree | | Integrated M.Tech | | Branch | | |
| 4. | Institute Email ID | | | | | | | |
| 5. | Contact Number | | | | | | | |
| 6. | SGPA of all Previous Semesters | | | | | | | |
| | I Semester | | II Semester | | III Semester | | IV Semester | |
| | V Semester | | VI Semester | | VII Semester | | VIII Semester | |
| 7. | CGPA after completion of VIII Semester | | | | | | | |
| 8. | Details of GATE Examination **(To be provided by the students who appeared and qualified)** | | | | | | | |
| | Year of Examination | | | | | | | |
| | Category (Put √ Mark) | GEN | | OBC | | SC | | ST |
| | Qualifying Marks (Cut-off) | | | | Marks Obtained | | | |

Encl: **Please attach a copy of GATE Score Card, if applicable.**

I do here by declare that the information provided by me in this application is true, complete and correct to the best of my knowledge and belief.

Date: _____ Signature of Student: _____

**FOR OFFICE USE ONLY**

**VERIFICATION**: The facts, as stated above are **CORRECT / NOT CORRECT** as per records available.

**Observations, if any:** _____

Date: _____

Signature of Dealing Assistant

AR (Academic - (UG/ PG) / DR (Academic)

Associate Dean (Academic – PG) / Dean (Academic)

Start of student mentorship programme for UG students

**INDIAN INSTITUTE OF TECHNOLOGY (INDIAN SCHOOL OF MINES) DHANBAD**

**OFFICE OF THE DEAN (ACADEMIC)**

No. IITISM/DAC/724 04.07.2024

NOTIFICATION

## START OF STUDENT MENTORSHIP PROGRAM FOR UG STUDENTS

In order to help Institute's Undergraduate Program students effectively deal with the challenges, if any, faced during their campus life and to help them choose and follow their career paths, a **Student Mentorship Program** (SMP) is being initiated for all UG students of this Institute. The Student Mentorship Program will start from MS 2024-25.

The following are the broad guidelines for the **Student Mentorship Program** -

(i) All UG students admitted in a department will be divided into small groups by their respective department. Each group of UG students will then be assigned one mentor faculty member from their own department by the respective HoD.

(ii) The mentor faculty member will monitor the assigned mentee students closely and help them effectively deal with their academic, non-academic and personal issues on a regular basis.

(iii) All mentor faculty members will provide their mobile number to their mentees and will also have the mobile number of their mentees. For ease of communication, the mentors will form a whatsapp group with their mentees.

(iv) The mentors will try to resolve all the student issues at their end. However, if the need arises, a mentor may guide his/her mentee to visit the specific department for more clarification on the matter. The mentors may also take the help of their HoD in case any issue needs HoD's intervention.

(v) The mentors must meet their mentees fortnightly and on the next day submit a report regarding their meeting with the mentees to their respective HoDs. The HoD will examine the reports submitted by the mentors and identify the issues, if any, that need to be addressed at the departmental/Institute level.

(vi) The HoD will submit a consolidated monthly report of all the mentor/mentee meetings conducted by the departmental mentors till the last day of a month to Assoc. Dean (UG) / FIC (UG) on email by 1st day of the next month. The mentee related issues, if any, identified by the HoD that were addressed/not addressed at the department level must be mentioned in the report. The issue (s) identified to be addressed at the Institute level must also be clearly mentioned in the report sent by the HoD.

(vii) Assoc. Dean (UG) / FIC (UG) will scrutinize the HoD report and report the issues that need to be addressed at the Institute / department level to Dean

(Academic) by the 10th day of the month in which the HoD report has been received.

(viii) Dean (Acad) will take the further course of action on the reported matters or will inform the respective authorities about the further course of action to be taken on the reported matters, as deemed appropriate in those matters.

A provision to download the details of all UG students registered in UG program of a department will be provided to the HoDs soon by the MIS team. The respective HoDs are requested to start working towards successful implementation of the Student Mentorship program.

04/07/2024

**Dean (Academic)**

**Copy to:**

1. Director/Deputy Director
2. All Deans, HoDs and Registrar
3. AD (PG), FIC (UG)
4. AD (IT & N), FIC (Automation) – For necessary changes in MIS
5. DR (Acad), AR (PG), AR (UG)
6. All UG Students

Standard operating procedure for round year admission to PhD preparation

**INDIAN INSTITUTE OF TECHNOLOGY (INDIAN SCHOOL OF MINES) DHANBAD**

**OFFICE OF THE DEAN (ACADEMIC)**

No. IITISM/DAC/ 725 04.07.2024

NOTIFICATION

**Standard Operating Procedure for round the year admission to Ph.D. program**

At present, the Ph.D (Regular- Institute's Assistantship) admission are usually taking place in the Monsoon (Phase-I) and Winter (Phase-II) semesters. However, for externally funded candidates and for part-time Ph.D. candidates, the admission process is open round the year. As per the approval of the competent authority, from the session 2024-25, Ph.D. admission will be conducted round the year for all regular, part-time and externally funded candidates. The applications received for admission will be processed by the respective departments in coordination with the Institute's Ph.D. admission cell. The final joining process after payment of admission fee by the selected candidates will be taken care of by Academic Section after receiving from admission cell the final list of candidates who have paid their admission fee.

The following Standard Operating Procedure will be followed round the year for Ph.D. admissions (for regular, part-time, external candidates):

1. **Preparation & Publication of Information Brochure (IB):**

   (i) The Information Brochure will be prepared by the Admission Cell. After approval of Competent Authority, the same will be published on the admission portal by the Automation Cell.

   (ii) The applicable seat matrix will be prepared and regularly updated by the Admission Cell. The departments will have to select candidates as per category wise vacancies available in their respective programs.

2. **Call for applications :**

   The admission to the Ph.D. program (regular, part-time, externally funded mode) will be conducted throughout the year. For the purpose, a standing call for application will be hosted on Ph.D. admission portal.

3. **Application processing:**

   (i) Applications will be received on MIS/application portal.

   (ii) The modules for applying for Ph.D. admission will be operational throughout the academic year.

   (iii) The applications received will be accessible to the DPGC conveners and Heads of the respective departments throughout the year via MIS/application portal.

(iv) The applications will be processed on monthly basis. The application received up to 1st day of a month will be processed during the next 15 days of the same month by the DPGC of the respective departments. The application received after 1st day of a month will be processed next month. The detailed timeline for the processing of the applications are mentioned in the Table-1

**Table -1 : Timeline for processing of applications**

| **Particulars** | **Schedule** |
|---|---|
| Applications received till | 1st day of the month |
| Scrutiny, Interview & recommendation (by the concerned department) | On or before 15th day of the month |
| Approval & publication of result (by Admission Cell) | 20th day of the month |
| Fee payment (the proportionate fee will be applicable as approved.) | Up to 25th of the month |
| Physical Document verification (by Academic section) and date of Joining Ph.D. program | Any working day during 1st week of the next month |

(v) The eligibility of a candidate is determined by the DPGC of the respective department through evaluation of candidate's credentials provided in the application against the eligibility criteria of admission to the Ph.D. program as published in Ph.D admission IB and Ph.D. manual. Based on the no. and quality of applications received, the department may apply any additional criteria to shortlist the candidates for the next stage / interview.

(vi) The eligible/shortlisted candidates, as applicable, will be interviewed by the committee comprising of the following :

(a) Head of the Department - Chairperson
(b) All the members of the DAC - Members
(c) One faculty from other department - Member (as invited by HoD / Chairperson)
(d) DPGC Convenor - Member Secretary

(vii) All communications regarding call for interview to the candidate(s) will be made by the Head or DPGC convenor.

(viii) The list of candidates recommended for admission will be sent by the respective HoD to Admission Cell. The consolidated list of candidates recommended for admission by each department will be sent by Admission Cell for the approval of the Chairperson Senate through Dean (Academic).

(ix) The final list of candidates provisionally selected for admission will be published on the website by admission cell or an offer for admission will be sent to the candidates on email, as applicable.

**4. Reporting and Joining:**

(i) The candidates offered provisional admission will pay the applicable fee and fill the registration form provided by the MIS, as informed to them by Admission cell. The admission no. will be generated for all such candidates.

(ii) The list of candidates who have paid the applicable fee along with their complete details will be shared by Admission cell with the Office of Dean (Acad) as well as with the Office of Dean (SW) by 26th Day of the month.

(iii) Physical verification of documents will be conducted by academic section during first week of the next month. The date of reporting will be kept flexible and the candidates may be allowed to report on any working day in the month, if required. The candidates' profiles will be activated on MIS after physical verification of documents.

(iv) The candidates will then report in their respective department for completion of their PH2 and PH3 forms.

(v) The candidates will also be required to visit office of Dean (SW) mandatorily and get themselves marked in MIS as physically registered.

A proportionate amount of fee will be charged from the candidates, as per their month of reporting given to them upon admission, if the reporting date is not the same as the date given to the candidates joining at the start of a semester.

04/07/2024

**Dean (Academic)**

**Copy to:**

1. Director/Deputy Director
2. All Deans, HoDs and Registrar
3. Chairperson PG-Ph.D. Admission
4. AD (PG), AD (HM), FIC (UG)
5. AD (IT & N), FIC (Automation) – For necessary changes in MIS
6. DR (Acad), DR (SW), AR (Adm), AR (PG)

Minimum No. Of Courses Required To Be Done For The Completion Of Coursework In Ph.D

INDIAN INSTITUTE OF TECHNOLOGY (INDIAN SCHOOL OF MINES) DHANBAD

OFFICE OF THE DEAN (ACADEMIC)

No. IITISM/DAC/727 09 July 2024

NOTIFICATION

**MINIMUM NO. OF COURSES REQUIRED TO BE DONE FOR THE COMPLETION OF COURSE WORK IN PH.D**

The Senate in its 33rd meeting held on 6th June 2024 has approved to reduce the minimum no. of courses required to be completed for course work in Ph.D. program. Consequently, for the scholars enrolling for course work in Ph.D. from Monsoon Semester 2024-25 and onwards –

(i) The minimum no. of courses required to be successfully completed with the required CGPA will be four (DC/DE/OE etc., as applicable) for course work [i.e. 4 + 2(S/X)].

(ii) For scholars enrolled in Ph.D. on the basis of their B.Tech degree, the minimum no. of courses required to be successfully completed with the required CGPA will be six (DC/DE/OE etc., as applicable) for course work [i.e. 4 + 2 + 2(S/X)].

(iii) The respective DSC of a scholar may prescribe additional courses to be completed by that scholar, if the need arises.

(iv) Registration and award of S grade in Research Methodology as well as in Research and Technical Communication courses, after the recommendation of the respective DSC, upon fulfilment of the research publication criterion for pre-submission seminar in Ph.D., has also been allowed.

09/07/2024

**Dean (Academic)**

**Copy to:**

1. Director/Deputy Director
2. All Deans/ All HODs/ Registrar
3. AD (PG)/ FIC (UG)/ FIC (Automation)
4. DR (Acad)/ AR (PG)

Authority assigned to Dean Academic for approving all academic related matters

**INDIAN INSTITUTE OF TECHNOLOGY (INDIAN SCHOOL OF MINES) DHANBAD**

**OFFICE OF THE DEAN (ACADEMIC)**

No. IITISM/DAC/741

**NOTIFICATION**

20th August, 2024

**AUTHORITY ASSIGNED TO DEAN (ACADEMIC) FOR APPROVING ALL ACADEMIC RELATED MATTERS/FORMS (EXCEPT POLICY DECISIONS).**

The Senate has approved that Dean (Academic) will be the final authority to approve all academic related regular forms/matters (except policy decisions) to have greater administrative efficiency and faster resolution of student related matters.

**Dean (Academic)**

**Copy to:**

1. Director/Deputy Director
2. Registrar
3. All Deans/ Associate Deans
4. All HODs
5. DR (Acad)/ AR (PG)/ AR(UG)
6. Academic Section

Regarding processing of applications of International students for admission

**INDIAN INSTITUTE OF TECHNOLOGY (INDIAN SCHOOL OF MINES) DHANBAD**

**OFFICE OF THE DEAN (ACADEMIC)**

No. IITISM/DAC/742

**NOTIFICATION**

20th August, 2024

**REGARDING PROCESSING OF APPLICATIONS OF INTERNATIONAL STUDENTS FOR ADMISSION.**

The Senate has decided that the applications of the international students received by the IRAA Office will be forwarded to the respective DPGC for further scrutiny. The respective DPGC will send it back to Dean (IRAA) after scrutiny. The consolidated list of eligible / not eligible candidates prepared by the office of Dean (IRAA) after due scrutiny may then be sent to Dean (Academic) for onward submission for approval to the Director.

**Dean (Academic)**

**Copy to:**

1. Director/Deputy Director
2. Registrar
3. Dean (IRAA)/All Deans/ Associate Deans
4. Chairperson PG-Ph.D. Admission
5. All HODs
6. AD (PG)/ DR (Acad)/ AR (PG)/ AR(UG)

Regarding The Examination Board And Ph.D. Thesis Evaluation.

**INDIAN INSTITUTE OF TECHNOLOGY (INDIAN SCHOOL OF MINES) DHANBAD**

**OFFICE OF THE DEAN (ACADEMIC)**

No. IITISM/DAC/743

**NOTIFICATION**

20th August, 2024

**REGARDING THE EXAMINATION BOARD AND PH.D. THESIS EVALUATION.**

The Senate has decided to consider allowing the following matters being taken up by the Examination Board to be taken care of at Dean (Academic)'s end instead of doing a meeting of Examination Board for such matters:

(i) Appointment of External Examiners for evaluation of Ph.D. Thesis of a scholar.
(ii) Approving the final Viva Voce Reports of Ph.D. scholars and putting up the final list of scholars before the Senate for its recommendation to the BoG for award of Degree.

The Ph.D. thesis evaluation reports received by the Office of Dean (Academic) from 1 Indian and 1 foreign examiners will be processed, after waiting for the evaluation report of the third examiner up to 1 month from the date of sending the Ph.D. thesis to the respective examiners.

Further, the list of external examiners for evaluation of Ph.D. thesis should be recommended by the DSC and forwarded to Dean (Academic) after due scrutiny by the respective HoDs regarding area of research of the proposed examiners.

The final Ph.D. Thesis can be submitted to the Institute Library through email.

20/08/2024

**Dean (Academic)**

**Copy to:**

1. Director/Deputy Director
2. Registrar
3. All Deans/ Associate Deans
4. PIC (Library)
5. All HODs/ Faculties
6. AD (PG)/ DR (Acad)/ AR (PG)/ AR(UG)

Withdrawal From A Course After The Conduct Of Mid Semester Examination

**INDIAN INSTITUTE OF TECHNOLOGY (INDIAN SCHOOL OF MINES) DHANBAD**

**OFFICE OF THE DEAN (ACADEMIC)**

No. IITISM/DAC/746

**NOTIFICATION**

20th August, 2024

**WITHDRAWAL FROM A COURSE AFTER THE CONDUCT OF MID SEMESTER EXAMINATION.**

The Senate has decided to provide a provision to students to withdraw from a course after the conduct of mid-semester examination.

20/08/2024
**Dean (Academic)**

**Copy to:**

1. Director/Deputy Director
2. Registrar
3. All Deans/ Associate Deans
4. All HODs
5. AD (PG)/ DR (Acad)/ AR (PG)/ AR(UG)

Necessary Requirements to be fulfilled for PwD students and approved pool of scribes

**INDIAN INSTITUTE OF TECHNOLOGY (INDIAN SCHOOL OF MINES) DHANBAD**
**OFFICE OF THE DEAN (ACADEMIC)**

No. IITISM/DAC/818 — 11th September 2024

**NOTIFICATION**

**NECESSARY REQUIREMENTS TO BE FULFILLED FOR PWD STUDENTS AS PER RPWD (AMENDMENT) RULES, 2024 AND APPROVED POOL OF SCRIBES**

The Senate has approved to accommodate the necessary requirements in terms of Designing Accessible and Inclusive curriculum guidelines notified under RPwD (Amendment) Rules, 2024, to make the teaching-learning process, assessment, evaluation and campus life more inclusive and acceptable for all categories of PwD students. All HoDs are requested to propose suitable changes that can be implemented in this regard for further deliberation centrally to finalize the same for earliest implementation. The DAC minutes must be sent in this regard by 20th September 2024 to dracad@iitism.ac.in.

Further, the academic department wise list of technical staff included in the common pool of scribes to help the eligible PwD students of Institute is enclosed. The scribes used by the respective PwD students of the Institute, shall be paid a fixed honorarium @Rs.200/- per hour for the academic year 2024-25. All HoDs are requested to release their respective staff members from the pool of scribes, upon receiving a request from the eligible PwD students through the academic section, for helping those PwD students as scribe during examinations.

All HoDs are also requested to ensure that all faculty members in their department provide sufficient compensatory time (Minimum 20 minutes per 1 hour of examination) to the PwD students (Deptt. wise list of PwD students attached for reference).

11/09/2024
**Dean (Academic)**

**Copy to:**

1. Director/Deputy Director
2. Registrar
3. All Deans/ Associate Deans
4. All HODs
5. DR (Acad)/ AR (PG)/ AR(UG)

**1. संक्षिप्त नाम और प्रारंभ-**

(1) इन नियमों को दिव्यांगजन अधिकार (संशोधन) नियमावली, 2024 कहा जाए।

(2) ये आधिकारिक राजपत्र में उनके प्रकाशन की तारीख से लागू होंगे।

2. दिव्यांगजन अधिकार नियमावली, 2017 में, नियम (15) में, उप-नियम (1) में, खंड (ट) के पश्चात् निम्नलिखित खंड को अंत: स्थापित किया जाएगा, अर्थात्:-

"(ण) दिनांक 19 जनवरी, 2024 की अधिसूचना संख्या फा.सं.एन.11018/01/2024 के माध्यम से उच्चतर शिक्षा विभाग, शिक्षा मंत्रालय, भारत सरकार की अधिसूचना में यथा विनिर्दिष्ट उच्चतर शैक्षणिक संस्थानों और विश्वविद्यालयों के लिए सुगम्यता दिशानिर्देश और मानक।"

[फा. सं. I-14002/3/2022-एआईसी]

राजीव शर्मा, संयुक्त सचिव

**नोट:** दिव्यांगजन अधिकार नियमावली, 2017 को दिनांक 15 जून, 2017 की अधिसूचना संख्या, सा.का.नि. 591(अ.) के माध्यम से भारत के राजपत्र, असाधारण, भाग II, खंड 3, उप खंड (i) में प्रकाशित किया गया था और दिनांक 20 जून, 2024 की **सा.का.नि.** 343 (अ.) के जरिए पिछली बार संशोधित किया गया था।

**MINISTRY OF SOCIAL JUSTICE AND EMPOWERMENT**

**[Department of Empowerment of Persons with Disabilities (Divyangjan)]**

**NOTIFICATION**

New Delhi, the 25th June, 2024

**G.S.R. 358(E).**—Whereas a draft of certain rules to amend sub-rule (1) of rule 15 of the Rights of Persons with Disabilities Rules, 2017 were published, as required by sub-section (1) of section 100 of the Rights of Persons with Disabilities Act, 2016 (49 of 2016), vide G.S.R. 89 I, dated the 1st February 2024 in the Official Gazette of India, Extraordinary, Part-II, section 3, sub-section (i), inviting objections and suggestions from all persons likely to be affected thereby, before the expiry of thirty days from the date on which the copies of the Official Gazette in containing the said notification was made available to the public;

And whereas, copies of the said notification were made available to the public on the 5th March, 2024;

And whereas, the objections and suggestions received from the public were considered by the Central Government;

Now, Therefore, in exercise of the powers conferred by sub-sections (1) and (2) of section 100 of the Rights of Persons with Disabilities Act, 2016 (49 of 2016), the Central Government hereby makes the following rules further to amend the Rights of Persons with Disabilities Rules, 2017, namely:-

**1. Short title and Commencement.-**

(1) These rules may be called the Rights of Persons with Disabilities (Amendment) Rules, 2024.

(2) They shall come into force on the date of their publication in the Official Gazette.

2. In the Rights of Persons with Disabilities Rules, 2017, in rule 15, in sub-rule (1), after clause (n), the following clause shall be inserted, namely:-

"(o) Accessibility Guidelines and Standards for Higher Education Institutions and Universities as specified. in the notification of the Department of Higher Education. Ministry of Education. Government of India vide notification number F. No. N-11018/01/2024 dated 19th January. 2024".

[F. No. I-14002/3/2022-AIC]

RAJEEV SHARMA. Jt. Secy.

**Note:** The Rights of Persons with Disabilities Rules. 2017 were published in the Gazette of India. Extraordinary. Part II. section 3. sub-section (i) *vide* notification number G.S.R. 591 (E). dated the 15th June. 2017 and was last amended *vide* G.S.R. 343 (E) . dated the 20th June. 2024.

Uploaded by Dte. of Printing at Government of India Press. Ring Road. Mayapuri. New Delhi-110064
and Published by the Controller of Publications. Delhi-110054.

#### 2.1.2.4 Short Stature/Dwarfism

Specific Needs:

- May need support with seating and mobility.
- May have specific needs related to associated vision, physical, hearing and speech disabilities.
- May need preferential seating to participate in ongoing activities
- May need emotional-behavioral & psycho-social support.
- May require assistance in the use of infrastructure or ICT.

#### 2.1.2.5 Muscular Dystrophy

Specific Needs:

- May need assistance with sitting, mobility, transfers and ambulation.
- May experience difficulty in breathing.
- May have limitations in speech and communication.
- May experience difficulty in hand manipulations.
- May require frequent therapy, surgery, or medication.
- May need emotional-behavioral & psycho-social support.
- May require assistance in the use of infrastructure or ICT.
- May need preferential seating to participate in ongoing activities.

### 2.1.3 Visual Disabilities

#### 2.1.3.1 Blindness and Low Vision

Specific Needs:

- May access information in a variety of ways: braille, audio, enlarged print, digital formats, screen reading softwares or other tactile and sensory systems
- May need assistance with orientation and mobility.
- May need preferential seating to participate in ongoing activities
- May need support in concept development.
- May need emotional-behavioral & psycho-social support.
- May require assistance in the use of infrastructure or ICT.

- May require frequent therapy or medication.

### 2.1.4 Hearing Disabilities

#### 2.1.4.1 Deaf and Hard of Hearing

Specific Needs:

- May need support in speech and communication.
- May need to learn Indian Sign Language (ISL) and communication with all.
- May need assistance in understanding verbal information/directions e.g. difficulty to hear sounds like a class bell, announcements etc.
- May need preferential seating to participate in ongoing activities
- May require frequent therapy or surgery.
- May need to use devices like hearing aids and cochlear implants.
- May require assistance in the use of infrastructure or ICT.
- May need emotional-behavioral & psycho-social support.
- May require note taking assistance through technology or alternative means such as through peers, etc.
- Providing transition support from school to college or graduation to post graduation, etc.
- Offering clear instructions or demonstrations

### 2.1.5 Speech & Language Disability

Specific Needs:

- May have trouble with: Articulation – production of speech sounds; Fluency, rhythm & flow of speech; or Voice, quality of pitch, resonance, or loudness.
- May need support in speech and communication.
- May need emotional-behavioral & psycho-social support.
- May require assistance in the use of infrastructure or ICT
- May require frequent speech therapy or other medical interventions.
- May need preferential seating to participate in ongoing activities.

### 2.1.6 Intellectual Disability

Specific Needs:

- May need support in speech, communication and social skills.
- May need support in cognitive functioning (decision making, reasoning, problem-solving etc.)
- May need assistance with seating and mobility.
- May need support in hand manipulations.
- May need support to understand information.
- May need support in self-care and daily living skills.
- May need emotional-behavioral & psycho-social support.
- May require assistance in the use of infrastructure or ICT.
- May require frequent therapy or other medical interventions.
- May need preferential seating to participate in ongoing activities.

### 2.1.7 Specific Learning Disability

Specific Needs:

- May need support in speech, communication and social skills.
- May need emotional-behavioral & psycho-social support.
- May need support to comprehend, speak, read, write, spell or do mathematical calculations.
- May need assistance in understanding verbal and written information/directions.
- May need emotional-behavioral & psycho-social support.

### 2.1.8 Autism Spectrum Disorder

Specific Needs:

- May need support in speech, communication and social skills.
- May need emotional-behavioral & psycho-social support.
- May have associated intellectual or behavioral conditions.

- May need preferential seating to participate in ongoing activities.
- May need support in cognitive functioning (reasoning, problem-solving, etc)
- May require assistance in the use of infrastructure or ICT.
- May be sensitive to bright lights, loud noises, busy hallways, textures, smells etc
- May require frequent therapy or medication.

### 2.1.9 Mental Illness

Specific Needs:

- May need support in speech, communication and social skills.
- May need emotional-behavioral & psycho-social support.
- May have associated intellectual or behavioral conditions.
- May need assistance in academic activities due to difficulties in concentration, memory, distractibility, impulsiveness, irritability, fear, anxiety etc.
- May need support in cognitive functioning (reasoning, problem-solving etc.) due to disorders of Thinking, Mood, Perception, Orientation, Memory that grossly impairs judgment, behaviour, capacity to recognize reality, or ability to meet ordinary demands of life.
- May need preferential seating to participate in ongoing activities.
- May require assistance in the use of infrastructure or ICT.
- May be sensitive to bright lights, loud noises, busy hallways, textures, smells etc.
- May require frequent therapy or medication.

### 2.1.10 Chronic Neurological Condition – Multiple Sclerosis

Specific Needs:

- May need support in motor and/or fine-motor functioning, locomotor and non-locomotor functioning.
- May need assistance with sitting and mobility.

- May need support in hand-functioning to manipulate objects, turn pages, write with a pen or pencil, type on a keyboard, and/or retrieve study material.
- May require frequent therapy, surgery, or medication.
- May need preferential seating to participate in ongoing activities
- May require assistance in the use of infrastructure or ICT.
- May need emotional-behavioral & psycho-social support.

### 2.1.11 Chronic Neurological Condition – Parkinson's disease

Specific Needs:

- May need support in motor and/or fine-motor functioning, locomotor and non-locomotor functioning.
- May need assistance with sitting and mobility.
- May need support in hand-functioning to manipulate objects, turn pages, write with a pen or pencil, type on a keyboard, and/or retrieve study material.
- May require frequent therapy, surgery, or medication.
- May need preferential seating to participate in ongoing activities
- May require assistance in the use of infrastructure or ICT.
- May need emotional-behavioral & psycho-social support.

### 2.1.12 Blood Disorder – Sickle Cell Disease

Specific Needs:

- May need support in motor and/or fine-motor functioning.
- May need assistance with seating and mobility.
- May have limitations in visual acuity.
- May need support in hand-functioning to manipulate objects, turn pages, write with a pen or pencil, type on a keyboard, and/or retrieve study material.
- May require frequent therapy, surgery, or medication.
- May need preferential seating to participate in ongoing activities

- May require assistance in the use of infrastructure or ICT.
- May need emotional-behavioral & psycho-social support.

### 2.1.13 Blood Disorder – Thalassemia

Specific Needs:

- May require frequent therapy or other medical interventions.
- May need support in motor and/or fine-motor functioning.
- May need preferential seating to participate in ongoing activities
- May require assistance in the use of infrastructure or ICT.
- May need emotional-behavioral & psycho-social support.

### 2.1.14 Blood Disorder – Haemophilia

Specific Needs:

- May require frequent therapy or other medical interventions.
- May need support in motor and/or fine-motor functioning.
- May need preferential seating to participate in ongoing activities
- May require assistance in the use of infrastructure or ICT.
- May need emotional-behavioral & psycho-social support.

### 2.1.15 Multiple Disabilities

Specific Needs:

- May need support in speech, tactile sign language, communication and social skills.
- May need support in cognitive functioning (reasoning, problem-solving etc.)
- May experience vision or hearing disability
- May have associated intellectual or behavioral conditions.
- May need specific seating to assist in pain relief and postural control.
- May need assistance with seating and mobility.
- May need support in motor and/or fine-motor functioning, locomotor and non-locomotor functioning.

Modification in eligibility criteria for admission in Ph.D.

**INDIAN INSTITUTE OF TECHNOLOGY (INDIAN SCHOOL OF MINES) DHANBAD**
**OFFICE OF THE DEAN (ACADEMIC)**

No. IITISM/DAC/819 11th September 2024

**NOTIFICATION**

**MODIFICATION IN ELIGIBILITY CRITERIA FOR ADMISSION IN PH.D.**

The Senate in its 34th meeting held on 05.04.2024 has approved modification in the eligibility criteria for admission in Ph.D. Accordingly, the modified eligibility criteria for admission to Ph.D. is attached as Appendix – 1 for the information and necessary action.

11/09/2024
**Dean (Academic)**

**Copy to:**

1. Director/Deputy Director
2. Registrar
3. All Deans/ Associate Deans
4. All HODs
5. Chairperson, Admission (PG-Ph.D.)
6. DR (Acad)/ AR (PG)/AR (Admissions)

### 1.3 Eligibility for Admission

The minimum eligibility criteria required for applying for admission to Ph.D. programs of different streams shall be-

#### 1.3.1 Ph.D. in the Engineering Stream

(a) Master's degree in Engineering in the relevant subject with first class/division or a minimum of 60% marks/CGPA of 6.0 (on a 10 point scale),

OR

(b) An applicant must have a Bachelor's degree in engineering with a minimum of 60% marks/CGPA of 6.0 (on a 10 point scale),

OR

(c) An applicant must have a Master's degree in science or an allied area with first class/division or a minimum of 60% marks/CGPA of 6.0 (on a 10 point scale).

#### 1.3.2 Ph.D. in the Science Stream

(a) An applicant must have a Master's degree in the relevant subject with first class/division or a minimum of 60 % marks/CGPA of 6.0 (on a 10 point scale),

OR

(b) An applicant must have a Bachelor's degree in engineering with a minimum of 60 % marks/CGPA of 6.0 (on a 10 point scale),

OR

(c) An applicant must have a Master's degree in science or an allied area with first class/division or a minimum of 60 % marks/CGPA of 6.0 (on a 10 point scale).

#### 1.3.3 Ph.D. in the Humanities and Social Sciences Stream

(a) An applicant must have a Master's degree in the relevant subject, arts, commerce, humanities and social sciences with first class/division or a minimum of 60 % marks/CGPA of 6.0 (on a 10 point scale),

OR

(b) An applicant must have a Master's degree in engineering / technology/science/ commerce / management with first class/division or a minimum of 60 % marks/CGPA of 6.0 (on a 10 point scale),

OR

(c) An applicant must have a Bachelor's degree in engineering with a minimum of 60% marks/CGPA of 6.0 (on a 10 point scale).

#### 1.3.4 Ph.D. in the Management Stream

(a) An applicant must have a Master's degree or equivalent in management or allied areas or engineering / technology with first class/division or a minimum of 60 % marks/CGPA of 6.0 (on a 10 point scale),

OR

(b) An applicant with a Bachelor's degree in engineering with a minimum of 60 % marks/CGPA of 6.0 (on a 10 point scale),

OR

(c) An applicant must have a Master's degree in science/arts/commerce with first class/division or a minimum of 60 % marks/CGPA of 6.0 (on a 10 point scale),

OR

(d) An applicant who has qualified for CA/ICAI/ICMA/CS, with first class/division or a minimum of 60 % marks/CGPA of 6.0 (on a 10 point scale) in Bachelor's degree.

**Note:**

1. *Bachelor's degree in Engineering means regular full-time Bachelor's degree. A candidate with AMIE or similar degree is not eligible for admission.*
2. *The exact qualification and eligibility requirements, and the list of programs to be offered in a year will be available in the Information Brochure published by the Institute before the start of admission process for every Academic Year.*
3. *For consideration of qualifications obtained from universities/institutes outside India, an equivalence certificate issued by Association of Indian Universities will be required to be submitted along with application.*

### 1.3.5 Requirement of GATE/NET in Engineering/Science or CAT/GMAT in Management

A. *Qualifying NET/GATE is not mandatory for application in Ph.D. in Engineering / Science, if the candidate -*

   (i) *Has done M.Tech/M.E. with first class or first division or with minimum 60% marks or equivalent CGPA or*

   (ii) *Has done B.Tech / B.E. with a minimum CGPA of 8 (on a 10 point scale) or with equivalent percentage from any CFTI or*

   (iii) *Has done B.Tech / B.E. with a minimum CGPA of 8 (on a 10 point scale) or with equivalent percentage from any Institute / University having 1 to 100$^{th}$ rank in Overall category in NIRF India rankings (either in the year of application or in the last year).*

   (iv) *Has applied for part-time Ph.D. and has minimum 2 years of experience in a regular post in PSUs/ Research Organizations/Organizations having MoU with Institute/ Higher Education Institutions approved by UGC/AICTE/globally reputed corporate organizations.*

B. *Except for the candidates mentioned in para A above, all other eligible candidates as per para 1.3 above, will have to qualify NET/GATE to apply for Ph.D. admission in Engineering / Science.*

C. *Qualifying CAT/GMAT will be mandatory for applying for Ph.D. in Management. However, for part-time Ph.D. candidates having minimum 2 years of experience in a regular post in PSUs/ Research Organizations/Organizations having MoU with Institute/ Higher Education Institutions approved by UGC/AICTE/globally reputed corporate organizations, the requirement of having CAT/GMAT may be relaxed.*

*It may be noted that based on number and quality of applications received in an admission cycle, the respective department may also impose additional shortlisting criteria (and shall also publish it while sending calls for interview) to restrict number of eligible applicants to be called for Interview.*

Handholding classes for 1st year UG / Preparatory students

**INDIAN INSTITUTE OF TECHNOLOGY (INDIAN SCHOOL OF MINES) DHANBAD**
**OFFICE OF THE DEAN (ACADEMIC)**

No. IITISM/DAC/820 — 12th September 2024

## NOTIFICATION

## HANDHOLDING CLASSES FOR 1ST YEAR UG / PREPARATORY STUDENTS IN THE LANGUAGE OTHER THAN ENGLISH AS CHOSEN BY THEM

All faculty members teaching in 1st year UG programs / Preparatory Courses were requested to submit their interest for offering additional handholding classes of their respective courses in the language other than English for the 1st year UG / preparatory students keen to enrol for the same. The 23 courses for which various faculty members submitted their interest were circulated among the 1st year UG / Preparatory students along with the details of language (other than English) in which the handholding classes for those courses are available for submitting students' interest for enrolment.

Based on the interests submitted by the students, the following is the detail of handholding classes to be offered at least once in a week in MS 2024-25 by the respective faculty members –

| S.No. | Admission Number | Department / Discipline | Course Code | Choice of Language | Email of the Faculty | Email of the student |
|---|---|---|---|---|---|---|
| 1 | 24je1104 | Applied Geophysics | NMCI101 | Hindi | sptiwari@iitism.ac.in | 24je1104@iitism.ac.in |
| 2 | 24JE0744 | Engineering Physics | NCSE101 | Hindi | chiranjeev@iitism.ac.in | 24je0744@iitism.ac.in |
| 3 | 24JE0745 | Engineering Physics | NCSE101 | Hindi | chiranjeev@iitism.ac.in | 24je0745@iitism.ac.in |
| 4 | 24JE0745 | Engineering Physics | NPHC101 | Hindi | rpgiri@iitism.ac.in | 24je0745@iitism.ac.in |
| 5 | 24JE0794 | Preparatory | NHSP001 | Hindi | mrahmanelt@iitism.ac.in | 24je0794@iitism.ac.in |

The handholding classes for the above courses may preferably be taken between 06:00 to 7:00 pm and the attendance must also be maintained for the same.
In case the enrolled students request for more classes in a week, the same are allowed to be taken by the respective faculty members. Moreover, if other students are also interested to join these classes in future, they are also allowed to join the same with the permission of the concerned faculty member.

12/09/2024
**Dean (Academic)**

Copy to:

1. Director / Dy. Director
2. All concerned faculty members and students
3. Registrar

Updated Ph.D credit Requirement

**INDIAN INSTITUTE OF TECHNOLOGY (INDIAN SCHOOL OF MINES) DHANBAD**

**OFFICE OF THE DEAN (ACADEMIC)**

No. IITISM/DAC/ 821 — 18th September, 2024

**NOTIFICATION**

## UPDATED Ph.D CREDIT REQUIREMENT DETAILS

The Senate approved updated Ph.D credit requirement details under NEP regime is as follows:

| **Detail of minimum credits required for Ph.D.** | | |
|---|---|---|
| **Source of Credits** | **Minimum no. of Courses or Credits required** | **Remarks** |
| **Coursework*** | 4 + 2(including RM, RTC in S/X mode) for eligible PG scholars; 6 + 2 (including RM, RTC in S/X mode) for scholars with B.Tech | To be considered for CGPA of coursework (except RM, RTC). |
| **Research work (Thesis Units)** | 100 credits (S/X) | Maximum 20 credits of thesis units allowed to be taken in each regular semester |
| *Registration and award of S grade in Research Methodology as well as in Research and Technical Communication courses, after the recommendation of the respective DSC, upon fulfilment of the publication criterion for pre-submission seminar in Ph.D., is also allowed. | | |

18/09/2024

**Dean (Academic)**

**Copy to:**

1. Director/Deputy Director
2. Registrar
3. All Deans/ Associate Deans/ FIC (Automation)
4. All HODs
5. DR (Acad)/ AR (PG)/ AR(UG)

Consideration of weightage of Phd supervisor and co-supervisor

**INDIAN INSTITUTE OF TECHNOLOGY (INDIAN SCHOOL OF MINES) DHANBAD**

**OFFICE OF THE DEAN (ACADEMIC)**

No. IITISM/DAC/ 823 20th September, 2024

## NOTIFICATION

## CONSIDERATION OF WEIGHTAGE OF PHD SUPERVISOR AND CO-SUPERVISOR

In case of Ph.D scholars where apart from supervisor, a co-supervisor and/or external co-supervisor needs to be appointed, the Senate approved to use the term "Joint Supervisor" for all supervisors, co-supervisors and external co-supervisors. The Senate also approved to consider an equal weightage for all "Joint Supervisors" appointed for a scholar.

The above change is applicable with immediate effect.

20/09/2024

**Dean (Academic)**

**Copy to:**

1. Director/Deputy Director
2. Registrar
3. All Deans/ Associate Deans/ FIC (Automation)
4. All HODs
5. DR (Acad)/ AR (PG)/ AR(UG)

Revision in non-credit Units

**INDIAN INSTITUTE OF TECHNOLOGY (INDIAN SCHOOL OF MINES) DHANBAD**

**OFFICE OF THE DEAN (ACADEMIC)**

No. IITISM/DAC/ 825 — 18th September, 2024

## NOTIFICATION

## REVISION IN NON CREDIT UNITS

The approved revision in Non Credit Units (in NEP regime), as recommended by the DSW Office, is enclosed for the information of all.

18/09/2024
**Dean (Academic)**

**Copy to:**

1. Director/Deputy Director
2. Registrar
3. All Deans/ Associate Deans/ FIC (Automation)
4. All HODs
5. DR (Acad)/ AR (PG)/ AR(UG)/ AR(SW)/ SPO

| Sl.no. | Program | Discipline (2 units per semester) | NCC/NSS/NSO/ CCS/Yoga (2 units per semester for 1st two years ) Sl. No. 1-5 to be assessed during even semesters(2nd & 4th )only & Sl.no. 6-12 to be assessed during odd semester (1st & 3rd ) only Under CCS 101 & CCS 102 | Community Outreach/ Community Services/ Sports/Student Club Activities/ Cultural Activities/ NVCTI Activities (2 units per semester for 1st two years) Sl. No. 1-5 to be assessed during even semesters(2nd & 4th ) only & Sl.no. 6-12 to be assessed during odd semester (1st & 3rd ) only | Other CCA or recognition in Inter IIT / Inter University / State / National / International events (during entire period) * | Maximu m non-credit uni ts that can be earned | Minimum noncredit units to be earned for the successful completion of the program [C(50 %)+D (at least 2 units) + E(at least 2 units)+F(Optio nal Or Add on)]= H |
|---|---|---|---|---|---|---|---|
| A | B | C | D | E | F | G | H |
| 1 | B.Tech. | 16 | 4 | 4 | 4 | 28 | 20 |
| 2 | B.Tech. with Minor | 16 | 4 | 4 | 4 | 28 | 20 |
| 3 | Double Major | 20 | 4 | 4 | 4 | 32 | 24 |
| 4 | Dual Degree (Category A/B/C) | 20 | 4 | 4 | 4 | 32 | 24 |
| 5 | Int. M.Tech. | 20 | 4 | 4 | 4 | 32 | 24 |
| 6 | M.Tech. | 8 | 4 | 4 | 4 | 20 | 12 |
| | M.Sc. Tech. | 12 | 4 | 4 | 4 | 24 | 16 |
| 8 | M.Sc. | 8 | 4 | 4 | 4 | 20 | 12 |
| 9 | MBA | 8 | 4 | 4 | 4 | 20 | 12 |
| 10 | MBA (BA) | 8 | 4 | 4 | 4 | 20 | 12 |
| 11 | MA | 8 | 4 | 4 | 4 | 20 | 12 |
| 12 | Ph.D. (Full Time) | 2 per sem. | 4 | 4 | 4 | 12 + 2 per sem. | 40% |

**Subject: Proposal for Non-credit Units to be implemented w.e.f. MS 2024-25**

*The following proposed is placed before the Senate to give recommendations for the implementation of changes in line with NEP 2020 on the system of Non-Credit Units to be implemented from MS 2024-25. The following are the details:*

**Non-Credit Unit & Minimum Units required for each program:**

** For participation in Inter IIT / Inter University / State / National / International events, **2 units** will be credited.*

*** For each indiscipline negative 1 unit minimum & maximum up to 4 unit depending upon severity (Discipline grading may be decided by the Office of DSW) will be awarded*

**** Min discipline unit to be decided e.g. 50 % of the total discipline units if 16 then at least 8 and so on.*

*#in the event, if any one shortfalls of minimum non-credit units, a make-up test may be conducted under CCS or special programme at the end of courses if required*

Thesis Or Project Evaluation In PG Programs

**INDIAN INSTITUTE OF TECHNOLOGY (INDIAN SCHOOL OF MINES) DHANBAD**

**OFFICE OF THE DEAN (ACADEMIC)**

No. IITISM/DAC/826 18th September, 2024

## NOTIFICATION

## PROPOSAL TO CONTINUE THESIS/PROJECT EVALUATION IN PG PROGRAMS (INCLUDING 5TH YEAR OF INTEGRATED M.TECH/DUAL DEGREE) WITH LETTER GRADE.

The Senate has approved that from MS 2024-25, the project/thesis of PG students will be evaluated with letter grade and the same will also be included in the calculation of their SGPA/CGPA, so that the existing and future PG students will get a chance to improve their CGPA in the final year.

18/09/2024

**Dean (Academic)**

**Copy to:**

1. Director/Deputy Director
2. Registrar
3. All Deans/ Associate Deans/ FIC (Automation)
4. All HODs
5. DR (Acad)/ AR (PG)/ AR(UG)

New members of DUGC & DPGC

INDIAN INSTITUTE OF TECHNOLOGY (INDIAN SCHOOL OF MINES) DHANBAD

OFFICE OF THE DEAN (ACADEMIC)

No.IIT(ISM)/DAC/836 17.10.2024

**NOTIFICATION**

DETAILS OF NEW MEMBERS OF DUGC AND DPGC OF ALL DEPARTMENTS

As the term of many of the existing members of DUGC and DPGC (except ex-officio members) is expiring on 18 October 2024, the details of new DUGC and DPGC members nominated by the respective departments and approved by the competent authority is enclosed herewith for the reference of all concerned.

The term of new DUGC and DPGC members (except in case of ex-officio members and student nominees) is valid from **19.10.2024** to **30.06.2026**.

The departments who are yet to nominate student nominees to their respective DUGC/DPGC may complete the process by 21st October 2024.

17/10/2024

Dean (Academic)

Copy to: Director / Dy. Director
All Deans /Assoc. Deans / HoDs
Chairperson, Admissions (PG-Ph.D.) 2025 / Chairman, JEE (Adv.) 2025
Registrar
DR (Acad) / AR (PG) / AR (UG) / AR (Admissions) / AR (IRAA)
Students

Details of Departmental Under Graduate Committee members (DUGC) of All Departments (upto 30.06.2026)

| DUGC MEMBERS | DEPARTMENT | | | | |
|---|---|---|---|---|---|
| | Applied Geology | Applied Geophysics | Chemical Engg. | Chemistry & Chemical Biology | Civil Engg. |
| Convener, DUGC | Prof. Kripamoy Sarkar | Prof. S. Maiti | Prof. Mahendra N Nandanwar | Prof. Biswajit Chowdhury | Prof. Sowmiya Chawla |
| HoD ( Ex-Officio Member ) | Prof. S. Sarangi | Prof. S. K. Pal | Prof. Aditya Kumar | Prof. Parthasarathi Das | Prof. Srinivas Pasupuleti |
| DUGC Member | Prof. Sahendra Singh | Prof. S.D.Gupta | Prof. Suresh K Yatirajula | Prof Rohit P John | Prof. Rahul Bhartiya |
| DUGC Member | Prof. Upama Dutta | Prof. S.Sahoo | Prof. Soumyajit Sengupta | Prof. Chanchal Halder | Prof. Leeza Malik |
| DUGC Member | Prof. Pranab Das | Prof. P.P.Mandal | Prof. LDNVV Konda | Prof. Niladri Patra | Prof. Bandita Barman |
| DUGC Member | Prof. Ashutosh Tripathy | Prof. Y.Giri | Prof. Sandip Mandal | Prof. Rashmi Madhuri | Prof. Shushobhit Chaudhary |
| DUGC Member | | | Prof. Suman Dutta | | Prof. Ankit Srivastava |
| DUGC Member | | | | | |
| DUGC Member | | | | | |
| Nominated UG Student | Anish Kumar Samal | Dristi Sen | | | Ms Palak Khandelwal 22 JE 0655 |
| Nominated UG Student | E. Akshara Rao | Raj Sahoo | | | Mr Yashvardhan Vishal Tripathi |

Details of Departmental Under Graduate Committee members (DUGC) of All Departments (upto 30.06.2026)

| DUGC MEMBERS | DEPARTMENT | | | | |
|---|---|---|---|---|---|
| | Computer Science & Engg. | Electrical Engg. | Electronics Engg. | Environmental Science & Engg. | Fuel, Minerals & Metallurgical Engg. |
| Convener, DUGC | Prof. Arup Kumar Pal | Prof. P. K. Nayak | Prof. Subindu Kumar | Prof. Suresh Pandian | Prof. Aarti Kumari |

| | | | | | |
|---|---|---|---|---|---|
| HoD ( Ex-Officio Member ) | Prof. Chiranjeev Kumar | Prof. Sukanta Das | Prof. Ravi Kumar Gangwar | Prof. Alok Sinha | Prof. Shravan Kumar |
| DUGC Member | Prof. A. C. S. Rao | Prof. P. K. Sadhu | Prof. Jitendra Kumar | Prof. S. Samadder | Prof. Barun Kumar Nandi |
| DUGC Member | Prof. Pranav Bisht | Prof. A. Baral | Prof. Mrinal Sen | Prof. P. Saravanan | Prof. Pankaj Kumar Jain |
| DUGC Member | Prof. Saurabh Srivastava | Prof. S. Barik | Prof. Rajeev Kumar Ranjan | Prof. T. Pathania | Prof. Avanish Kumar |
| DUGC Member | Prof. Subhrangsu Mandal | Prof. D.V. Bhaskar | Prof. Nirupama Mondal | Prof. Riya Dutta | Prof. Subhendu Mishra |
| DUGC Member | | Prof. Shyam A. B. | | | |
| DUGC Member | | | | | |
| DUGC Member | | | | | |
| Nominated UG Student | Mr. Bhaskar | Sunny Kumar (22JE0993) | | | |
| Nominated UG Student | Ms. Eshita Paliwal | Sumit Kumar Raj (22JE0989) | | | |

Details of Departmental Under Graduate Committee members (DUGC) of All Departments (upto 30.06.2026)

| DUGC MEMBERS | DEPARTMENT | | | | |
|---|---|---|---|---|---|
| | Humanities & Social Sciences | Management Studies & Industrial Engg. | Mathematics & Computing | Mechanical Engg. | Mining Engg. |
| Convener, DUGC | Prof. Sangay Tamang | Prof Rashmi Singh | Prof. N Jana | Prof. Subhankar Sen | Prof. R. K. Sinha |
| HoD (Ex-Officio Member) | Prof. Nirban Manna | Prof Sandeep Mondal | Prof. R. K. Upadhyay | Prof. Somnath Chattopadhyaya | Prof. D. P. Mishra |
| DUGC Member | Prof. A.K. Behura | Prof Niladri Das | Prof. S. A. Sahu | Prof. Arun Dayal Uday | Prof. Radhakanta Koner |
| DUGC Member | Prof. Sathya Narayana Sharma | Prof Bibhas Chandra | Prof. S. Mondal | Prof. Swagata Bhaumik | Prof. Siddhartha Agarwal |
| DUGC Member | Prof. Sruti Kanungo | Prof Sabnam Basu | Prof. A. Das | Prof. Vivek Bajpai | Prof. Dondapati Gopi Krishna |

| | | | | | |
|---|---|---|---|---|---|
| DUGC Member | Prof. Sanatan Mandal | Prof Diti Goswami | Prof. S. Kumawat | Prof. Tanmay Dutta | Prof. Bhaskara Behera |
| DUGC Member | | | | Prof. Tanweer Alam | |
| DUGC Member | | | | | |
| DUGC Member | | | | | |
| Nominated UG Student | | | V Int M . Tech (M&C) CR | | Ms. Sanika Kole |
| Nominated UG Student | | | VII Int. M. Tech (M&C) CR | | Mr. Shriballabha Mahapatra |

Details of Departmental Under Graduate Committee members (DUGC) of All Departments (upto 30.06.2026)

| DUGC MEMBERS | DEPARTMENT | |
|---|---|---|
| | Petroleum Engg. | Physics |
| Convener, DUGC | Prof. Ashutosh Kumar | Prof. Kaushal Kumar |
| HoD<br>( Ex-Officio Member ) | Prof. Keka Ojha | Prof. Bobby Kachappilly Antony |
| DUGC Member | Prof. Ajay Mandal | Prof. Tusharkanti Dey |
| DUGC Member | Prof. Rajeev Upadhyay | Prof. Soumya Bagchi |
| DUGC Member | Prof. Ajay Suri | Prof. R. Mondal |
| DUGC Member | Prof. Archana | Prof. R. P. Giri |
| DUGC Member | Prof. N K Maurya | |
| DUGC Member | Prof. Raj Kiran | |
| DUGC Member | Prof. Md. H.Siddique | |
| Nominated UG Student | | Mr. Iliyan Noorani |
| Nominated UG Student | | Mr. Varun Gupta |

Details of Departmental Post Graduate Committee members (DPGC) of All Departments (upto 30.06.2026)

| DPGC MEMBERS | DEPARTMENT | | | | |
|---|---|---|---|---|---|
| | Applied Geology | Applied Geophysics | Chemical Engg. | Chemistry & Chemical Biology | Civil Engg. |
| Convener, DPGC | Prof. P.R. Sahoo | Prof. S.D.Gupta | Prof. Soubhik Bhaumik | Prof. Sumanta Kumar Sahu | Prof. Smruti Sourava Mohapatra |
| HoD (Ex-officio member) | Prof. S. Sarangi | Prof. S. K. Pal | Prof. Aditya Kumar | Prof. Parthasarathi Das | Prof. Srinivas Pasupuleti |
| DPGC Member | Prof. M.K. Mukherjee | Prof. S.Maiti | Prof. Siddhartha Sengupta | Prof. Soumit Chatterjee | Prof. Renu V. |

| | | | | | |
|---|---|---|---|---|---|
| DPGC Member | Prof. A.S. Majumdar | Prof. M. Agrawal | Prof. Paidinaidu Paluri | Prof. Naga Rajiv Lakkaniga | Prof. Pranesh Roy |
| DPGC Member | Prof. Joseph D'Souza | Prof. Niptika Jana | Prof. Ejaz Ahmad | Prof. Sourav Kumar Dey | Prof. Avinash Kumar Singh |
| DPGC Member | Prof. Udita Bansal | Prof. Y.Giri | Prof. DK Sandilya | Prof. Asmita Singha | Prof. Abhishek Kumar Pandey |
| DPGC Member | | | Prof. Sourav Sengupta | | Prof. Sukanta Chakraborty |
| DPGC Member | | | | | |
| Nominated PG Student | Sandipan Chakraborty | Divya Meena | | Priyanshu Yadav | Mr Faijan Ali Ansari 21DR0053 |
| Nominated PG Student | Abhyartha Das | Arpan Pan | | Avani Jha | Ms. Swati Sharma 24MT0478 |

Details of Departmental Post Graduate Committee members (DPGC) of All Departments (upto 30.06.2026)

| DPGC MEMBERS | DEPARTMENT | | | | |
|---|---|---|---|---|---|
| | Computer Science & Engg. | Electrical Engg. | Electronics Engg. | Environmental Science & Engg. | Fuel, Minerals & Metallurgical Engg. |
| Convener, DPGC | Prof. Sachin Tripathi | Prof. V. Mukherjee | Prof. M. K. Das | Prof. B. Paul | Prof. Shatrughan Soren |
| HoD (Ex-officio member) | Prof. Chiranjeev Kumar | Prof. Sukanta Das | Prof. Ravi Kumar Gangwar | Prof. Alok Sinha | Prof. Shravan Kumar |
| DPGC Member | Prof. Ayan Das | Prof. K. Chatterjee | Prof. Santanu Dwari | Prof. S. Jagadevan | Prof. Shalini Gautam |
| DPGC Member | Prof. Hari Om | Prof. K.C.Jana | Prof. Amitesh Kumar | Prof. M. Patel | Prof. Kesavan Ravi |
| DPGC Member | Prof. Pranay Kumar Saha | Prof. Haswanth Vundavilli | Prof. Samrat Mukhopadhyay | Prof. Saifi Izhar | Prof. Gaurav Jha |
| DPGC Member | Prof. Mauajama Firdaus | Prof. B.K.Naick | Prof. Shalu Rani | Prof. Vittal H | Prof. Kasturi Sala |
| DPGC Member | Prof. Rajendra Pamula | Prof. Bhawana Singh | | | |
| DPGC Member | | NIL | | | |
| Nominated PG Student | Mr. Gyan Prakash | Vikash Kumar Raushan (22 DR 0271) | | | |
| Nominated PG Student | Mr. Kunal Kumar | Priyanka Kumari (24DR0135) | | | |

Details of Departmental Post Graduate Committee members (DPGC) of All Departments (upto 30.06.2026)

| DPGC MEMBERS | DEPARTMENT | | | | |
|---|---|---|---|---|---|
| | Humanities & Social Sciences | Management Studies & Industrial Engg. | Mathematics & Computing | Mechanical Engg. | Mining Engg. |
| Convener, DPGC | Prof. Gyan Prakash | Prof Himanshu Gupta | Prof. P. K. Kewat | Prof. Rashmi Ranjan Das | Prof. B. S. Choudhary |
| HoD (Ex-officio member) | Prof. Nirban Manna | Prof Sandeep Mondal | Prof. R. K. Upadhyay | Prof. Somnath Chattopadhyaya | Prof. D. P. Mishra |
| DPGC Member | Prof. M. Rahman | Prof Shashank Bansal | Prof. D. Pradhan | Prof. Zafar Alam | Prof. V. G. K. Villuri |
| DPGC Member | Prof. Shanmugapriya T | Prof Aparna Krishna | Prof. R. Kaligatla | Prof. Suman Saha | Prof. M. S. Alam |
| DPGC Member | Prof. Sangay Tamang | Prof Preeti Roy | Prof. A. Antony Selvan | Prof. Sarthak Sambit Singh | Prof. Ashok Kumar |
| DPGC Member | Prof. Sucharita Maji | Prof Esha Saha | Prof. M. Verma | Prof. Deepak Kumar Mandal | Prof. G. Budi |
| DPGC Member | | Prof Debashree Roy | | Prof. Antarip Poddar | |
| DPGC Member | | | | | |
| Nominated PG Student | Neha Yeshvi (24MA0011) | | 1st Year MSc (M&C) CR | | Mr. Jai Prakash |
| Nominated PG Student | Nantu Shaw (23DR0087) | | JRF Represtative | | Mr. Mrigank Vishwakarma |

Details of Departmental Post Graduate Committee members (DPGC) of All Departments (upto 30.06.2026)

| DPGC MEMBERS | DEPARTMENT | |
|---|---|---|
| | Petroleum Engg. | Physics |
| Convener, DPGC | Prof. Vikas Mahto | Prof. Prashant Kr. Sharma |
| HoD (Ex-officio member) | Prof. Keka Ojha | Prof. Bobby Kachappilly Antony |
| DPGC Member | Prof. Chandan Guria | Prof. Amitava Adak |
| DPGC Member | Prof. T K Naiya | Prof. Sudeshna Sen |
| DPGC Member | Prof. V K Rajak | Prof. E. Kundu |
| DPGC Member | Prof. Sayantan Ghosh | Prof. S. S. Roy |
| DPGC Member | Prof. Pawan Gupta | |
| DPGC Member | Prof. Chandan Sahu | |
| Nominated PG Student | | Ms. Shinjini Pal |
| Nominated PG Student | | Mr. Sunita Brijlal Yadav |

Introduction of Joint 5 year Integrated Dual Degree with IIM Mumbai

INDIAN INSTITUTE OF TECHNOLOGY (INDIAN SCHOOL OF MINES) DHANBAD

OFFICE OF THE DEAN (ACADEMIC)

No. IITISM/DAC/838 21.10.2024

NOTIFICATION

**JOINT 5-YEAR INTEGRATED DUAL DEGREE PROGRAM WITH IIM MUMBAI**

The Institute is pleased to announce signing of MOU with IIM Mumbai to offer a joint 5-year Integrated Dual Degree Program that leads to award of a B.Tech degree in relevant discipline along with a diploma in management from IIT (ISM) Dhanbad, and an MBA degree from IIM Mumbai. The salient features of this joint 5-year Integrated Dual Degree program are enclosed herewith. The template of this program and other UG programs are also enclosed for the information of all.

Applications will soon be invited from the existing B.Tech students who will pre-register next month for their 4th / 6th Semester (WS 2024-25). The interested students can submit their interest during online pre-registration for WS 2024-25 as per the details provided in the Pre-registration notification to be issued for WS 2024-25 in due course.

From the Academic year 2025-26, the applications for this program will be sought from the 1st year B.Tech students during their pre-registration for 3rd Semester (Monsoon Semester).

21/10/2024

Dean (Academic)

Copy to: Director / Dy. Director
All Deans / Assoc. Deans / HoDs
Registrar
DR (Acad) / DR (F&A) / AR (UG) / AR (PG) / AR (SW)
All UG Students

UG Program Templates with first year courses and Dual Degree Cat D

INDIAN INSTITUTE OF TECHNOLOGY (INDIAN SCHOOL OF MINES) DHANBAD

OFFICE OF THE DEAN (ACADEMIC)

No. IITISM/DAC/839 23.10.2024

NOTIFICATION

**NEW UNDERGRADUATE PROGRAM TEMPLATES (AS PER NEP 2020)**

The new UG program templates, as applicable from the batch admitted in MS 2024-25 along with the salient features of new program templates, are enclosed for the reference of all. Please note the change in Dual Degree Category C and addition of Dual Degree Category D. The notification no. IITISM/DAC/838 dated 21.10.2024 stands superseded by this notification with respect to the updated UG Program templates of Dual Degree category C and D.

Kindly note that in addition to the given credits, some non-credit units are also required to be necessarily earned to successfully complete the program {notification dated 18.09.2024 enclosed for reference. Office of Dean (Students' Welfare) will provide the details in this regard in due course/shortly}.

For the UG first year, the department wise list of courses is also enclosed for reference.

23/10/2024

Dean (Academic)

Copy to: Director / Dy. Director
All Deans / Assoc. Deans / HoDs
Registrar
DR (Acad) / AR (UG) / AR (PG) / AR (SW)
All UG Students

**Salient Features of New UG Program Templates**

**(Effective from the batch admitted in MS 2024-25)**

The Institute Senate has approved the change in program templates with inclusion of new categories of courses such as Ability Enhancement Courses, Skill Enhancement Courses, Value Added Courses, Engineering Science Compulsory Courses apart from introducing Inter-disciplinary Courses, Non-Credit Units, adding credits to Internships and continuing with Discipline Specific Courses. Choice of Minor/Honours/Mixed Courses has also been incorporated suitably for students to pursue their academic interests in the domains of their choice additionally.

The following are the salient features of the new Program templates implemented in line with NEP 2020 from the new batch of students admitted in MS 2024-25 –

1. The UG students can now choose the option to pursue a Minor (of a different department), an Honours (in the same discipline) or a Mix of courses from Honours/Minor basket (leading to no specific Honours/Minor specialization), as applicable as per their program template. The option in this regard can be submitted only during pre-registration for their 3rd semester. The enclosed program templates may be referred for a better understanding.
2. The B.Tech program students can also choose to enroll for a Dual Degree Category A, B, C or D now from their 3rd semester. The option in this regard can be submitted only during pre-registration for their 3rd semester. The enclosed program templates may be referred for a better understanding. The minimum eligibility requirements will continue to apply.
3. The B.Tech students opting for Dual Degree Category A during pre-registration for 3rd semester are required to choose only Honours in the same discipline. The option of choosing any minor in same/other discipline or choosing an honours of a different discipline will not be allowed.
4. The B.Tech students opting for Dual Degree Category B / C are required to choose only Minor in the discipline of their PG Degree. The option of choosing a Minor in any discipline other than that of their PG degree or the option to choose an honours will not be allowed to such students.
5. The B.Tech students opting for Dual Degree Category D (With MBA from IIM Mumbai) will not be able to choose any honours / minor courses as they will complete the 12 pre-requisite courses of MBA. Such students will get a Diploma in Management upon successful completion of their UG program along with the 12 pre-requisite courses,

subject to fulfilment of other necessary requirements. The Dual Degree Category C students who are enrolled for doing an MBA/MBA (BA) from IIT (ISM) Dhanbad will follow a separate program template that leads to award of a B.Tech. Degree with Minor in management discipline and an MBA/MBA (BA) degree, as applicable in their case.

6. The Integrated M.Tech program students will be able to choose either a minor (of a different department) or a mix of courses from honours/minor basket (leading to no specific honours/minor specialization) from their **3rd semester**. The enclosed program template may be referred for a better understanding.

7. Only the courses offered in a semester that do not have a time table clash will be allowed to be registered.

8. The approved Exit Options will also be shared in due course.

9. The detailed distribution of credits common to all UG entrants in the first year is as given hereunder –

| **Course Type** | **1st Sem (Group I)** | **2nd Sem (Group I)** | **1st Sem (Group II)** | **2nd Sem (Group II)** |
|---|---|---|---|---|
| IDC – Inter-disciplinary Course | 7 | 3 | 3 | 7 |
| DSC – Discipline Specific Course - Core | 4 | 4 | 4 | 4 |
| ESC – Engineering Science Compulsory Courses | 3 | 3 | 3 | 3 |
| AEC – Ability Enhancement Courses | 2 | 3 | 3 | 2 |
| SEC – Skill Enhancement Courses | 2.5 | 3.5 | 3.5 | 2.5 |
| VAC – Value Added Courses | 3 | 4 | 4 | 3 |
| **Total Semester Credits** | **21.5** | **20.5** | **20.5** | **21.5** |

## UPDATED UG PROGRAM TEMPLATES AS PER NEP 2020 (EFFECTIVE FROM THE BATCH ADMITTED IN MS 2024-25)

### B.Tech. Program

| | | | | DSC – Discipline Specific Course - Core | | | | | ^Minor or Honours as applicable, or a mix of courses offered by various departments under Minor/ Honours or both (i.e. No single specialization, and with 20+6 credits) as chosen by the student from 3rd Semester | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Semester** | IDC [3-0-0] | IDC /VAC Lab [0-0-2] | VAC [3-0-0] | DC [3-0-0] in 1st year, [3-1-0] later | DE [3-0-0] | DP [0-0-2] | HSSE [3-0-0] | ESC# [3-0-0] | Minor (Only DC) [3-1-0] | or Honours (Only DC) [3-1-0] | SDC of the chosen Minor /Practical of chosen Honours [0-0-3] | *AEC/SEC [3-0-0] 2nd year onwards | PR (7th - 6Cr) (8th - 10Cr) | Internship (S/X) | Graded Credits |
| **1st & 2nd** | 3 | 2 | 2 | 2 | | 2 | | 2 | | | | 5 | | | 42 |
| **3rd** | | | | 3 | | 2 | | 1 | | | | 1 | | | 20 |
| **4th** | | | | 3 | | 2 | | 1 | | | | 1 | | | 20 |
| **5th** | | | | 2 | 1 | 2 | 1 | | 1 | 1 | 1 | | | | 21.5 |
| **6th** | | | | 2 | 1 | 1 | 1 | | 1 | 1 | 1 | | | | 20.5 |
| **7th** | | | | | 2 | | | | 1 | 1 | 1 | | 1 | 1 | 21.5 |
| **8th** | | | | | | | | | 2 | 2 | 1 | | 1 | | 19.5 |
| Course Count | 3 | 2 | 2 | 12 | 4 | 9 | 2 | 4 | 5 | 5 | 4 | 7 | 2 | 1 | 165 credits |
| Credit Count | 9 | 2 | 6 | 46 | 12 | 9 | 6 | 12 | 20 | 20 | 6 | 17 | 16 | 4 | |

^Minor, if chosen, must be of a different department / Honours chosen must be of the same department. No specialization means taking different courses and their respective SDC/practicals across Minors and/or Honours offered by various departments

# Third Semester onwards ESC of the student's primary department may also be allowed

* AEC / SEC shall continue to be offered in two Groups during 3rd and 4th Semesters

### Dual Degree (Category - A) Program

| | | | | DSC – Discipline Specific Course - Core | | | | | Only Honours allowed* | | Only PG Courses | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Semester** | IDC [3-0-0] | IDC /VAC Lab [0-0-2] | VAC [3-0-0] | DC [3-0-0] in 1st year, [3-1-0] later | DE [3-0-0] | DP [0-0-2] | HSSE [3-0-0] | ESC# [3-0-0] | Honours (Only DC) [3-1-0] | Practical of Honours [0-0-3] | ADD [DCPG with Credit 3-1-0] | ADD [DEPG with Credit 3-0-0] | ADD [DPPG with Credit 0-0-3] | ADD [TU] | **AEC/SEC [3-0-0] 2nd year onwards | PR (7th - 6Cr) (8th - 10Cr) | Internship (S/X) | Graded Credits |
| **1st & 2nd** | 3 | 2 | 2 | 2 | | 2 | | 2 | | | | | | | 5 | | | 42 |
| **3rd** | | | | 3 | | 2 | | 1 | 1 | 1 | | | | | 1 | | | 25.5 |
| **4th** | | | | 3 | | 2 | | 1 | 1 | 1 | | | | | 1 | | | 25.5 |
| **5th** | | | | 2 | 1 | 2 | 1 | | | | 1 | | 1 | | | | | 21.5 |
| **6th** | | | | 2 | 1 | 1 | 1 | | 1 | | 1 | | 1 | | | | | 24.5 |
| **7th** | | | | | 2 | | | | 1 | 1 | 1 | 1 | 1 | | | 1 | 1 | 30 |
| **8th** | | | | | | | | | 1 | 1 | 2 | 1 (RM) | 2 | | | 1 | | 29.5 |
| **9th** | | | | | | | | | | | 1 | 1 | 1 | 1 | | | | 28.5 |
| **10th** | | | | | | | | | | | | 1 | | 1 | | | | 23 |
| Course Count | 3 | 2 | 2 | 12 | 4 | 9 | 2 | 4 | 5 | 4 | 6 | 4 | 6 | 2 | 7 | 2 | 1 | 250 credits |
| Credit Count | 9 | 2 | 6 | 46 | 12 | 9 | 6 | 12 | 20 | 6 | 24 | 12 | 9 | 40 | 17 | 16 | 4 | |

# Third Semester onwards ESC of the student's primary department may also be allowed

*Also, Honours of only the same discipline, as was there in UG, can be taken

** AEC / SEC shall continue to be offered in two Groups during 3rd and 4th Semesters

## Dual Degree (Category - B) Program

| | | | | DSC – Discipline Specific Course - Core | | | | | Only Minor allowed* | | Only PG Courses of Second Discipline | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Semester** | IDC [3-0-0] | IDC /VAC Lab [0-0-2] | VAC [3-0-0] | DC [3-0-0] in 1st year, [3-1-0] later | DE [3-0-0] | DP [0-0-2] | HSSE [3-0-0] | ESC# [3-0-0] | Minor (Only DC) [3-1-0] | SDC of Minor [0-0-3] | ADD [DCPG with Credit 3-1-0] | ADD [DEPG with Credit 3-0-0] | ADD [DPPG with Credit 0-0-3] | ADD [TU] | **AEC/SEC [3-0-0] 2nd year onwards | PR (7th - 6Cr) (8th - 10Cr) | Internship (S/X) | Graded Credits |
| **1st & 2nd** | **3** | **2** | **2** | **2** | | **2** | | **2** | | | | | | | 5 | | | 42 |
| **3rd** | | | | **3** | | **2** | | **1** | **1** | 1 | | | | | **1** | | | **25.5** |
| **4th** | | | | **3** | | **2** | | **1** | **1** | 1 | | | | | **1** | | | **25.5** |
| **5th** | | | | **2** | **1** | **2** | **1** | | | | **1** | | **1** | | | | | **21.5** |
| **6th** | | | | **2** | **1** | **1** | **1** | | **1** | | **1** | | **1** | | | | | **24.5** |
| **7th** | | | | | **2** | | | | **1** | **1** | **1** | **1** | **1** | | | **1** | **1** | **30** |
| **8th** | | | | | | | | | **1** | **1** | **2** | **1 (RM)** | **2** | | | **1** | | **29.5** |
| **9th** | | | | | | | | | | | **1** | **1** | **1** | **1** | | | | **28.5** |
| **10th** | | | | | | | | | | | | **1** | | **1** | | | | **23** |
| Course Count | **3** | **2** | **2** | **12** | **4** | **9** | **2** | **4** | **5** | **4** | **6** | **4** | **6** | **2** | **7** | **2** | **1** | **250 credits** |
| Credit Count | **9** | **2** | **6** | **46** | **12** | **9** | **6** | **12** | **20** | **6** | **24** | **12** | **9** | **40** | **17** | **16** | **4** | |

# Third Semester onwards ESC of the student's primary department may also be allowed
*Also, Minor of only the same discipline, as is chosen for PG Degree, can be taken
** AEC / SEC shall continue to be offered in two Groups during 3rd and 4th Semesters

| | | | | DSC – Discipline Specific Course - Core | | | | | Only Minor allowed* | | Only PG Courses of MBA | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Semester** | IDC [3-0-0] | IDC /VAC Lab [0-0-2] | VAC [3-0-0] | DC [3-0-0] in 1st year, [3-1-0] later | DE [3-0-0] | DP [0-0-2] | HSSE [3-0-0] | ESC# [3-0-0] | Minor (Only DC) [3-1-0] | SDC of Minor [0-0-3] | ADD [At least 5 DCPG with 3-1-0] | ADD [DEPG with Credit 3-0-0] | ADD [DPPG with Credit 0-0-3/0-0-2] | ADD [Term Paper] | **AEC/SEC [3-0-0] 2nd year onwards | PR (7th - 6Cr) (8th - 10Cr) | Internship (S/X) | Graded Credits |
| **1st & 2nd** | **3** | **2** | **2** | **2** | | **2** | | **2** | | | | | | | 5 | | | 42 |
| **3rd** | | | | **3** | | **2** | | **1** | **1** | 1 | | | | | **1** | | | **25.5** |
| **4th** | | | | **3** | | **2** | | **1** | **1** | 1 | | | | | **1** | | | **25.5** |
| **5th** | | | | **2** | **1** | **2** | **1** | | | | **1** | | **1** | | | | | **21.5** |
| **6th** | | | | **2** | **1** | **1** | **1** | | **1** | | **2** | | **1** | | | | | **27** |
| **7th** | | | | | **2** | | | | **1** | **1** | **2** | **1** | | | | **1** | **1** | **31.5** |
| **8th** | | | | | | | | | **1** | **1** | **4** | **1** | | | | **1** | | **31.5** |
| **9th** | | | | | | | | | | | **2** | **3** | | **1** | | | | **24** |
| **10th** | | | | | | | | | | | | **3** | | **1** | | | | **17** |
| Course Count | **3** | **2** | **2** | **12** | **4** | **9** | **2** | **4** | **5** | **4** | **11** | **8** | **2** | **2** | **7** | **2** | **1** | **245.5 credits** |
| Credit Count | **9** | **2** | **6** | **46** | **12** | **9** | **6** | **12** | **20** | **6** | **38** | **24** | **2.5** | **16** | **17** | **16** | **4** | |

# Third Semester onwards ESC of the student's primary department may also be allowed
*Also, Minor of only the same discipline, as is chosen for PG Degree, can be taken
** AEC / SEC shall continue to be offered in two Groups during 3rd and 4th Semesters

## Dual Degree (Category - C2) With MBA (BA)

| | | | | DSC – Discipline Specific Course - Core | | | | | Only Minor allowed* | | Only PG Courses of MBA (BA) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Semester** | IDC [3-0-0] | IDC /VAC Lab [0-0-2] | VAC [3-0-0] | DC [3-0-0] in 1st year, [3-1-0] later | DE [3-0-0] | DP [0-0-2] | HSSE [3-0-0] | ESC# [3-0-0] | Minor (Only DC) [3-1-0] | SDC of Minor [0-0-3] | ADD [At least 5 DCPG with 3-1-0] | ADD [DEPG with Credit 3-0-0] | ADD [DPPG with Credit 0-0-3/0-0-2] | ADD [Term Paper] | **AEC/SEC [3-0-0] 2nd year onwards | PR (7th - 6Cr) (8th - 10Cr) | Internship (S/X) | Graded Credits |
| **1st & 2nd** | **3** | **2** | **2** | **2** | | **2** | | **2** | | | | | | | 5 | | | 42 |
| **3rd** | | | | **3** | | **2** | | **1** | **1** | 1 | | | | | **1** | | | **25.5** |
| **4th** | | | | **3** | | **2** | | **1** | **1** | 1 | | | | | **1** | | | **25.5** |
| **5th** | | | | **2** | **1** | **2** | **1** | | | | **1** | | **1** | | | | | **21.5** |
| **6th** | | | | **2** | **1** | **1** | **1** | | **1** | | **2** | | **1** | | | | | **26** |
| **7th** | | | | | **2** | | | | **1** | **1** | **2** | **1** | | | | **1** | **1** | **32.5** |
| **8th** | | | | | | | | | **1** | **1** | **4** | **1** | | | | **1** | | **31.5** |
| **9th** | | | | | | | | | | | **2** | **3** | | **1** | | | | **24** |
| **10th** | | | | | | | | | | | | **3** | | **1** | | | | **17** |
| Course Count | **3** | **2** | **2** | **12** | **4** | **9** | **2** | **4** | **5** | **4** | **11** | **8** | **2** | **2** | **7** | **2** | **1** | **245.5 credits** |
| Credit Count | **9** | **2** | **6** | **46** | **12** | **9** | **6** | **12** | **20** | **6** | **38** | **24** | **2.5** | **16** | **17** | **16** | **4** | |

# Third Semester onwards ESC of the student's primary department may also be allowed
*Also, Minor of only the same discipline, as is chosen for PG Degree, can be taken
** AEC / SEC shall continue to be offered in two Groups during 3rd and 4th Semesters

## Dual Degree (Category - C1) With MBA

## Dual Degree (Category - D) With MBA from IIM MUMBAI

| | | | | DSC – Discipline Specific Course - Core | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Semester** | IDC [3-0-0] | IDC /VAC Lab [0-0-2] | VAC [3-0-0] | DC [3-0-0] in 1st year, [3-1-0] later | DE [3-0-0] | DP [0-0-2] | HSSE [3-0-0] | ESC# [3-0-0] | 12 Pre-requisite courses for MBA* | **AEC/SEC [3-0-0] 2nd year onwards | PR (5th - 6Cr) (7th - 10Cr) | Internship (S/X) | Graded Credits except MBA Pre reqsts. | MBA prerequisite Course Credits | **Total credits*** |
| **1st & 2nd** | **3** | **2** | **2** | **2** | | **2** | | **2** | | 5 | | | 42 | 0 | **42** |
| **3rd** | | | | **3** | | **2** | | **1** | **2** | **1** | | | 20 | 7 | **27** |
| **4th** | | | | **3** | | **2** | | **1** | **3** | **1** | | | 20 | 10 | **30** |
| **5th** | | | | **2** | **1** | **2** | **1** | | **2** | | **1** | | 22 | 7 | **29** |
| **6th** | | | | **2** | **1** | **1** | **1** | | **3** | | | | 15 | 10 | **25** |
| **7th** | | | | | **2** | | | | **2** | | **1** | **1** | 20 | 8 | **28** |
| **Credits** | **9** | **2** | **6** | **46** | **12** | **9** | **6** | **12** | **42** | **17** | **16** | **4** | **139** | **42** | **181 credits** |

| | |
|---|---|
| **8th** | **Curriculum, as prescribed at IIM Mumbai, for the MBA degree** |
| **9th** | |
| **10th** | |

# Third Semester onwards ESC of the student's primary department may also be allowed
*Students enrolled for this programme need to ensure that they complete all the courses of B.Tech as well as pre-requisite courses of MBA by the end of 7th semester
** AEC / SEC shall continue to be offered in two Groups during 3rd and 4th Semesters

## Integrated M.Tech. Program

| Semester | IDC [3-0-0] | IDC /VAC Lab [0-0-2] | VAC [3-0-0] | DSC – Discipline Specific Course - Core: DC [3-0-0] in 1st year, [3-1-0] later | DE [3-0-0] | DP [0-0-2] | HSSE [3-0-0] | ESC# [3-0-0] | Only ^Minor or a Mix of courses (i.e. no specialization) allowed: Minor (Only DC) [3-1-0] | SDC of Minor [0-0-3] | Vocational Training / Excursion / Field Visit [S/X] | *AEC/SEC [3-0-0] 2nd year onwards | Thesis | Internship (S/X) | Graded Credits |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **1st & 2nd** | **3** | **2** | **2** | **2** | | **2** | | **2** | | | | **5** | | | **42** |
| **3rd** | | | | **3** | | **2** | | **1** | | | | **1** | | | **20** |
| **4th** | | | | **3** | | **2** | | **1** | | | **1** | **1** | | | **23** |
| **5th** | | | | **2** | **1** | **2** | **1** | | **1** | **1** | | | | | **21.5** |
| **6th** | | | | **2** | **1** | **1** | **1** | | **1** | **1** | **1** | | | | **23.5** |
| **7th** | | | | **3** | | **2** | | | **1** | **1** | | | | | **19.5** |
| **8th** | | | | **3** | **1** | **1** | | | **2** | **1** | **1** | | | | **28.5** |
| **9th** | | | | | | | | | | | | | **1** | **1** | **24** |
| **10th** | | | | | | | | | | | | | **1** | | **20** |
| Course Count | **3** | **2** | **2** | **18** | **3** | **12** | **2** | **4** | **5** | **4** | **3** | **7** | **2** | **1** | **222 credits** |
| Credit Count | **9** | **2** | **6** | **70** | **9** | **12** | **6** | **12** | **20** | **6** | **9** | **17** | **40** | **4** | |

# Third Semester onwards ESC of the student's primary department may also be allowed

* AEC / SEC shall continue to be offered in two Groups during 3rd and 4th Semesters

^Minor, if chosen, must be of a different department. No specialization means taking different courses and their respective SDC/practicals across Minors and/or Honours offered by various departments

# Department of Applied Geology

## Group- II

| 1 st Semester | | | | | | |
|---|---|---|---|---|---|---|
| **S. No.** | **Course Component** | **Course Code** | **Course Name** | **L-T-P** | **Course Category** | **Credit (L*1+T*1+P*0.5)** |
| 1 | IDC1 | NMCI101 | Engineering Mathematics - I | 3-0-0 | Theory | 3 |
| 2 | DSC1 | NGLC103 | Introduction to Palaeontology | 3-0-0 | Theory | 3 |
| 3 | DSC2 | NGLC104 | Palaeontology Practical | 0-0-2 | Practical | 1 |
| 4 | ESC1 | NPEE101 | Introduction to Petroleum Engineering | 3-0-0 | Theory | 3 |
| 5 | AEC1 | NHSA103 | Understanding Human Behaviour | 2-1-0 | Theory | 3 |
| 6 | SEC1 | NMES101 | Manufacturing Process | 2-0-3 | Practical | 3.5 |
| 7 | VAC1 | NCSV101 | Computer Programming | 3-0-0 | Theory | 3 |
| 8 | VAC2 | NCSV102 | Computer Programming Lab | 0-0-2 | Practical | 1 |
| | | | | | | 20.5 |
| **2 nd Semester** | | | | | | |
| **S. No.** | **Course Component** | **Course Code** | **Course Name** | **L-T-P** | **Course Category** | **Credit (L*1+T*1+P*0.5)** |
| 1 | IDC2 | NPHI101 | Engineering Physics | 3-0-0 | Theory | 3 |
| 2 | IDC3 | NPHI102 | Engineering Physics Lab | 0-0-2 | Practical | 1 |
| 3 | IDC4 | NMCI102 | Engineering Mathematics - II | 3-0-0 | Theory | 3 |
| 4 | DSC3 | NGLC101 | Earth System and Processes | 3-0-0 | Theory | 3 |
| 5 | DSC4 | NGLC102 | Earth System and Processes Practical | 0-0-2 | Practical | 1 |
| 6 | ESC2 | NFME102 | Basic of Mineral Engineering | 3-0-0 | Theory | 3 |
| 7 | AEC2 | NHSA101 | Communication Skills | 1-0-0 | Theory | 1 |
| 8 | AEC3 | NHSA102 | Communication Skills Lab | 0-0-2 | Practical | 1 |
| 9 | SEC2 | NCES101 | Engineering Graphics | 1-0-3 | Theory | 2.5 |
| 10 | VAC3 | NESV101 | Environmental Science | 3-0-0 | Theory | 3 |
| | | | | | | 21.5 |

IDC – Inter-disciplinary Course; DSC – Discipline Specific Course - Core; AEC – Ability Enhancement Courses; SEC – Skill Enhancement Courses; VAC – Value Added Courses; **ESC** – Engineering Science Compulsory (**to be offered only for the students of other departments**). ESC courses mentioned herein are to be studied by your department's student.

# Department of Applied Geophysics

## Group- II

| 1 st Semester | | | | | | |
|---|---|---|---|---|---|---|
| **S. No.** | **Course Component** | **Course Code** | **Course Name** | **L-T-P** | **Course Category** | **Credit (L*1+T*1+P*0.5)** |

| | | | | | | |
|---|---|---|---|---|---|---|
| 1 | IDC1 | NMCI101 | Engineering Mathematics - I | 3-0-0 | Theory | 3 |
| 2 | DSC1 | NGPC101 | Geoelectromagnetism | 3-0-0 | Theory | 3 |
| 3 | DSC2 | NGPC102 | Geoelectromagnetism Practical | 0-0-2 | Practical | 1 |
| 4 | ESC1 | NPEE101 | Introduction to Petroleum Engineering | 3-0-0 | Theory | 3 |
| 5 | AEC1 | NHSA103 | Understanding Human Behaviour | 2-1-0 | Theory | 3 |
| 6 | SEC1 | NMES101 | Manufacturing Process | 2-0-3 | Practical | 3.5 |
| 7 | VAC1 | NCSV101 | Computer Programming | 3-0-0 | Theory | 3 |
| 8 | VAC2 | NCSV102 | Computer Programming Lab | 0-0-2 | Practical | 1 |
| | | | | | | 20.5 |

**2 nd Semester**

| S. No. | Course Component | Course Code | Course Name | L-T-P | Course Category | Credit (L*1+T*1+P*0.5) |
|---|---|---|---|---|---|---|
| 1 | IDC2 | NPHI101 | Engineering Physics | 3-0-0 | Theory | 3 |
| 2 | IDC3 | NPHI102 | Engineering Physics Lab | 0-0-2 | Practical | 1 |
| 3 | IDC4 | NMCI102 | Engineering Mathematics - II | 3-0-0 | Theory | 3 |
| 4 | DSC3 | NGPC103 | Mathematical Geophysics | 3-0-0 | Theory | 3 |
| 5 | DSC4 | NGPC104 | Mathematical Geophysics Practical | 0-0-2 | Practical | 1 |
| 6 | ESC2 | NCSE102 | Introduction to Algorithms | 3-0-0 | Theory | 3 |
| 7 | AEC2 | NHSA101 | Communication Skills | 1-0-0 | Theory | 1 |
| 8 | AEC3 | NHSA102 | Communication Skills Lab | 0-0-2 | Practical | 1 |
| 9 | SEC2 | NCES101 | Engineering Graphics | 1-0-3 | Theory | 2.5 |
| 10 | VAC3 | NESV101 | Environmental Science | 3-0-0 | Theory | 3 |
| | | | | | | 21.5 |

IDC – Inter-disciplinary Course; DSC – Discipline Specific Course - Core; AEC – Ability Enhancement Courses; SEC – Skill Enhancement Courses; VAC – Value Added Courses; **ESC** – Engineering Science Compulsory (**to be offered only for the students of other departments**). ESC courses mentioned herein are to be studied by your department's student.

# Department of Chemical Engineering

# Group- II

| 1 st Semester | | | | | | |
|---|---|---|---|---|---|---|
| **Sl. No.** | **Course Component** | **Course Code** | **Course Name** | **L-T-P** | **Course Category** | **Credit (L*1+T*1+P*0.5)** |
| 1 | IDC1 | NMCI101 | Engineering Mathematics - I | 3-0-0 | Theory | 3 |
| 2 | DSC1 | NCHC101 | Introduction to Chemical Engineering | 3-0-0 | Theory | 3 |
| 3 | DSC2 | NCHC102 | Unit Operations Lab | 0-0-2 | Practical | 1 |
| 4 | ESC1 | NFME101 | Introduction to Materials Science & Engineering | 3-0-0 | Theory | 3 |
| 5 | AEC1 | NHSA103 | Understanding Human Behaviour | 2-1-0 | Theory | 3 |
| 6 | SEC1 | NMES101 | Manufacturing Process | 2-0-3 | Practical | 3.5 |
| 7 | VAC1 | NCSV101 | Computer Programming | 3-0-0 | Theory | 3 |
| 8 | VAC2 | NCSV102 | Computer Programming Lab | 0-0-2 | Practical | 1 |
| | | | | | | 20.5 |
| **2 nd Semester** | | | | | | |
| **Sl. No.** | **Course Component** | **Course Code** | **Course Name** | **L-T-P** | **Course Category** | **Credit (L*1+T*1+P*0.5)** |
| 1 | IDC2 | NCYI101 | Engineering Chemistry | 3-0-0 | Theory | 3 |
| 2 | IDC3 | NCYI102 | Engineering Chemistry Lab | 0-0-2 | Practical | 1 |
| 3 | IDC4 | NMCI102 | Engineering Mathematics - II | 3-0-0 | Theory | 3 |
| 4 | DSC3 | NCHC103 | Chemical Process Calculations | 3-0-0 | Theory | 3 |
| 5 | DSC4 | NCHC104 | Computational Tools for Chemical Engineers Lab | 0-0-2 | Practical | 1 |
| 6 | ESC2 | NMEE102 | Basic Mechanical Engineering | 3-0-0 | Theory | 3 |
| 7 | AEC2 | NHSA101 | Communication Skills | 1-0-0 | Theory | 1 |
| 8 | AEC3 | NHSA102 | Communication Skills Lab | 0-0-2 | Practical | 1 |
| 9 | SEC2 | NCES101 | Engineering Graphics | 1-0-3 | Theory | 2.5 |
| 10 | VAC3 | NESV101 | Environmental Science | 3-0-0 | Theory | 3 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | | | | 21.5 |

IDC – Inter-disciplinary Course; DSC – Discipline Specific Course - Core; AEC – Ability Enhancement Courses; SEC – Skill Enhancement Courses; VAC – Value Added Courses; **ESC** – Engineering Science Compulsory (**to be offered only for the students of other departments**). ESC courses mentioned herein are to be studied by your department's student.

# Department of Computer Science and Engineering

## Group- II

| 1 st Semester | | | | | | |
|---|---|---|---|---|---|---|
| **Sl. No.** | **Course Component** | **Course Code** | **Course Name** | **L-T-P** | **Course Category** | **Credit (L*1+T*1+P*0.5)** |
| 1 | IDC1 | NMCI101 | Engineering Mathematics - I | 3-0-0 | Theory | 3 |
| 2 | DSC1 | NCSC101 | Introduction to Unix and software Tools | 3-0-0 | Theory | 3 |
| 3 | DSC2 | NCSC102 | Introduction to Unix and software Tools Lab | 0-0-2 | Practical | 1 |
| 4 | ESC1 | NMCE101 | Statistical Methods | 3-0-0 | Theory | 3 |
| 5 | AEC1 | NHSA103 | Understanding Human Behaviour | 2-1-0 | Theory | 3 |
| 6 | SEC1 | NMES101 | Manufacturing Process | 2-0-3 | Practical | 3.5 |
| 7 | VAC1 | NCSV101 | Computer Programming | 3-0-0 | Theory | 3 |
| 8 | VAC2 | NCSV102 | Computer Programming Lab | 0-0-2 | Practical | 1 |
| | | | | | | 20.5 |
| **2 nd Semester** | | | | | | |
| **Sl. No.** | **Course Component** | **Course Code** | **Course Name** | **L-T-P** | **Course Category** | **Credit (L*1+T*1+P*0.5)** |
| 1 | IDC2 | NPHI101 | Engineering Physics | 3-0-0 | Theory | 3 |
| 2 | IDC3 | NPHI102 | Engineering Physics Lab | 0-0-2 | Practical | 1 |
| 3 | IDC4 | NMCI102 | Engineering Mathematics - II | 3-0-0 | Theory | 3 |
| 4 | DSC3 | NCSC103 | Data Structures | 3-0-0 | Theory | 3 |
| 5 | DSC4 | NCSC104 | Data Structures Lab | 0-0-2 | Practical | 1 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 6 | ESC2 | NECE102 | Digital Electronics | 3-0-0 | Theory | 3 |
| 7 | AEC2 | NHSA101 | Communication Skills | 1-0-0 | Theory | 1 |
| 8 | AEC3 | NHSA102 | Communication Skills Lab | 0-0-2 | Practical | 1 |
| 9 | SEC2 | NCES101 | Engineering Graphics | 1-0-3 | Theory | 2.5 |
| 10 | VAC3 | NESV101 | Environmental Science | 3-0-0 | Theory | 3 |
| | | | | | | 21.5 |

IDC – Inter-disciplinary Course; DSC – Discipline Specific Course - Core; AEC – Ability Enhancement Courses; SEC – Skill Enhancement Courses; VAC – Value Added Courses; **ESC** – Engineering Science Compulsory (**to be offered only for the students of other departments**).ESC courses mentioned herein are to be studied by your department's student.

# Department of Civil Engineering

## Group- I

| **1 st Semester** | | | | | | |
|---|---|---|---|---|---|---|
| **Sl. No.** | **Course Component** | **Course Code** | **Course Name** | **L-T-P** | **Course Category** | **Credit (L*1+T*1+P*0.5)** |
| 1 | IDC1 | NMCI101 | Engineering Mathematics - I | 3-0-0 | Theory | 3 |
| 2 | IDC2 | NPHI101 | Engineering Physics | 3-0-0 | Theory | 3 |
| 3 | IDC3 | NPHI102 | Engineering Physics Lab | 0-0-2 | Practical | 1 |
| 4 | DSC1 | NCEC101 | Building Materials and Building Construction | 3-0-0 | Theory | 3 |
| 5 | DSC2 | NCEC102 | Material Testing Laboratory | 0-0-2 | Practical | 1 |
| 6 | ESC1 | NMEE101 | Mechanics for Engineers | 3-0-0 | Theory | 3 |
| 7 | AEC1 | NHSA101 | Communication Skills | 1-0-0 | Theory | 1 |
| 8 | AEC2 | NHSA102 | Communication Skills Lab | 0-0-2 | Practical | 1 |
| 9 | SEC1 | NCES101 | Engineering Graphics | 1-0-3 | Theory | 2.5 |
| 10 | VAC1 | NESV101 | Environmental Science | 3-0-0 | Theory | 3 |
| | | | | | | 21.5 |
| **2 nd Semester** | | | | | | |

| S. No. | Course Component | Course Code | Course Name | L-T-P | Course Category | Credit (L*1+T*1+P*0.5) |
|---|---|---|---|---|---|---|
| 1 | IDC4 | NMCI102 | Engineering Mathematics - II | 3-0-0 | Theory | 3 |
| 2 | DSC3 | NCEC103 | Surveying | 3-0-0 | Theory | 3 |
| 3 | DSC4 | NCEC104 | Surveying Laboratory | 0-0-2 | Practical | 1 |
| 4 | ESC2 | NESE101 | Basics of Environmental Engineering | 3-0-0 | Theory | 3 |
| 5 | AEC3 | NHSA103 | Understanding Human Behaviour | 2-1-0 | Theory | 3 |
| 6 | SEC2 | NMES101 | Manufacturing Process | 2-0-3 | Theory | 3.5 |
| 7 | VAC2 | NCSV101 | Computer Programming | 3-0-0 | Theory | 3 |
| 8 | VAC3 | NCSV102 | Computer Programming Lab | 0-0-2 | Practical | 1 |
| | | | | | | 20.5 |

IDC – Inter-disciplinary Course; DSC – Discipline Specific Course - Core; AEC – Ability Enhancement Courses; SEC – Skill Enhancement Courses; VAC – Value Added Courses; **ESC** – Engineering Science Compulsory (**to be offered only for the students of other departments**). ESC courses mentioned herein are to be studied by your department's student.

# Department of Electronics and Communication Engineering

## Group- II

| 1 st Semester | | | | | | |
|---|---|---|---|---|---|---|
| **Sl. No.** | **Course Component** | **Course Code** | **Course Name** | **L-T-P** | **Course Category** | **Credit (L*1+T*1+P*0.5)** |
| 1 | IDC1 | NMCI101 | Engineering Mathematics - I | 3-0-0 | Theory | 3 |
| 2 | DSC1 | NECC101 | Introduction to Electronics Engineering | 3-0-0 | Theory | 3 |
| 3 | DSC2 | NECC102 | Introduction to Electronics Engineering Lab | 0-0-2 | Practical | 1 |
| 4 | ESC1 | NEEE101 | Electrical Devices and Circuits | 3-0-0 | Theory | 3 |
| 5 | AEC1 | NHSA103 | Understanding Human Behaviour | 2-1-0 | Theory | 3 |
| 6 | SEC1 | NMES101 | Manufacturing Process | 2-0-3 | Practical | 3.5 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 7 | VAC1 | NCSV101 | Computer Programming | 3-0-0 | Theory | 3 |
| 8 | VAC2 | NCSV102 | Computer Programming Lab | 0-0-2 | Practical | 1 |
| | | | | | | 20.5 |
| **2 nd Semester** | | | | | | |
| **Sl. No.** | **Course Component** | **Course Code** | **Course Name** | **L-T-P** | **Course Category** | **Credit (L*1+T*1+P*0.5)** |
| 1 | IDC2 | NPHI101 | Engineering Physics | 3-0-0 | Theory | 3 |
| 2 | IDC3 | NPHI102 | Engineering Physics Lab | 0-0-2 | Practical | 1 |
| 3 | IDC4 | NMCI102 | Engineering Mathematics - II | 3-0-0 | Theory | 3 |
| 4 | DSC3 | NECC103 | Digital Circuits and System Design | 3-0-0 | Theory | 3 |
| 5 | DSC4 | NECC104 | Digital System Design Lab | 0-0-2 | Practical | 1 |
| 6 | ESC2 | NCSE102 | Introduction to Algorithms | 3-0-0 | Theory | 3 |
| 7 | AEC2 | NHSA101 | Communication Skills | 1-0-0 | Theory | 1 |
| 8 | AEC3 | NHSA102 | Communication Skills Lab | 0-0-2 | Practical | 1 |
| 9 | SEC2 | NCES101 | Engineering Graphics | 1-0-3 | Theory | 2.5 |
| 10 | VAC3 | NESV101 | Environmental Science | 3-0-0 | Theory | 3 |
| | | | | | | 21.5 |

IDC – Inter-disciplinary Course; DSC – Discipline Specific Course - Core; AEC – Ability Enhancement Courses; SEC – Skill Enhancement Courses; VAC – Value Added Courses; **ESC** – Engineering Science Compulsory (**to be offered only for the students of other departments**). ESC courses mentioned herein are to be studied by your department's student.

# Department of Electrical Engineering

## Group- I

| **1 st Semester** | | | | | | |
|---|---|---|---|---|---|---|
| **Sl. No.** | **Course Component** | **Course Code** | **Course Name** | **L-T-P** | **Course Category** | **Credit (L*1+T*1+P*0.5)** |
| 1 | IDC1 | NMCI101 | Engineering Mathematics - I | 3-0-0 | Theory | 3 |
| 2 | IDC2 | NPHI101 | Engineering Physics | 3-0-0 | Theory | 3 |
| 3 | IDC3 | NPHI102 | Engineering Physics Lab | 0-0-2 | Practical | 1 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 4 | DSC1 | NEEC101 | Basics of Electrical Engineering - I | 3-0-0 | Theory | 3 |
| 5 | DSC2 | NEEC102 | Basics of Electrical Engineering - I Lab | 0-0-2 | Practical | 1 |
| 6 | ESC1 | NECE101 | Basics of Electronics Engineering | 3-0-0 | Theory | 3 |
| 7 | AEC1 | NHSA101 | Communication Skills | 1-0-0 | Theory | 1 |
| 8 | AEC2 | NHSA102 | Communication Skills Lab | 0-0-2 | Practical | 1 |
| 9 | SEC1 | NCES101 | Engineering Graphics | 1-0-3 | Theory | 2.5 |
| 10 | VAC1 | NESV101 | Environmental Science | 3-0-0 | Theory | 3 |
| | | | | | | 21.5 |

**2 nd Semester**

| S. No. | Course Component | Course Code | Course Name | L-T-P | Course Category | Credit (L*1+T*1+P*0.5) |
|---|---|---|---|---|---|---|
| 1 | IDC4 | NMCI102 | Engineering Mathematics - II | 3-0-0 | Theory | 3 |
| 2 | DSC3 | NEEC103 | Basics of Electrical Engineering - II | 3-0-0 | Theory | 3 |
| 3 | DSC4 | NEEC104 | Basics of Electrical Engineering - II Lab | 0-0-2 | Practical | 1 |
| 4 | ESC2 | NCSE102 | Introduction to Algorithms | 3-0-0 | Theory | 3 |
| 5 | AEC3 | NHSA103 | Understanding Human Behaviour | 2-1-0 | Theory | 3 |
| 6 | SEC2 | NMES101 | Manufacturing Process | 2-0-3 | Theory | 3.5 |
| 7 | VAC2 | NCSV101 | Computer Programming | 3-0-0 | Theory | 3 |
| 8 | VAC3 | NCSV102 | Computer Programming Lab | 0-0-2 | Practical | 1 |
| | | | | | | 20.5 |

IDC – Inter-disciplinary Course; DSC – Discipline Specific Course - Core; AEC – Ability Enhancement Courses; SEC – Skill Enhancement Courses; VAC – Value Added Courses; **ESC** – Engineering Science Compulsory (**to be offered only for the students of other departments**). ESC courses mentioned herein are to be studied by your department's student.

# Department of Engineering Physics

## Group- II

| 1 st Semester | | | | | | |
|---|---|---|---|---|---|---|
| **S. No.** | **Course Component** | **Course Code** | **Course Name** | **L-T-P** | **Course Category** | **Credit (L*1+T*1+P*0.5)** |
| 1 | IDC1 | NMCI101 | Engineering Mathematics - I | 3-0-0 | Theory | 3 |
| 2 | DSC1 | NPHC101 | Wave and Acoustics | 3-0-0 | Theory | 3 |
| 3 | DSC2 | NPHC102 | Wave and Acoustics Lab | 0-0-2 | Practical | 1 |
| 4 | ESC1 | NCSE101 | Fundamental of Data Structures | 3-0-0 | Theory | 3 |
| 5 | AEC1 | NHSA103 | Understanding Human Behaviour | 2-1-0 | Theory | 3 |
| 6 | SEC1 | NMES101 | Manufacturing Process | 2-0-3 | Practical | 3.5 |
| 7 | VAC1 | NCSV101 | Computer Programming | 3-0-0 | Theory | 3 |
| 8 | VAC2 | NCSV102 | Computer Programming Lab | 0-0-2 | Practical | 1 |
| | | | | | | 20.5 |
| **2 nd Semester** | | | | | | |
| **S. No.** | **Course Component** | **Course Code** | **Course Name** | **L-T-P** | **Course Category** | **Credit (L*1+T*1+P*0.5)** |
| 1 | IDC2 | NCYI101 | Engineering Chemistry | 3-0-0 | Theory | 3 |
| 2 | IDC3 | NCYI102 | Engineering Chemistry Lab | 0-0-2 | Practical | 1 |
| 3 | IDC4 | NMCI102 | Engineering Mathematics - II | 3-0-0 | Theory | 3 |
| 4 | DSC3 | NPHC103 | Applied Optics | 3-0-0 | Theory | 3 |
| 5 | DSC4 | NPHC104 | Optics Lab | 0-0-2 | Practical | 1 |
| 6 | ESC2 | NMCE102 | Numerical Methods | 3-0-0 | Theory | 3 |
| 7 | AEC2 | NHSA101 | Communication Skills | 1-0-0 | Theory | 1 |
| 8 | AEC3 | NHSA102 | Communication Skills Lab | 0-0-2 | Practical | 1 |
| 9 | SEC2 | NCES101 | Engineering Graphics | 1-0-3 | Theory | 2.5 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 10 | VAC3 | NESV101 | Environmental Science | 3-0-0 | Theory | 3 |
| | | | | | | 21.5 |

IDC – Inter-disciplinary Course; DSC – Discipline Specific Course - Core; AEC – Ability Enhancement Courses; SEC – Skill Enhancement Courses; VAC – Value Added Courses; **ESC** – Engineering Science Compulsory (**to be offered only for the students of other departments**). ESC courses mentioned herein are to be studied by your department's student.

# Department of Environmental Science and Engineering

## Group- I

| 1 st Semester | | | | | | |
|---|---|---|---|---|---|---|
| **Sl. No.** | **Course Component** | **Course Code** | **Course Name** | **L-T-P** | **Course Category** | **Credit (L*1+T*1+P*0.5)** |
| 1 | IDC1 | NMCI101 | Engineering Mathematics - I | 3-0-0 | Theory | 3 |
| 2 | IDC2 | NCYI101 | Engineering Chemistry | 3-0-0 | Theory | 3 |
| 3 | IDC3 | NCYI102 | Engineering Chemistry Lab | 0-0-2 | Practical | 1 |
| 4 | DSC1 | NESC101 | Drinking Water Supply and Treatment | 3-0-0 | Theory | 3 |
| 5 | DSC2 | NESC102 | Water Pollution Practical | 0-0-2 | Practical | 1 |
| 6 | ESC1 | NCHE101 | Unit operations and Unit Processes | 3-0-0 | Theory | 3 |
| 7 | AEC1 | NHSA101 | Communication Skills | 1-0-0 | Theory | 1 |
| 8 | AEC2 | NHSA102 | Communication Skills Lab | 0-0-2 | Practical | 1 |
| 9 | SEC1 | NCES101 | Engineering Graphics | 1-0-3 | Theory | 2.5 |
| 10 | VAC1 | NESV101 | Environmental Science | 3-0-0 | Theory | 3 |
| | | | | | | 21.5 |
| **2 nd Semester** | | | | | | |
| **S. No.** | **Course Component** | **Course Code** | **Course Name** | **L-T-P** | **Course Category** | **Credit (L*1+T*1+P*0.5)** |
| 1 | IDC4 | NMCI102 | Engineering Mathematics - II | 3-0-0 | Theory | 3 |
| 2 | DSC3 | NESC103 | Air Pollution | 3-0-0 | Theory | 3 |
| 3 | DSC4 | NESC104 | Air and Noise Pollution Practical | 0-0-2 | Practical | 1 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 4 | ESC2 | NMNE102 | Introduction to Mining, Energy and Climate Change | 3-0-0 | Theory | 3 |
| 5 | AEC3 | NHSA103 | Understanding Human Behaviour | 2-1-0 | Theory | 3 |
| 6 | SEC2 | NMES101 | Manufacturing Process | 2-0-3 | Theory | 3.5 |
| 7 | VAC2 | NCSV101 | Computer Programming | 3-0-0 | Theory | 3 |
| 8 | VAC3 | NCSV102 | Computer Programming Lab | 0-0-2 | Practical | 1 |
| | | | | | | 20.5 |

IDC – Inter-disciplinary Course; DSC – Discipline Specific Course - Core; AEC – Ability Enhancement Courses; SEC – Skill Enhancement Courses; VAC – Value Added Courses; **ESC** – Engineering Science Compulsory (**to be offered only for the students of other departments**). ESC courses mentioned herein are to be studied by your department's student.

# Department of Fuel Minerals and Metallurgical Engineering

## Group- II

| 1 st Semester | | | | | | |
|---|---|---|---|---|---|---|
| **S. No.** | **Course Component** | **Course Code** | **Course Name** | **L-T-P** | **Course Category** | **Credit (L*1+T*1+P*0.5)** |
| 1 | IDC1 | NMCI101 | Engineering Mathematics - I | 3-0-0 | Theory | 3 |
| 2 | DSC1 | NFMC101 | Introduction to Metallurgical Engineering | 3-0-0 | Theory | 3 |
| 3 | DSC2 | NFMC102 | Introduction to Metallurgical Engineering Lab | 0-0-2 | Practical | 1 |
| 4 | ESC1 | NMNE101 | Mine to Mill Operations | 3-0-0 | Theory | 3 |
| 5 | AEC1 | NHSA103 | Understanding Human Behaviour | 2-1-0 | Theory | 3 |
| 6 | SEC1 | NMES101 | Manufacturing Process | 2-0-3 | Practical | 3.5 |
| 7 | VAC1 | NCSV101 | Computer Programming | 3-0-0 | Theory | 3 |
| 8 | VAC2 | NCSV102 | Computer Programming Lab | 0-0-2 | Practical | 1 |
| | | | | | | 20.5 |
| **2 nd Semester** | | | | | | |

| S. No. | Course Component | Course Code | Course Name | L-T-P | Course Category | Credit (L*1+T*1+P*0.5) |
|---|---|---|---|---|---|---|
| 1 | IDC2 | NCYI101 | Engineering Chemistry | 3-0-0 | Theory | 3 |
| 2 | IDC3 | NCYI102 | Engineering Chemistry Lab | 0-0-2 | Practical | 1 |
| 3 | IDC4 | NMCI102 | Engineering Mathematics - II | 3-0-0 | Theory | 3 |
| 4 | DSC3 | NFMC103 | Introduction to Mineral Engineering | 3-0-0 | Theory | 3 |
| 5 | DSC4 | NFMC104 | Introduction to Mineral Engineering Lab | 0-0-2 | Practical | 1 |
| 6 | ESC2 | NMEE102 | Basic Mechanical Engineering | 3-0-0 | Theory | 3 |
| 7 | AEC2 | NHSA101 | Communication Skills | 1-0-0 | Theory | 1 |
| 8 | AEC3 | NHSA102 | Communication Skills Lab | 0-0-2 | Practical | 1 |
| 9 | SEC2 | NCES101 | Engineering Graphics | 1-0-3 | Theory | 2.5 |
| 10 | VAC3 | NESV101 | Environmental Science | 3-0-0 | Theory | 3 |
| | | | | | | 21.5 |

IDC – Inter-disciplinary Course; DSC – Discipline Specific Course - Core; AEC – Ability Enhancement Courses; SEC – Skill Enhancement Courses; VAC – Value Added Courses; **ESC** – Engineering Science Compulsory (**to be offered only for the students of other departments**).
ESC courses mentioned herein are to be studied by your department's student.

# Department of Mathematics and Computing

## Group- II

| 1 st Semester | | | | | | |
|---|---|---|---|---|---|---|
| **Sl. No.** | **Course Component** | **Course Code** | **Course Name** | **L-T-P** | **Course Category** | **Credit (L*1+T*1+P*0.5)** |
| 1 | IDC1 | NMCI101 | Engineering Mathematics - I | 3-0-0 | Theory | 3 |
| 2 | DSC1 | NMCC101 | Computer Organization and Architecture | 3-0-0 | Theory | 3 |
| 3 | DSC2 | NMCC102 | Computer Organization and Architecture Lab | 0-0-2 | Practical | 1 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 4 | ESC1 | NECE101 | Basics of Electronics Engineering | 3-0-0 | Theory | 3 |
| 5 | AEC1 | NHSA103 | Understanding Human Behaviour | 2-1-0 | Theory | 3 |
| 6 | SEC1 | NMES101 | Manufacturing Process | 2-0-3 | Practical | 3.5 |
| 7 | VAC1 | NCSV101 | Computer Programming | 3-0-0 | Theory | 3 |
| 8 | VAC2 | NCSV102 | Computer Programming Lab | 0-0-2 | Practical | 1 |
| | | | | | | 20.5 |
| **2 nd Semester** | | | | | | |
| **Sl . No.** | **Course Component** | **Course Code** | **Course Name** | **L-T-P** | **Course Category** | **Credit (L*1+T*1+P*0.5)** |
| 1 | IDC2 | NPHI101 | Engineering Physics | 3-0-0 | Theory | 3 |
| 2 | IDC3 | NPHI102 | Engineering Physics Lab | 0-0-2 | Practical | 1 |
| 3 | IDC4 | NMCI102 | Engineering Mathematics - II | 3-0-0 | Theory | 3 |
| 4 | DSC3 | NCSC103 | Data Structures | 3-0-0 | Theory | 3 |
| 5 | DSC4 | NCSC104 | Data Structures Lab | 0-0-2 | Practical | 1 |
| 6 | ESC2 | NECE102 | Digital Electronics | 3-0-0 | Theory | 3 |
| 7 | AEC2 | NHSA101 | Communication Skills | 1-0-0 | Theory | 1 |
| 8 | AEC3 | NHSA102 | Communication Skills Lab | 0-0-2 | Practical | 1 |
| 9 | SEC2 | NCES101 | Engineering Graphics | 1-0-3 | Theory | 2.5 |
| 10 | VAC3 | NESV101 | Environmental Science | 3-0-0 | Theory | 3 |
| | | | | | | 21.5 |

IDC – Inter-disciplinary Course; DSC – Discipline Specific Course - Core; AEC – Ability Enhancement Courses; SEC – Skill Enhancement Courses; VAC – Value Added Courses; **ESC** –

Engineering Science Compulsory (**to be offered only for the students of other departments**). ESC courses mentioned herein are to be studied by your department's student.

# Department of Mechanical Engineering

## Group- I

| 1 st Semester | | | | | | |
|---|---|---|---|---|---|---|
| **Sl. No.** | **Course Component** | **Course Code** | **Course Name** | **L-T-P** | **Course Category** | **Credit (L*1+T*1+P*0.5)** |
| 1 | IDC1 | NMCI101 | Engineering Mathematics - I | 3-0-0 | Theory | 3 |
| 2 | IDC2 | NPHI101 | Engineering Physics | 3-0-0 | Theory | 3 |
| 3 | IDC3 | NPHI102 | Engineering Physics Lab | 0-0-2 | Practical | 1 |
| 4 | DSC1 | NMEC101 | Engineering Mechanics | 3-0-0 | Theory | 3 |
| 5 | DSC2 | NMEC102 | Engineering Mechanic Lab | 0-0-2 | Practical | 1 |
| 6 | ESC1 | NEEE101 | Electrical Devices and Circuits | 3-0-0 | Theory | 3 |
| 7 | AEC1 | NHSA101 | Communication Skills | 1-0-0 | Theory | 1 |
| 8 | AEC2 | NHSA102 | Communication Skills Lab | 0-0-2 | Practical | 1 |
| 9 | SEC1 | NCES101 | Engineering Graphics | 1-0-3 | Theory | 2.5 |
| 10 | VAC1 | NESV101 | Environmental Science | 3-0-0 | Theory | 3 |
| | | | | | | 21.5 |
| **2 nd Semester** | | | | | | |
| **S. No.** | **Course Component** | **Course Code** | **Course Name** | **L-T-P** | **Course Category** | **Credit (L*1+T*1+P*0.5)** |
| 1 | IDC4 | NMCI102 | Engineering Mathematics - II | 3-0-0 | Theory | 3 |
| 2 | DSC3 | NMEC103 | Thermodynamics | 3-0-0 | Theory | 3 |
| 3 | DSC4 | NMEC104 | Thermodynamics Lab | 0-0-2 | Practical | 1 |
| 4 | ESC2 | NECE102 | Digital Electronics | 3-0-0 | Theory | 3 |
| 5 | AEC3 | NHSA103 | Understanding Human Behaviour | 2-1-0 | Theory | 3 |
| 6 | SEC2 | NMES101 | Manufacturing Process | 2-0-3 | Theory | 3.5 |
| 7 | VAC2 | NCSV101 | Computer Programming | 3-0-0 | Theory | 3 |
| 8 | VAC3 | NCSV102 | Computer Programming Lab | 0-0-2 | Practical | 1 |
| | | | | | | 20.5 |

IDC – Inter-disciplinary Course; DSC – Discipline Specific Course - Core; AEC – Ability Enhancement Courses; SEC – Skill Enhancement Courses; VAC – Value Added Courses; **ESC** –

Engineering Science Compulsory (**to be offered only for the students of other departments**). ESC courses mentioned herein are to be studied by your department's student.

# Department of Mining Machinery Engineering

## Group- I

| 1 st Semester | | | | | | |
|---|---|---|---|---|---|---|
| **Sl. No.** | **Course Component** | **Course Code** | **Course Name** | **L-T-P** | **Course Category** | **Credit (L*1+T*1+ P*0.5)** |
| 1 | IDC1 | NMCI101 | Engineering Mathematics - I | 3-0-0 | Theory | 3 |
| 2 | IDC2 | NPHI101 | Engineering Physics | 3-0-0 | Theory | 3 |
| 3 | IDC3 | NPHI102 | Engineering Physics Lab | 0-0-2 | Practical | 1 |
| 4 | DSC1 | NMEC101 | Engineering Mechanics | 3-0-0 | Theory | 3 |
| 5 | DSC2 | NMEC102 | Engineering Mechanic Lab | 0-0-2 | Practical | 1 |
| 6 | ESC1 | NEEE101 | Electrical Devices and Circuits | 3-0-0 | Theory | 3 |
| 7 | AEC1 | NHSA101 | Communication Skills | 1-0-0 | Theory | 1 |
| 8 | AEC2 | NHSA102 | Communication Skills Lab | 0-0-2 | Practical | 1 |
| 9 | SEC1 | NCES101 | Engineering Graphics | 1-0-3 | Theory | 2.5 |
| 10 | VAC1 | NESV101 | Environmental Science | 3-0-0 | Theory | 3 |
| | | | | | | 21.5 |
| **2 nd Semester** | | | | | | |
| **S. No.** | **Course Component** | **Course Code** | **Course Name** | **L-T-P** | **Course Category** | **Credit (L*1+T*1+ P*0.5)** |
| 1 | IDC4 | NMCI102 | Engineering Mathematics - II | 3-0-0 | Theory | 3 |
| 2 | DSC3 | NMEC103 | Thermodynamics | 3-0-0 | Theory | 3 |
| 3 | DSC4 | NMEC104 | Thermodynamics Lab | 0-0-2 | Practical | 1 |
| 4 | ESC2 | NECE102 | Digital Electronics | 3-0-0 | Theory | 3 |
| 5 | AEC3 | NHSA103 | Understanding Human Behaviour | 2-1-0 | Theory | 3 |
| 6 | SEC2 | NMES101 | Manufacturing Process | 2-0-3 | Theory | 3.5 |
| 7 | VAC2 | NCSV101 | Computer Programming | 3-0-0 | Theory | 3 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 8 | VAC3 | NCSV102 | Computer Programming Lab | 0-0-2 | Practical | 1 |
| | | | | | | 20.5 |

IDC – Inter-disciplinary Course; DSC – Discipline Specific Course - Core; AEC – Ability Enhancement Courses; SEC – Skill Enhancement Courses; VAC – Value Added Courses; **ESC** – Engineering Science Compulsory (**to be offered only for the students of other departments**). ESC courses mentioned herein are to be studied by your department's student.

# Department of Mining Engineering

## Group- I

| 1 st Semester | | | | | | |
|---|---|---|---|---|---|---|
| **Sl. No.** | **Course Component** | **Course Code** | **Course Name** | **L-T-P** | **Course Category** | **Credit (L*1+T*1+P*0.5)** |
| 1 | IDC1 | NMCI101 | Engineering Mathematics - I | 3-0-0 | Theory | 3 |
| 2 | IDC2 | NPHI101 | Engineering Physics | 3-0-0 | Theory | 3 |
| 3 | IDC3 | NPHI102 | Engineering Physics Lab | 0-0-2 | Practical | 1 |
| 4 | DSC1 | NMNC101 | Mine Economics | 3-0-0 | Theory | 3 |
| 5 | DSC2 | NMNC102 | Mining Technology Lab | 0-0-2 | Practical | 1 |
| 6 | ESC1 | NMEE101 | Mechanics For Engineers | 3-0-0 | Theory | 3 |
| 7 | AEC1 | NHSA101 | Communication Skills | 1-0-0 | Theory | 1 |
| 8 | AEC2 | NHSA102 | Communication Skills Lab | 0-0-2 | Practical | 1 |
| 9 | SEC1 | NCES101 | Engineering Graphics | 1-0-3 | Theory | 2.5 |
| 10 | VAC1 | NESV101 | Environmental Science | 3-0-0 | Theory | 3 |
| | | | | | | 21.5 |
| **2 nd Semester** | | | | | | |
| **S. No.** | **Course Component** | **Course Code** | **Course Name** | **L-T-P** | **Course Category** | **Credit (L*1+T*1+P*0.5)** |
| 1 | IDC4 | NMCI102 | Engineering Mathematics - II | 3-0-0 | Theory | 3 |
| 2 | DSC3 | NMNC103 | Elements of Mining | 3-0-0 | Theory | 3 |
| 3 | DSC4 | NMNC104 | Mine Model Laboratory | 0-0-2 | Practical | 1 |
| 4 | ESC2 | NECE102 | Digital Electronics | 3-0-0 | Theory | 3 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 5 | AEC3 | NHSA103 | Understanding Human Behaviour | 2-1-0 | Theory | 3 |
| 6 | SEC2 | NMES101 | Manufacturing Process | 2-0-3 | Theory | 3.5 |
| 7 | VAC2 | NCSV101 | Computer Programming | 3-0-0 | Theory | 3 |
| 8 | VAC3 | NCSV102 | Computer Programming Lab | 0-0-2 | Practical | 1 |
| | | | | | | 20.5 |

IDC – Inter-disciplinary Course; DSC – Discipline Specific Course - Core; AEC – Ability Enhancement Courses; SEC – Skill Enhancement Courses; VAC – Value Added Courses; **ESC** – Engineering Science Compulsory (**to be offered only for the students of other departments**). ESC courses mentioned herein are to be studied by your department's student.

# Department of Petroleum Engineering

## Group- II

| 1 st Semester | | | | | | |
|---|---|---|---|---|---|---|
| **S. No.** | **Course Component** | **Course Code** | **Course Name** | **L-T-P** | **Course Category** | **Credit (L*1+T*1+P*0.5)** |
| 1 | IDC1 | NMCI101 | Engineering Mathematics - I | 3-0-0 | Theory | 3 |
| 2 | DSC1 | NPEC101 | Elements of Reservoir Engineering | 3-0-0 | Theory | 3 |
| 3 | DSC2 | NPEC102 | Reservoir Engineering Lab | 0-0-2 | Practical | 1 |
| 4 | ESC1 | NGLE101 | Introduction to Earth Science | 3-0-0 | Theory | 3 |
| 5 | AEC1 | NHSA103 | Understanding Human Behaviour | 2-1-0 | Theory | 3 |
| 6 | SEC1 | NMES101 | Manufacturing Process | 2-0-3 | Practical | 3.5 |
| 7 | VAC1 | NCSV101 | Computer Programming | 3-0-0 | Theory | 3 |
| 8 | VAC2 | NCSV102 | Computer Programming Lab | 0-0-2 | Practical | 1 |
| | | | | | | 20.5 |
| **2 nd Semester** | | | | | | |
| **S. No.** | **Course Component** | **Course Code** | **Course Name** | **L-T-P** | **Course Category** | **Credit (L*1+T** |

| | | | | | | ***1+P*0.5)** |
|---|---|---|---|---|---|---|
| 1 | IDC2 | NCYI101 | Engineering Chemistry | 3-0-0 | Theory | 3 |
| 2 | IDC3 | NCYI102 | Engineering Chemistry Lab | 0-0-2 | Practical | 1 |
| 3 | IDC4 | NMCI102 | Engineering Mathematics - II | 3-0-0 | Theory | 3 |
| 4 | DSC3 | NPEC103 | Petroleum Engineering Thermodynamics and Transport Phenomena | 3-0-0 | Theory | 3 |
| 5 | DSC4 | NPEC104 | Process Engineering Lab | 0-0-2 | Practical | 1 |
| 6 | ESC2 | NGPE102 | Introduction to Geophysics | 3-0-0 | Theory | 3 |
| 7 | AEC2 | NHSA101 | Communication Skills | 1-0-0 | Theory | 1 |
| 8 | AEC3 | NHSA102 | Communication Skills Lab | 0-0-2 | Practical | 1 |
| 9 | SEC2 | NCES101 | Engineering Graphics | 1-0-3 | Theory | 2.5 |
| 10 | VAC3 | NESV101 | Environmental Science | 3-0-0 | Theory | 3 |
| | | | | | | 21.5 |

IDC – Inter-disciplinary Course; DSC – Discipline Specific Course - Core; AEC – Ability Enhancement Courses; SEC – Skill Enhancement Courses; VAC – Value Added Courses; **ESC** – Engineering Science Compulsory (**to be offered only for the students of other departments**). ESC courses mentioned herein are to be studied by your department's student.

New PG Program Templates Notification

INDIAN INSTITUTE OF TECHNOLOGY (INDIAN SCHOOL OF MINES) DHANBAD

OFFICE OF THE DEAN (ACADEMIC)

No. IITISM/DAC/840 23.10.2024

NOTIFICATION

**NEW POSTGRADUATE PROGRAM TEMPLATES (AS NEP 2020)**

The new PG program templates, as applicable from the batch admitted in MS 2024-25, are enclosed for the reference of all.

Kindly note that in addition to the given credits, some non-credit units are also required to be necessarily earned to successfully complete the program {notification dated 18.09.2024 enclosed for reference. Office of Dean (Students' Welfare) will provide the details in this regard in due course/shortly}.

For the PG first year, the department wise list of courses is also enclosed for reference.

23/10/2024

Dean (Academic)

Copy to: Director / Dy. Director
All Deans / Assoc. Deans / HoDs
Registrar
DR (Acad) / AR (UG) / AR (PG) / AR (SW)
All PG Students

**UPDATED PG PROGRAM TEMPLATES AS PER NEP 2020 (EFFECTIVE FROM THE BATCH ADMITTED IN MS 2024-25)**

## M.Tech. Program

| Semester | DC [3-1-0] | DE [3-0-0] | RM [3-0-0] | DP [0-0-3] | Thesis | Credits |
|---|---|---|---|---|---|---|
| **1st** | **3** | **2** | | **3** | | **22.5** |
| **2nd** | **3** | **1** | **1** | **3** | | **22.5** |
| **3rd** | | | | | **1** | **20** |
| **4th** | | | | | **1** | **20** |
| Course Count | **6** | **3** | **1** | **6** | **2** | |
| Credit Count | **24** | **9** | **3** | **9** | **40** | **Total 85 Credits** |

## M.Sc.Tech. Program

| Semester | DC [1st Sem: 3 DC of 3-1-0 and 2 DC of 3-0-0; 2nd & 4th sem all DC of 3-00; 3rd Sem: 2 DC of 3-1-0 and 3 DC of 3-0-0; 5th sem: 1 DC of 3-1-0 and 1 DC of 3-0-0) | DE [3-0-0] | RM [3-0-0] | DP [0-0-2] | Thesis | Vocational Training / Excursion / Field Visit [ S/X ] | Internship (Non-Credit Unit) | Credits |
|---|---|---|---|---|---|---|---|---|
| **1st** | **5** | | | **3** | | | | **21** |
| **2nd** | **5** | | | **3** | | **1** | | **21** |
| **3rd** | **5** | | | **3** | | | | **20** |
| **4th** | **5** | | | **2** | | **1** | | **20** |
| **5th** | **2** | **2** | **1** | | | | **1** | **21** |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **6th** | | | | | **1** | | | **20** |
| Course Count | **22** | **2** | **1** | **11** | **1** | **2** | **1** | |
| Credit Count | **72** | **6** | **3** | **11** | **20** | **6** | **5** | **Total 123 Credits** |

## M.Sc. Program

| **Semester** | DC [Atleast three DCs should be of 3-1-0 in 1st semester and two each in other semesters] | DE [3-0-0] | RM [3-0-0] | DP [0-0-3] | Thesis | Credits |
|---|---|---|---|---|---|---|
| **1st** | **5** | | | **2** | | **21** |
| **2nd** | **4** | **1** | | **2** | | **20** |
| **3rd** | **2** | **2** | **1** | **2** | | **20** |
| **4th** | | | | | **1** | **20** |
| Course Count | **11** | **3** | **1** | **6** | **1** | |
| Credit Count | **40** | **9** | **3** | **9** | **20** | **Total 81 Credits** |

## MA Program

| **Semester** | DC [Atleast three DCs should be of 3-1-0 in 1st semester and two in other semesters] | DE [3-0-0] | RM [3-0-0] | DP [0-0-3/ 0-0-2] | Thesis | Credits |
|---|---|---|---|---|---|---|
| **1st** | **4** | | **1** | **2** | | **20.5** |
| **2nd** | **4** | **1** | | **1** | | **19.5** |
| **3rd** | **3** | **2** | | **2** | | **21** |
| **4th** | | | | | **1** | **20** |
| Course Count | **11** | **3** | **1** | **5** | **1** | |
| Credit Count | **42** | **9** | **3** | **7** | **20** | **Total 81 Credits** |

## MBA Program

| Semester | DC [Atleast three DCs should be of 3-1-0 in 1st semester and two in 2nd sem] | DE [3-0-0] | DP [0-0-3] in 1st and [0-0-2) in 2nd sem | Term Paper ( S/X ) | Credits |
|---|---|---|---|---|---|
| **1st** | **5** | **0** | **1** | | **19.5** |
| **2nd** | **6** | **0** | **1** | | **21** |
| **3rd** | | **4** | | **1** | **20** |
| **4th** | | **4** | | **1** | **20** |
| Course Count | **11** | **8** | **2** | **2** | |
| Credit Count | **38** | **24** | **2.5** | **16** | **Total 80.5 Credits** |

## MBA (BA) Program

| Semester | DC [Atleast four DCs should be of 3-1-0 in 1st semester and one in 2nd sem] | DE [3-0-0] | DP [0-0-3] in 1st and [0-0-2) in 2nd sem | Term Paper ( S/X ) | Credits |
|---|---|---|---|---|---|
| **1st** | **5** | | **1** | | **20.5** |
| **2nd** | **6** | | **1** | | **20** |
| **3rd** | | **4** | | **1** | **20** |
| **4th** | | **4** | | **1** | **20** |
| Course Count | **11** | **8** | **2** | **2** | |
| Credit Count | **38** | **24** | **2.5** | **16** | **Total 80.5 Credits** |

**INDIAN INSTITUTE OF TECHNOLOGY (INDIAN SCHOOL OF MINES) DHANBAD**

**OFFICE OF THE DEAN (ACADEMIC)**

No. IITISM/DAC/ 825 18th September, 2024

## NOTIFICATION

## REVISION IN NON CREDIT UNITS

The approved revision in Non Credit Units (in NEP regime), as recommended by the DSW Office, is enclosed for the information of all.

18/09/2024
**Dean (Academic)**

**Copy to:**

1. Director/Deputy Director
2. Registrar
3. All Deans/ Associate Deans/ FIC (Automation)
4. All HODs
5. DR (Acad)/ AR (PG)/ AR(UG)/ AR(SW)/ SPO

**Subject: Proposal for Non-credit Units to be implemented w.e.f. MS 2024-25**

*The following proposed is placed before the Senate to give recommendations for the implementation of changes in line with NEP 2020 on the system of Non-Credit Units to be implemented from MS 2024-25. The following are the details:*

**Non-Credit Unit & Minimum Units required for each program:**

| Sl.no. | Program | Discipline (2 units per semester) | NCC/NSS/NSO/ CCS/Yoga (2 units per semester for 1st two years ) Sl. No. 1-5 to be assessed during even semesters(2nd & 4th )only & Sl.no. 6-12 to be assessed during odd semester (1st & 3rd ) only Under CCS 101 & CCS 102 | Community Outreach/ Community Services/ Sports/Student Club Activities/ Cultural Activities/ NVCTI Activities (2 units per semester for 1st two years) Sl. No. 1-5 to be assessed during even semesters(2nd & 4th ) only & Sl.no. 6-12 to be assessed during odd semester (1st & 3rd ) only | Other CCA or recognition in Inter IIT / Inter University / State / National / International events (during entire period) * | Maxim m no credit uni ts that can b earne |
|---|---|---|---|---|---|---|
| A | B | C | D | E | F | G |
| 1 | B.Tech. | 16 | 4 | 4 | 4 | 28 |
| 2 | | 16 | 4 | 4 | 4 | 28 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | **B.Tech. with Minor** | | | | | |
| **3** | **Double Major** | 20 | 4 | 4 | 4 | 32 |
| **4** | **Dual Degree (Category A/B/C)** | 20 | 4 | 4 | 4 | 32 |
| **5** | **Int. M.Tech.** | 20 | 4 | 4 | 4 | 32 |
| **6** | **M.Tech.** | 8 | 4 | 4 | 4 | 20 |
| | **M.Sc. Tech.** | 12 | 4 | 4 | 4 | 24 |
| **8** | **M.Sc.** | 8 | 4 | 4 | 4 | 20 |
| **9** | **MBA** | 8 | 4 | 4 | 4 | 20 |
| **10** | **MBA (BA)** | 8 | 4 | 4 | 4 | 20 |
| **11** | **MA** | 8 | 4 | 4 | 4 | 20 |
| **12** | **Ph.D. (Full Time)** | 2 per sem. | 4 | 4 | 4 | 12 + 2 per sem. |

** For participation in Inter IIT / Inter University / State / National / International events, **2 units** will be credited.*

*** For each indiscipline negative 1 unit minimum & maximum up to 4 unit depending upon severity (Discipline grading may be decided by the Office of DSW) will be awarded*

**** Min discipline unit to be decided e.g. 50 % of the total discipline units if 16 then at least 8 and so on.*

*#in the event, if any one shortfalls of minimum non-credit units, a make-up test may be conducted under CCS or special programme at the end of courses if required*

## **M.Sc.Tech** (Applied Geology)

### Semester I

| Course Type | L-T-P | Credits | Name of the Course offered | Course Code |
|---|---|---|---|---|
| DC 1 | 3 1 0 | 4 | Mineralogy | NGLC501 |
| DC 2 | 3 1 0 | 4 | Applied Geochemistry | NGLC502 |
| DC 3 | 3 1 0 | 4 | Solid Earth Geophysics | NGPC514 |
| DC 4 | 3 0 0 | 3 | Methods of Structural Geology | NGLC503 |
| DC 5 | 3 0 0 | 3 | Applied Sedimentology | NGLC504 |
| DP 1 | 0 0 2 | 1 | Mineralogy and Geochemistry Practical | NGLC505 |
| DP 2 | 0 0 2 | 1 | Methods of Structural Geology Practical | NGLC506 |
| DP 3 | 0 0 2 | 1 | Sedimentology Practical | NGLC507 |
| **Total Credits 21** | | | | |

### Semester II

| Course Type | L-T-P | Credits | Name of the Course to be offered | Course Code |
|---|---|---|---|---|
| DC 6 | 3 0 0 | 3 | Igneous Petrology | NGLC521 |
| DC 7 | 3 0 0 | 3 | Metamorphic Petrology | NGLC522 |
| DC 8 | 3 0 0 | 3 | Petroleum Geology | NGLC520 |
| DC 9 | 3 0 0 | 3 | Programming in MATLAB | NGLC523 |
| DC 10 | 3 0 0 | 3 | Coal Geology | NGLC515 |
| DP 4 | 0 0 2 | 1 | Igneous Petrology Practical | NGLC524 |
| DP 5 | 0 0 2 | 1 | Metamorphic Petrology Practical | NGLC525 |
| DP 6 | 0 0 2 | 1 | Coal Geology and Petroleum Geology Practical | NGLC526 |
| Vocational Training / Field Visit / Excursion etc. | S/ X | 2.5 | Sedimentary Field Training | NGLC527 |
| **Total Credits 20.5** | | | | |

## Department of Applied

### M.Sc.Tech ( Applied Geophysics)

**Semester I**

| Course | L-T- | Credits | Name of the Course offered | Course Code |
|---|---|---|---|---|
| DC | 3 1 0 | 4 | Geohpysical | NGPC5 |
| DC | 3 00 | 3 | Mathematical Functional | NGPC5 |
| DC | 3 1 0 | 4 | Solid Earth | NGPC5 |
| DC | 3 00 | 3 | Physical and Structural | NGLC2 |
| DC | 3 1 0 | 4 | Remote Sensing | NGPC5 |
| DP | 0 02 | 1 | Remote Sensing Principles | NGPC5 |
| DP | 0 02 | 1 | Mathematical Functional Analysis | NGPC5 |
| DP | 0 02 | 1 | Geohpysical Methods | NGPC5 |
| Total Credits | | | | |

**Semester II**

| Course | L-T- | Credits | Name of the Course to be offered | Course Code |
|---|---|---|---|---|
| DC | 3 00 | 3 | Gravity | NGPC5 |
| DC | 3 00 | 3 | Earthquake | NGPC5 |
| DC | 3 00 | 3 | Geoelectrical | NGPC5 |
| DC | 3 00 | 3 | Seismic Data | NGPC5 |
| DC | 3 00 | 3 | Economic Geology & Indian Mineral | NGPC5 |
| DP | 0 02 | 1 | Seismic Data Acquisition | NGPC5 |
| DP | 0 02 | 1 | Geoelectrical Method | NGPC5 |
| DP | 0 02 | 1 | Earthquake Seismology | NGPC5 |
| Vocational Field Visit / etc. | S/ | 2. | Vocational Training / Field Visit / | NGPC5 |
| Total Credits 20.5 | | | | |

### M.Tech ( Applied Geophysics-Earthquake Science and Engineering)

**Semester I**

| Course Type | L-T-P | Credits | Name of the Course offered | Course Code |
|---|---|---|---|---|
| DC 1 | 3 1 0 | 4 | Seismology | NGPC501 |
| DC 2 | 3 1 0 | 4 | Geotechnical Modelling | NGPC502 |
| DC 3 | 3 1 0 | 4 | Computational Seismology | NGPC503 |
| DE 1 | 3 0 0 | 3 | Hydrology | NGPD506 |
| DE 2 | 3 0 0 | 3 | Seismic Hazard Zonation | NGPD505 |
| DP 1 | 0 0 3 | 1.5 | Geotechnical Modelling Practical | NGPC504 |
| DP 2 | 0 0 3 | 1.5 | Seismology Practical | NGPC505 |
| DP 3 | 0 0 3 | 1.5 | Computational Seismology Practical | NGPC506 |
| To | tal Credits 22.5 | | | |

**Semester II**

| Course Type | L-T-P | Credits | Name of the Course to be offered | Course Code |
|---|---|---|---|---|
| DC 4 | 3 1 0 | 4 | Remote Sensing: Principles and Data Acquisition System | NGPC507 |
| DC 5 | 3 1 0 | 4 | Advanced Numerical Methods | NGPC508 |
| DC 6 | 3 1 0 | 4 | Computational Seismology | NGPC503 |
| DE 3 | 3 0 0 | 3 | | |
| RM | 3 0 0 | 3 | Research Methodology | NGPC595 |
| DP 4 | 0 0 3 | 1.5 | Remote Sensing: Principles and Data Acquisition System Pra | NGPC510 |
| DP 5 | 0 0 3 | 1.5 | Advanced Numerical Methods Practical | NGPC511 |
| DP 6 | 0 0 3 | 1.5 | Computational Seismology Practical | NGPC506 |
| Total Credits 22.5 | | | | |

## Department of Chemical Engineering

### M.Tech ( Chemical Engg. )

**Semester I**

| Course Type | L-T-P | Credits | Name of the Course offered | Course Code |
|---|---|---|---|---|
| DC 1 | 3 1 0 | 4 | Advanced Transport Phenomena | NCHC501 |
| DC 2 | 3 1 0 | 4 | Advanced Chemical Engineering Thermodyna m | NCHC502 |
| DC 3 | 3 1 0 | 4 | Computational Techniques in Chemical Engine | eNCHC503 |
| DE 1 | 3 0 0 | 3 | | |
| DE 2 | 3 0 0 | 3 | | |
| DP 1 | 0 0 3 | 1.5 | Computational Techniques Lab | NCHC504 |
| DP 2 | 0 0 3 | 1.5 | Advanced Process Simulation Lab | NCHC505 |
| DP 3 | 0 0 3 | 1.5 | Instrumental Methods of Analysis | NCHC506 |
| Total Credits 22.5 | | | | |

**Semester II**

| Course Type | L-T-P | Credits | Name of the Course to be offered | Course Code |
|---|---|---|---|---|
| DC 4 | 3 1 0 | 4 | Advanced Chemical Reaction Engineering | NCHC507 |
| DC 5 | 3 1 0 | 4 | Advanced Mass transfer | NCHC508 |
| DC 6 | 3 1 0 | 4 | Advanced Process Control | NCHC509 |
| DE 3 | 3 0 0 | 3 | | |
| RM | 3 0 0 | 3 | | |
| DP 4 | 0 0 3 | 1.5 | Advanced Processes Lab | NCHC510 |
| DP 5 | 0 0 3 | 1.5 | Advanced Chemical Engineering Lab | NCHC511 |
| DP 6 | 0 0 3 | 1.5 | Term Paper and Presentation | NCHC512 |
| Total Credits 25.5 | | | | |

Department of Chemistry and Chemical Biology

M.Sc. ( Chemistry )

Semester I

| Course Type | L-T-P | Credits | Name of the Course offered | Course Code |
|---|---|---|---|---|
| DC 1 | 3 1 0 | 4 | Physical Organic Chemistry | NCYC511 |
| DC 2 | 3 1 0 | 4 | Quantum Chemistry | NCYC510 |
| DC 3 | 3 1 0 | 4 | Group Theory | NCYC512 |
| DC 4 | 3 0 0 | 3 | Main Group Chemistry | NCYC514 |
| DC 5 | 3 0 0 | 3 | Application of Spectroscopic Methods | NCYC513 |
| DP 1 | 0 0 3 | 1.5 | Organic Chemistry Lab – I | NCYC516 |
| DP 2 | 0 0 3 | 1.5 | Inorganic Chemistry Lab | NCYC515 |
| Total Credits 21 | | | | |

Semester II

| Course Type | L-T-P | Credits | Name of the Course to be offered | Course Code |
|---|---|---|---|---|
| DC 6 | 3 1 0 | 4 | Transition Metal Chemistry | NCYC519 |
| DC 7 | 3 1 0 | 4 | Molecular Spectroscopy | NCYC520 |
| DC 8 | 3 0 0 | 3 | Methods in Organic Synthesis | NCYC518 |
| DC 9 | 3 0 0 | 3 | Kinetics and Thermodynamics | NCYC517 |
| DE 1 | 3 0 0 | 3 | | |
| DP 3 | 0 0 3 | 1.5 | Physical Chemistry lab- I | NCYC521 |
| DP 4 | 0 0 3 | 1.5 | Analytical Chemistry lab | NCYC522 |
| Total Credits 20 | | | | |

M.Tech (Pharmaceutical Science and Engineering)

Semester I

| Course Type | L-T-P | Credits | Name of the Course offered | Course Code |
|---|---|---|---|---|
| DC 1 | 3 1 0 | 4 | Basic of Pharmacology | NCYC501 |
| DC 2 | 3 1 0 | 4 | Unit Operations for Pharmaceutics | NCHC525 |
| DC 3 | 3 1 0 | 4 | Formulation & Drug Delivery Technology | NCYC502 |
| DE 1 | 3 0 0 | 3 | | |
| DE 2 | 3 0 0 | 3 | | |
| DP 1 | 0 0 3 | 1.5 | Process Chemistry Lab | NCYC503 |
| DP 2 | 0 0 3 | 1.5 | Instrumental Method of Analysis Lab | NCYC504 |
| DP 3 | 0 0 3 | 1.5 | Chemical Biology Lab | NCYC505 |
| Total Credits 22.5 | | | | |

Semester II

| Course Type | L-T-P | Credits | Name of the Course to be offered | Course Code |
|---|---|---|---|---|
| DC 4 | 3 1 0 | 4 | Reaction Engineering | NCHC514 |
| DC 5 | 3 1 0 | 4 | Computer aided drug design | NCYC506 |
| DC 6 | 3 1 0 | 4 | Clinical trials and Regulatory affairs | NCYC507 |
| DE 3 | 3 0 0 | 3 | | |
| RM | 3 0 0 | 3 | Research Methodology | NCYC595 |
| DP 4 | 0 0 3 | 1.5 | Pharmaceutical documentation lab | NCYC508 |
| DP 5 | 0 0 3 | 1.5 | Chemical Engineering Lab | NCHC515 |
| DP 6 | 0 0 3 | 1.5 | Formulation/Manufacturing Lab | NCYC509 |
| Total Credits 22.5 | | | | |

# Department of Civil Engineering

## M.Tech ( Civil )

### Semester I

| Course Type | L-T-P | Credits | Name of the Course offered | Course Code |
|---|---|---|---|---|
| DC 1 | 3 1 0 | 4 | Numerical Methods in Civil Engg | NCEC503 |
| DC 2 | 3 1 0 | 4 | Mechanics of Deformable Solids | NCEC501 |
| DC 3 | 3 1 0 | 4 | Mechanics of Geomaterials | NCEC502 |
| DE 1 | 3 0 0 | 3 | | |
| DE 2 | 3 0 0 | 3 | | |
| DP 1 | 0 0 3 | 1.5 | Computational Laboratory-I | NCEC504 |
| DP 2 | 0 0 3 | 1.5 | Civil Engineering Model Development Laborato | NCEC505 |
| DP 3 | 0 0 3 | 1.5 | Term Project-I | NCEC506 |
| Total Credits 22.5 | | | | |

### Semester II

| Course Type | L-T-P | Credits | Name of the Course to be offered | Course Code |
|---|---|---|---|---|
| DC 4 | 3 1 0 | 4 | Transportation System, Design, and Managem | NCEC507 |
| DC 5 | 3 1 0 | 4 | Engineering Hydrology and Hydraulics | NCEC508 |
| DC 6 | 3 1 0 | 4 | Finite Element Method | NCEC509 |
| DE 3 | 3 0 0 | 3 | | |
| RM | 3 0 0 | 3 | Research Methodology and Statistics | NCEC595 |
| DP 4 | 0 0 3 | 1.5 | Advanced Testing Laboratory | NCEC510 |
| DP 5 | 0 0 3 | 1.5 | Term Project-II | NCEC511 |
| DP 6 | 0 0 3 | 1.5 | Computational Laboratory-II | NCEC512 |
| Total Credits 22.5 | | | | |

# Department of Computer Science and Engineering

## 2 Year M.Tech (Computer Science and Engineering)

| Semester I | | | | |
|---|---|---|---|---|
| Course Type | L-T-P | Credits | Name of the Course offered | Course Code |
| DC 1 | 3 1 0 | 4 | Advanced Data Structures & Algorithms | NCSC501 |
| DC 2 | 3 1 0 | 4 | Computing Techniques and Mathematical Tools | NCSC502 |
| DC 3 | 3 1 0 | 4 | Advanced Computer Networks | NCSC503 |
| DE 1 | 3 0 0 | 3 | | |
| DE 2 | 3 0 0 | 3 | | |
| DP 1 | 0 0 3 | 1.5 | Computing Techniques and Mathematical Tools Lab | NCSC504 |
| DP 2 | 0 0 3 | 1.5 | Advanced Data Structures & Algorithms Lab | NCSC505 |
| DP 3 | 0 0 3 | 1.5 | Advancod Computer Network Lab | NCSC506 |
| Total Credits 22.5 | | | | |

| Seme | | | |
|---|---|---|---|
| Course Type | L-T-P | Credits | Name |
| DC 4 | 3 1 0 | 4 | Advance |
| DC 5 | 3 1 0 | 4 | Algorith |
| DC 6 | 3 1 0 | 4 | Cryptogr |
| DE 3 | 3 0 0 | 3 | |
| RM | 3 0 0 | 3 | Research |
| DP 4 | 0 0 3 | 1.5 | Advance |
| DP 5 | 0 0 3 | 1.5 | Algorith |
| DP 6 | 0 0 3 | 1.5 | Cryptogr Lab |
| Total Cr | | | |

## For 3-Year Executive M.Tech (AI & DS)

| Semester – I | | | | |
|---|---|---|---|---|
| Course Type | L-T-P | Credits | Name of the Course to be offered | Course No. |
| DC 1 | 3 1 0 | 4 | Advanced Data Structures & Algorithms | NCSC501 |
| DC 2 | 3 1 0 | 4 | Computing Techniques and Mathematical Tools | NCSC502 |
| DC 3 | 3 1 0 | 4 | Artificial Intelligence | NCSC513 |
| Total Credits 12 | | | | |

| Seme | | | |
|---|---|---|---|
| Course Type | L-T-P | Credits | Name |
| DC 4 | 3 1 0 | 4 | Advance |
| DC 5 | 3 1 0 | 4 | Data Ana |
| DC 6 | 3 1 0 | 4 | Deep Lea |
| Total Cr | | | |

## For 2-Year Executive M.Tech (AI & DS)

| Semester – I | | | | |
|---|---|---|---|---|
| Course Type | L-T-P | Credits | Name of the Course to be offered | Course No. |
| DC 1 | 3 1 0 | 4 | Advanced Data Structures & Algorithms | NCSC501 |
| DC 2 | 3 1 0 | 4 | Computing Techniques and Mathematical Tools | NCSC502 |
| DC 3 | 3 1 0 | 4 | Artificial Intelligence | NCSC513 |
| DE1 | 3 0 0 | 3 | Computer Vision | NCSD503 |
| DE2 | 3 0 0 | 3 | Machine Learning | NCSD519 |
| Total Credits 18 | | | | |

| Seme | | | |
|---|---|---|---|
| Course Type | L-T-P | Credits | Name |
| DC4 | 3 1 0 | 4 | Advance |
| DC5 | 3 1 0 | 4 | Data Ana |
| DC6 | 3 1 0 | 4 | Deep Lea |
| DE3 | 3 0 0 | 3 | Natural L |
| RM | 3 0 0 | 3 | Research |
| Total Cr | | | |

## M.Tech ( Optical Communication and Integrated Photonics )

| Semester I | | | | |
|---|---|---|---|---|
| Course Type | L-T-P | Credits | Name of the Course offered | Course Code |
| DC 1 | 3 1 0 | 4 | Emerging Communication Systems | NECC501 |
| DC 2 | 3 1 0 | 4 | Optical Fiber Communications | NECC505 |
| DC 3 | 3 1 0 | 4 | Wireless Networks | NECC503 |
| DE 1 | 3 0 0 | 3 | | |
| DE 2 | 3 0 0 | 3 | | |

| Semester II | | | | |
|---|---|---|---|---|
| Course Type | L-T-P | Credits | Name of the Course to be offered | Course Code |
| DC 4 | 3 1 0 | 4 | Optoelectronic and Photonic Devices | NECC506 |
| DC 5 | 3 1 0 | 4 | Optimization Theory and Techniques | NECC504 |
| DC 6 | 3 1 0 | 4 | Photonic Integrated Circuits | NECC507 |
| DE 3 | 3 0 0 | 3 | | |
| RM | 3 0 0 | 3 | Research Methodology | NECC595 |

| | | | | |
|---|---|---|---|---|
| DP 1 | 0 0 3 | 1.5 | 5G Communication Systems Lab | NECC515 |
| DP 2 | 0 0 3 | 1.5 | Optical Communication Lab | NECC521 |
| DP 3 | 0 0 3 | 1.5 | Communication Networks Lab | NECC516 |
| Total Credits 22.5 | | | | |

| | | | | |
|---|---|---|---|---|
| DP 4 | 0 0 3 | 1.5 | Optoelectronic and Photonic Devices Lab | NECC522 |
| DP 5 | 0 0 3 | 1.5 | Photonic IC CAD Lab | NECC523 |
| DP 6 | 0 0 3 | 1.5 | Photonics Project Lab | NECC524 |
| Total Credits 22.5 | | | | |

## M.Tech ( RF and Microwave Engineering )

| Semester I | | | | |
|---|---|---|---|---|
| Course Type | L-T-P | Credits | Name of the Course offered | Course Code |
| DC 1 | 3 1 0 | 4 | Emerging Communication Systems | NECC501 |
| DC 2 | 3 1 0 | 4 | Advanced Engineering Electromagnetics | NECC508 |
| DC 3 | 3 1 0 | 4 | Microwave Measurements | NECC509 |
| DE 1 | 3 0 0 | 3 | | |
| DE 2 | 3 0 0 | 3 | | |
| DP 1 | 0 0 3 | 1.5 | 5G Communication Systems Lab | NECC515 |
| DP 2 | 0 0 3 | 1.5 | RF and CAD Laboratory | NECC525 |
| DP 3 | 0 0 3 | 1.5 | Microwave Measurements Lab | NECC526 |
| Total Credits 22.5 | | | | |

| Semester II | | | | |
|---|---|---|---|---|
| Course Type | L-T-P | Credits | Name of the Course to be offered | Course Code |
| DC 4 | 3 1 0 | 4 | Microwave Circuits and Networks | NECC535 |
| DC 5 | 3 1 0 | 4 | Advanced Antenna Theory | NECC534 |
| DC 6 | 3 1 0 | 4 | Microwave Transmission Lines and Matching Networks | NECC510 |
| DE 3 | 3 0 0 | 3 | | |
| RM | 3 0 0 | 3 | Research Methodology | NECC595 |
| DP 4 | 0 0 3 | 1.5 | RF Circuits and Networks Simulation Lab | NECC538 |
| DP 5 | 0 0 3 | 1.5 | Antenna Simulation Lab | NECC539 |
| DP 6 | 0 0 3 | 1.5 | RF Project Lab | NECC540 |
| Total Credits 22.5 | | | | |

## M.Tech ( VLSI Design )

| Semester I | | | | |
|---|---|---|---|---|
| Course Type | L-T-P | Credits | Name of the Course offered | Course Code |
| DC 1 | 3 1 0 | 4 | Analog IC Design | NECC511 |
| DC 2 | 3 1 0 | 4 | Digital IC Design | NECC512 |
| DC 3 | 3 1 0 | 4 | CAD for VLSI | NECC513 |
| DE 1 | 3 0 0 | 3 | | |
| DE 2 | 3 0 0 | 3 | | |
| DP 1 | 0 0 3 | 1.5 | Circuit Simulation Lab | NECC531 |
| DP 2 | 0 0 3 | 1.5 | HDL-based System Design Lab | NECC527 |
| DP 3 | 0 0 3 | 1.5 | VLSI Design and Project Lab-I | NECC528 |
| Total Credits 22.5 | | | | |

| Semester II | | | | |
|---|---|---|---|---|
| Course Type | L-T-P | Credits | Name of the Course to be offered | Course Code |
| DC 4 | 3 1 0 | 4 | MOS Device Physics and Modeling | NECC514 |
| DC 5 | 3 1 0 | 4 | Current Mode Analog Circuits | NECC536 |
| DC 6 | 3 1 0 | 4 | Embedded System Design | NECC537 |
| DE 3 | 3 0 0 | 3 | | |
| RM | 3 0 0 | 3 | Research Methodology | NECC595 |
| DP 4 | 0 0 3 | 1.5 | Device Simulation Lab | NECC529 |
| DP 5 | 0 0 3 | 1.5 | Embedded System Design Lab | NECC541 |
| DP 6 | 0 0 3 | 1.5 | VLSI Design and Project Lab-II | NECC530 |
| Total Credits 22.5 | | | | |

## Department of Electrical Engineering

### M.Tech (Power System Engineering)

**Semester I**

| Course Type | L-T-P | Credits | Name of the Course offered | Course Code |
|---|---|---|---|---|
| DC 1 | 3 1 0 | 4 | ADVANCED CONTROL SYSTEM | NEEC501 |
| DC 2 | 3 1 0 | 4 | POWER SYSTEM ANALYSIS | NEEC502 |
| DC 3 | 3 1 0 | 4 | HVDC TRANSMISSION AND FACTS | NEEC503 |
| DE 1 | 3 0 0 | 3 | | |
| DE 2 | 3 0 0 | 3 | | |
| DP 1 | 0 0 3 | 1.5 | ADVANCED POWER SYSTEM LAB | NEEC504 |
| DP 2 | 0 0 3 | 1.5 | ADVANCED ELECTRICAL MACHINE LAB | NEEC505 |
| DP 3 | 0 0 3 | 1.5 | ADVANCED CONTROL SYSTEM LAB | NEEC506 |
| **Total Credits 22.5** | | | | |

**Semester II**

| Course Type | L-T-P | Credits | Name of the Course to be offered | Course Code |
|---|---|---|---|---|
| DC 4 | 3 1 0 | 4 | SOFT COMPUTING TECHNIQUES | NEEC508 |
| DC 5 | 3 1 0 | 4 | ADVANCED POWER SYSTEM PROTECTION | NEEC509 |
| DC 6 | 3 1 0 | 4 | SMART GRID TECHNOLOGY | NEEC507 |
| DE 3 | 3 0 0 | 3 | | |
| RM | 3 0 0 | 3 | RESEARCH METHODOLOGY & STATISTICS FOR EE | NEEC595 |
| DP 4 | 0 0 3 | 1.5 | ADVANCED SIMULATION LAB | NEEC518 |
| DP 5 | 0 0 3 | 1.5 | ADVANCED POWER SYSTEM PROTECTION LAB | NEEC513 |
| DP 6 | 0 0 3 | 1.5 | ADVANCED MEASUREMENT AND INSTRUMENTATION LAB | NEEC519 |
| **Total Credits 22.5** | | | | |

### M.Tech ( Power Electronics and Electrical Drives )

**Semester I**

| Course Type | L-T-P | Credits | Name of the Course offered | Course Code |
|---|---|---|---|---|
| DC 1 | 3 1 0 | 4 | ADVANCED CONTROL SYSTEM | NEEC501 |
| DC 2 | 3 1 0 | 4 | MODELLING OF ELECTRICAL MACHINES | NEEC514 |
| DC 3 | 3 1 0 | 4 | CONVERTER CONTROLLED MACHINE DRIVES | NEEC515 |
| DE 1 | 3 0 0 | 3 | | |
| DE 2 | 3 0 0 | 3 | | |
| DP 1 | 0 0 3 | 1.5 | ADVANCED POWER ELECTRONICS LAB | NEEC516 |
| DP 2 | 0 0 3 | 1.5 | ADVANCED ELECTRICAL MACHINE LAB | NEEC505 |
| DP 3 | 0 0 3 | 1.5 | ADVANCED CONTROL SYSTEM LAB | NEEC506 |
| Total Credits 22.5 | | | | |

**Semester II**

| Course Type | L-T-P | Credits | Name of the Course to be offered | Course Code |
|---|---|---|---|---|
| DC 4 | 3 1 0 | 4 | ELECTRIC & HYBRID ELECTRIC VEHICLES | NEEC512 |
| DC 5 | 3 1 0 | 4 | ELECTROMAGNETIC COMPATIBILITY OF POWER CONVERTER | NEEC510 |
| DC 6 | 3 1 0 | 4 | DIGITAL CONTROL OF POWER ELECTRONICS AND DRIVES | NEEC511 |
| DE 3 | 3 0 0 | 3 | | |
| RM | 3 0 0 | 3 | RESEARCH METHODOLOGY & STATISTICS FOR EE | NEEC595 |
| DP 4 | 0 0 3 | 1.5 | ADVANCED SIMULATION LAB | NEEC518 |
| DP 5 | 0 0 3 | 1.5 | ADVANCED DRIVES LAB | NEEC517 |
| DP 6 | 0 0 3 | 1.5 | ADVANCED MEASUREMENT AND INSTRUMENTATION LAB | NEEC519 |
| Total Credits 22.5 | | | | |

## Department of Environmental Science and Engineering

### M.Tech ( Environmental Science and Engineering )

**Semester I**

| Course Type | L-T-P | Credits | Name of the Course offered | Course Code |
|---|---|---|---|---|
| DC 1 | 3 1 0 | 4 | Advanced Data Structures & Algorithms | NCSC501 |

**Semester II**

| Course Type | L-T-P | Credits | Name of the Course to be offered | Course Code |
|---|---|---|---|---|
| DC 4 | 3 1 0 | 4 | Integrated Solid Waste Management | NESC507 |

| | | | | |
|---|---|---|---|---|
| DC 2 | 3 1 0 | 4 | Computing Techniques and Mathematical Tools | NCSC502 |
| DC 3 | 3 1 0 | 4 | Advanced Computer Networks | NCSC503 |
| DE 1 | 3 0 0 | 3 | | |
| DE 2 | 3 0 0 | 3 | | |
| DP 1 | 0 0 3 | 1.5 | Computing Techniques and Mathematical Tools Lab | NCSC504 |
| DP 2 | 0 0 3 | 1.5 | Advanced Data Structures & Algorithms Lab | NCSC505 |
| DP 3 | 0 0 3 | 1.5 | Advanced Computer Network Lab | NCSC506 |
| Total Credits 22.5 | | | | |

| | | | | |
|---|---|---|---|---|
| DC 5 | 3 1 0 | 4 | Numerical Methods for Environmental Application | NESC508 |
| DC 6 | 3 1 0 | 4 | Environmental Remote Sensing & GIS | NESC509 |
| DE 3 | 3 0 0 | 3 | | |
| RM | 3 0 0 | 3 | Research Methodology | NESC595 |
| DP 4 | 0 0 3 | 1.5 | Integrated Solid Waste Management Practical | NESC510 |
| DP 5 | 0 0 3 | 1.5 | Environmental Computational Lab | NESC511 |
| DP 6 | 0 0 3 | 1.5 | Environmental Remote Sensing & GIS Practical | NESC512 |
| Total Credits 22.5 | | | | |

## Department of Humanities and Social

### M.A( ) Digital Humanities and Social Sciences

| Semester | | | | |
|---|---|---|---|---|
| Course | L-T- | Credits | Name of the Course | Course |
| DC | 3 1 0 | 4 | Introduction to Digital | NHSC5 |
| DC | 3 1 0 | 4 | Statistics for Humanities and Social | NHSC5 |
| DC | 3 1 0 | 4 | Corpus | NHSC5 |
| DC | 3 00 | 3 | E – | NHSC5 |
| R | 3 00 | 3 | Research | NHSC5 |
| DP | 0 03 | 1. | Effective Communication | NHSC5 |
| DP | 0 03 | 1. | Social Research | NHSC5 |
| Total Credits | | | | |

| Semester | | | | |
|---|---|---|---|---|
| Course | L-T- | Credits | Name of the Course | Course |
| DC | 3 1 0 | 4 | Python Programming | NHSC5 |
| DC | 3 1 0 | 4 | Text | NHSC5 |
| DC | 3 1 0 | 4 | Digital | NHSC5 |
| DC | 3 00 | 3 | Digital | NHSC5 |
| DE | 3 00 | 3 | - | |
| DP | 0 03 | 1. | Natural Language Processing | NHSC5 |
| Total Credits | | | | |

## Department of Fuel, Minerals and Metallurgical Engineering

### M.Tech ( Fuel & Energy Engineering )

| Semester I | | | | |
|---|---|---|---|---|
| Course Type | L-T-P | Credits | Name of the Course offered | Course Code |
| DC 1 | 3 1 0 | 4 | Fuel Technology | NFMC522 |
| DC 2 | 3 1 0 | 4 | Coal & Mineral Beneficiation | NFMC502 |
| DC 3 | 3 1 0 | 4 | Alternate Energy Systems | NFMC523 |
| DE 1 | 3 0 0 | 3 | | |
| DE 2 | 3 0 0 | 3 | | |
| DP 1 | 0 0 3 | 1.5 | Thermochemical Conversion Lab | NFMC524 |
| DP 2 | 0 0 3 | 1.5 | Fuel Technology Lab | NFMC506 |
| DP 3 | 0 0 3 | 1.5 | Mineral Processing Lab | NFMC505 |
| Total Credits 22.5 | | | | |

| Semester II | | | | |
|---|---|---|---|---|
| Course Type | L-T-P | Credits | Name of the Course to be offered | Course Code |
| DC 4 | 3 1 0 | 4 | Energy Technology | NFMC525 |
| DC 5 | 3 1 0 | 4 | CFD of Thermal and Fluid Systems | NFMC526 |
| DC 6 | 3 1 0 | 4 | Processing of Liquid and Gaseous Fuels | NFMC527 |
| DE 3 | 3 0 0 | 3 | | |
| RM | 3 0 0 | 3 | Research Methodology | NFMC595 |
| DP 4 | 0 0 3 | 1.5 | CFD of Thermal and Fluid Systems Lab | NFMC528 |
| DP 5 | 0 0 3 | 1.5 | Processing of Liquid and Gaseous Fuels Lab | NFMC529 |
| DP 6 | 0 0 3 | 1.5 | Energy Technology Lab | NFMC530 |
| Total Credits 22.5 | | | | |

### M.Tech ( Mineral Engineering )

| Semester I | | | | |
|---|---|---|---|---|
| Course Type | L-T-P | Credits | Name of the Course offered | Course Code |
| DC 1 | 3 1 0 | 4 | Size Preparation Technology | NFMC501 |
| DC 2 | 3 1 0 | 4 | Coal & Mineral Beneficiation | NFMC502 |
| DC 3 | 3 1 0 | 4 | Process Metallurgy | NFMC503 |
| DE 1 | 3 0 0 | 3 | | |
| DE 2 | 3 0 0 | 3 | | |
| DP 1 | 0 0 3 | 1.5 | Non-ferrous Extractive Metallurgy Lab | NFMC504 |
| DP 2 | 0 0 3 | 1.5 | Mineral Processing Lab | NFMC505 |
| DP 3 | 0 0 3 | 1.5 | Fuel Technology Lab | NFMC506 |
| Total Credits 22.5 | | | | |

| Semester II | | | | |
|---|---|---|---|---|
| Course Type | L-T-P | Credits | Name of the Course to be offered | Course Code |
| DC 4 | 3 1 0 | 4 | Process Equipment Selection | NFMC507 |
| DC 5 | 3 1 0 | 4 | Flowsheet Design & Plant Layout | NFMC508 |
| DC 6 | 3 1 0 | 4 | Modeling of Mineral Processing Systems | NFMC509 |
| DE 3 | 3 0 0 | 3 | | |
| RM | 3 0 0 | 3 | Research Methodology | NFMC595 |
| DP 4 | 0 0 3 | 1.5 | Simulation of Mineral Processing Systems Lab | NFMC510 |
| DP 5 | 0 0 3 | 1.5 | Fines Processing Lab | NFMC511 |
| DP 6 | 0 0 3 | 1.5 | Energy Technology Lab | NFMC530 |
| Total Credits 22.5 | | | | |

### M.Tech (Metallurgical Engineerin g )

| Semester I | | | | |
|---|---|---|---|---|
| Course Type | L-T-P | Credits | Name of the Course offered | Course Code |
| DC 1 | 3 1 0 | 4 | Mechanical Behaviour of Materials | NFMC513 |
| DC 2 | 3 1 0 | 4 | Advanced Thermodynamics and Kinetics | NFMC514 |
| DC 3 | 3 1 0 | 4 | Process Metallurgy | NFMC503 |
| DE 1 | 3 0 0 | 3 | | |
| DE 2 | 3 0 0 | 3 | | |
| DP 1 | 0 0 3 | 1.5 | Non-ferrous Extractive Metallurgy Lab | NFMC504 |
| DP 2 | 0 0 3 | 1.5 | Mechanical Behaviour of Materials Lab | NFMC515 |
| DP 3 | 0 0 3 | 1.5 | Computer Applications in Metallurgical Engineering lab | NFMC516 |
| Total Credits 22.5 | | | | |

| Semester II | | | | |
|---|---|---|---|---|
| Course Type | L-T-P | Credits | Name of the Course to be offered | Course Code |
| DC 4 | 3 1 0 | 4 | Advanced Physical Metallurgy | NFMC517 |
| DC 5 | 3 1 0 | 4 | Materials Characterization | NFMC518 |
| DC 6 | 3 1 0 | 4 | Advanced Iron-Making Technologies | NFMC519 |
| DE 3 | 3 0 0 | 3 | | |
| RM | 3 0 0 | 3 | Research Methodology | NFMC595 |
| DP 4 | 0 0 3 | 1.5 | Materials Processing Lab | NFMC520 |
| DP 5 | 0 0 3 | 1.5 | Materials Characterization Lab | NFMC521 |
| DP 6 | 0 0 3 | 1.5 | Energy Technology Lab | NFMC530 |
| Total Credits 22.5 | | | | |

## Department of Management Studies and Industrial Engineering

### MBA

**Semester I**

| Course Type | L-T-P | Credits | Name of the Course offered | Course Code |
|---|---|---|---|---|
| DC 1 | 3 1 0 | 4 | Organizational Behaviour | NMSC513 |
| DC 2 | 3 1 0 | 4 | Decision Modeling | NMSC502 |
| DC 3 | 3 0 0 | 3 | Managerial Economics | NMSC514 |
| DC 4 | 3 0 0 | 3 | Management Principles & Practice | NMSC515 |
| DC 5 | 3 1 0 | 4 | Financial Accounting and Reporting | NMSC516 |
| DP 1 | 0 0 3 | 1.5 | Spreadsheet Modelling | NMSC505 |
| **Total Credits 19.5** | | | | |

**Semester II**

| Course Type | L-T-P | Credits | Name of the Course to be offered | Course Code |
|---|---|---|---|---|
| DC 6 | 3 0 0 | 3 | Corporate Finance | NMSC517 |
| DC 7 | 3 1 0 | 4 | Project Management | NMSC508 |
| DC 8 | 3 0 0 | 3 | Research Methodology and Statistics | NMSC595 |
| DC 9 | 3 1 0 | 4 | Operations Management | NMSC509 |
| DC 10 | 3 0 0 | 3 | Marketing Management | NMSC518 |
| DC 11 | 3 0 0 | 3 | Human Resource Management | NMSC519 |
| DP 2 | 0 0 2 | 1 | Business Analytics Lab | NMSC520 |
| **Total Credits 21** | | | | |

### MBA (BA)

**Semester I**

| Course Type | L-T-P | Credits | Name of the Course offered | Course Code |
|---|---|---|---|---|
| DC 1 | 3 0 0 | 3 | Statistical Methods & Applications | NMSC521 |
| DC 2 | 3 1 0 | 4 | Decision Modeling | NMSC502 |
| DC 3 | 3 1 0 | 4 | Machine Learning | NMSC503 |
| DC 4 | 3 1 0 | 4 | Data Mining for Business | NMSC522 |
| DC 5 | 3 1 0 | 4 | Financial Accounting and Reporting | NMSC516 |
| DP 1 | 0 0 3 | 1.5 | Machine Learning Lab | NMSC506 |
| **Total Credits 20.5** | | | | |

**Semester II**

| Course Type | L-T-P | Credits | Name of the Course to be offered | Course Code |
|---|---|---|---|---|
| DC 6 | 3 0 0 | 3 | Corporate Finance | NMSC517 |
| DC 7 | 3 1 0 | 4 | Project Management | NMSC508 |
| DC 8 | 3 0 0 | 3 | Stochastic Processes | NMSC524 |
| DC 9 | 3 0 0 | 3 | Advanced DBMS | NMSC525 |
| DC 10 | 3 0 0 | 3 | Marketing Management | NMSC518 |
| DC 11 | 3 0 0 | 3 | Human Resource Management | NMSC519 |
| DP 2 | 0 0 2 | 1 | Advanced DBMS Lab | NMSC526 |
| **Total Credits 20** | | | | |

### Executive MBA

Semester I

| Course Type | L-T- | Credits | Name of the Course offered | Course Code |
|---|---|---|---|---|
| DC | 3 1 0 | 4 | Organizati onal Behaviour | NMSC51 |
| DC | 3 1 0 | 4 | Decision Modeling | NMSC50 |
| DC | 3 0 0 | 3 | Managerial Economics | NMSC51 |
| DC | 3 00 | 3 | Management Principles &Practice | NMSC51 |
| DC | 3 1 0 | 4 | Financial Accounti ng &Reporti ng | NMSC51 |
| DP | 0 03 | 1.5 | Spreadsheet Modelling | NMSC50 |
| Total Credits 19.5 | | | | |

Semester II

| Course Type | L-T- | Credits | Name of the Course offered | Course Code |
|---|---|---|---|---|
| DC | 3 00 | 3 | Corporate Finance | NMSC51 |
| DC | 3 1 0 | 4 | Project Management | NMSC50 |
| DC | 3 0 0 | 3 | Research Methodology and Statistics | NMSC59 |
| DC | 3 1 0 | 4 | Operations Management | NMSC50 |
| DC | 3 00 | 3 | Marketing Management | NMSC51 |
| DC | 3 00 | 3 | Human Resource Management | NMSC51 |
| DP | 0 02 | 1.0 | Business Analytics Lab | NMSC52 |
| Total Credits 21 | | | | |

### M.Tech ( Industrial Engineering and Management )

Semester I

| Course Type | L-T-P | Credits | Name of the Course offered | Course Code |
|---|---|---|---|---|
| DC 1 | 3 1 0 | 4 | Manufacturing System Engineering | NMSC501 |
| DC 2 | 3 1 0 | 4 | Decision Modeling | NMSC502 |
| DC 3 | 3 1 0 | 4 | Machine Learning | NMSC503 |
| DE 1 | 3 0 0 | 3 | | |

Semester II

| Course Type | L-T-P | Credits | Name of the Course to be offered | Course Code |
|---|---|---|---|---|
| DC 4 | 3 1 0 | 4 | Work Study & Ergonomics | NMSC507 |
| DC 5 | 3 1 0 | 4 | Project Management | NMSC508 |
| DC 6 | 3 1 0 | 4 | Operations Management | NMSC509 |
| DE 3 | 3 0 0 | 3 | | |

| | | | | |
|---|---|---|---|---|
| DE 2 | 3 0 0 | 3 | | |
| DP 1 | 0 0 3 | 1.5 | Stochastic Programming Lab | NMSC504 |
| DP 2 | 0 0 3 | 1.5 | Spreadsheet Modelling | NMSC505 |
| DP 3 | 0 0 3 | 1.5 | Machine Learning Lab | NMSC506 |
| Total Credits 22.5 | | | | |

| | | | | |
|---|---|---|---|---|
| RM | 3 0 0 | 3 | Research Methodology & Statisitcs | NMSC595 |
| DP 4 | 0 0 3 | 1.5 | Software Lab | NMSC510 |
| DP 5 | 0 0 3 | 1.5 | Simulation Modelling & Analysis Lab | NMSC511 |
| DP 6 | 0 0 3 | 1.5 | Work Study & Ergonomics Lab | NMSC512 |
| Total Credits 22.5 | | | | |

## Department of Mathematics & Computing

### M.Sc. ( Mathematics and Computing )

**Semester I**

| Course Type | L-T-P | Credits | Name of the Course offered | Course Code |
|---|---|---|---|---|
| DC 1 | 3 1 0 | 4 | Probability & Statistics | NMCC513 |
| DC 2 | 3 1 0 | 4 | Advanced Algebra | NMCC514 |
| DC 3 | 3 1 0 | 4 | Differential Equations | NMCC515 |
| DC 4 | 3 0 0 | 3 | Advanced Numerical Methods | NMCC516 |
| DC 5 | 3 0 0 | 3 | Data Structures | NMCC517 |
| DP 1 | 0 0 3 | 1.5 | Advanced Numerical Methods Practical | NMCC518 |
| DP 2 | 0 0 3 | 1.5 | Data Structures Practical | NMCC519 |
| Total Credits 21 | | | | |

**Semester II**

| Course Type | L-T-P | Credits | Name of the Course to be offered | Course Code |
|---|---|---|---|---|
| DC 6 | 3 1 0 | 4 | Functional Analysis | NMCC520 |
| DC 7 | 3 1 0 | 4 | Topology | NMCC521 |
| DC 8 | 3 0 0 | 3 | Operating Systems | NMCC522 |
| DC 9 | 3 0 0 | 3 | Database Management Systems | NMCC523 |
| DE 1 | 3 0 0 | 3 | | |
| DP 3 | 0 0 3 | 1.5 | Operating Systems Practical | NMCC524 |
| DP 4 | 0 0 3 | 1.5 | Data Base Management Systems Practical | NMCC525 |
| Total Credits 20 | | | | |

### M.Tech ( Data Analytics )

**Semester I**

| Course Type | L-T-P | Credits | Name of the Course offered | Course Code |
|---|---|---|---|---|
| DC 1 | 3 1 0 | 4 | Numerical Linear Algebra | NMCC501 |
| DC 2 | 3 1 0 | 4 | Fundamentals of Machine Learning | NMCC502 |
| DC 3 | 3 1 0 | 4 | Statistics in Decision Makings | NMCC503 |
| DE 1 | 3 0 0 | 3 | | |
| DE 2 | 3 0 0 | 3 | | |
| DP 1 | 0 0 3 | 1.5 | Numerical Linear Algebra Lab | NMCC504 |
| DP 2 | 0 0 3 | 1.5 | Fundamentals of Machine Learning Practical | NMCC505 |
| DP 3 | 0 0 3 | 1.5 | Statistics in Decision Makings Practical | NMCC506 |
| Total Credits 22.5 | | | | |

**Semester II**

| Course Type | L-T-P | Credits | Name of the Course to be offered | Course Code |
|---|---|---|---|---|
| DC 4 | 3 1 0 | 4 | Advanced DBMS | NMCC507 |
| DC 5 | 3 1 0 | 4 | Neural Networks and Deep Learning | NMCC508 |
| DC 6 | 3 1 0 | 4 | Advanced Data Structures & Algorithm | NMCC509 |
| DE 3 | 3 0 0 | 3 | | |
| RM | 3 0 0 | 3 | | |
| DP 4 | 0 0 3 | 1.5 | Advanced DBMS Practical | NMCC510 |
| DP 5 | 0 0 3 | 1.5 | Neural Networks and Deep Learning Practical | NMCC511 |
| DP 6 | 0 0 3 | 1.5 | Advanced Data Structures & Algorithm Practical | NMCC512 |
| Total Credits 22.5 | | | | |

## Department of Mechanical Engineering

### M.Tech (Manufacturing Engineering)

**Semester I**

| Course Type | L-T-P | Credits | Name of the Course offered | Course Code |
|---|---|---|---|---|
| DC 1 | 3 1 0 | 4 | Machining Science | NMEC501 |
| DC 2 | 3 1 0 | 4 | Thermo Production Process | NMEC502 |

**Semester II**

| Course Type | L-T-P | Credits | Name of the Course to be offered | Course Code |
|---|---|---|---|---|
| DC 4 | 3 1 0 | 4 | Additive Manufacturing | NMEC525 |
| DC 5 | 3 1 0 | 4 | CAM and Automation | NMEC526 |

| | | | | |
|---|---|---|---|---|
| DC 3 | 3 1 0 | 4 | Theory of Metal Forming | NMEC503 |
| DE 1 | 3 0 0 | 3 | | |
| DE 2 | 3 0 0 | 3 | | |
| DP 1 | 0 0 3 | 1.5 | Thermo-Production Lab | NMEC504 |
| DP 2 | 0 0 3 | 1.5 | Modelling and Simulation Lab | NMEC505 |
| DP 3 | 0 0 3 | 1.5 | Machining Lab | NMEC506 |
| Total Credits 22.5 | | | | |

| | | | | |
|---|---|---|---|---|
| DC 6 | 3 1 0 | 4 | Unconventional Manufacturing Processes | NMEC536 |
| DE 3 | 3 0 0 | 3 | | |
| RM | 3 0 0 | 3 | Research Methodology | NMEC595 |
| DP 4 | 0 0 3 | 1.5 | CAM and Mechatronics Lab | NMEC527 |
| DP 5 | 0 0 3 | 1.5 | Additive Manufacturing Lab | NMEC528 |
| DP 6 | 0 0 3 | 1.5 | Unconventional Manufacturing Lab | NMEC529 |
| Total Credits 22.5 | | | | |

## M.Tech (Thermal Engineering)

### Semester I

| Course Type | L-T-P | Credits | Name of the Course offered | Course Code |
|---|---|---|---|---|
| DC 1 | 3 1 0 | 4 | Numerical Methods | NMEC513 |
| DC 2 | 3 1 0 | 4 | Advanced Fluid Dynamics | NMEC514 |
| DC 3 | 3 1 0 | 4 | Advanced Thermodynamics | NMEC515 |
| DE 1 | 3 0 0 | 3 | | |
| DE 2 | 3 0 0 | 3 | | |
| DP 1 | 0 0 3 | 1.5 | Thermo-Fluids Lab-I | NMEC516 |
| DP 2 | 0 0 3 | 1.5 | Thermo-Fluids Lab-II | NMEC517 |
| DP 3 | 0 0 3 | 1.5 | Computing Lab | NMEC518 |
| Total Credits 22.5 | | | | |

### Semester II

| Course Type | L-T-P | Credits | Name of the Course to be offered | Course Code |
|---|---|---|---|---|
| DC 4 | 3 1 0 | 4 | Computaional Fluid Dynamics | NMEC522 |
| DC 5 | 3 1 0 | 4 | Conduction and Radiation | NMEC523 |
| DC 6 | 3 1 0 | 4 | Convection and Two-Phase Flow | NMEC524 |
| DE 3 | 3 0 0 | 3 | | |
| RM | 3 0 0 | 3 | Research Methodology | NMEC595 |
| DP 4 | 0 0 3 | 1.5 | Computaional Fluid Dynamics Lab | NMEC530 |
| DP 5 | 0 0 3 | 1.5 | Thermo-fluids Lab – III | NMEC531 |
| DP 6 | 0 0 3 | 1.5 | Solar Thermal lab | NMEC532 |
| Total Credits 22.5 | | | | |

## M.Tech (Machine Design)

### Semester I

| Course Type | L-T-P | Credits | Name of the Course offered | Course Code |
|---|---|---|---|---|
| DC 1 | 3 1 0 | 4 | Theory of Elasticity | NMEC507 |
| DC 2 | 3 1 0 | 4 | Mechanical Vibration | NMEC508 |
| DC 3 | 3 1 0 | 4 | Finite Element Methods | NMEC509 |
| DE 1 | 3 0 0 | 3 | | |
| DE 2 | 3 0 0 | 3 | | |
| DP 1 | 0 0 3 | 1.5 | Computation Lab | NMEC510 |
| DP 2 | 0 0 3 | 1.5 | Mechanical Vibration Lab | NMEC511 |
| DP 3 | 0 0 3 | 1.5 | Structural Modelling and Simulation lab | NMEC512 |

### Semester II

| Course Type | L-T-P | Credits | Name of the Course to be offered | Course Code |
|---|---|---|---|---|
| DC 4 | 3 1 0 | 4 | Fracture Mechanics | NMEC519 |
| DC 5 | 3 1 0 | 4 | Advanced Dynamics | NMEC520 |
| DC 6 | 3 1 0 | 4 | Control System | NMEC521 |
| DE 3 | 3 0 0 | 3 | | |
| RM | 3 0 0 | 3 | Research Methodology | NMEC595 |
| DP 4 | 0 0 3 | 1.5 | Control System Lab | NMEC533 |
| DP 5 | 0 0 3 | 1.5 | Mechanical Characterization Lab | NMEC534 |
| DP 6 | 0 0 3 | 1.5 | Research Methodology Lab 2 | NMEC535 |
| Total Credits 22.5 | | | | |

# Department of Mining Engineering

## M.Tech (Mining Engineering )

### Semester I

| Course Type | L-T-P | Credits | Name of the Course offered | Course Code |
|---|---|---|---|---|
| DC 1 | 3 1 0 | 4 | Computational Geomechanics and Ground Control | NMNC501 |
| DC 2 | 3 1 0 | 4 | Computational Subsurface Ventilation and Environment | NMNC502 |
| DC 3 | 3 1 0 | 4 | Risk and Workplace Safety Management | NMNC503 |
| DE 1 | | | | |
| DE 2 | | | | |
| DP 1 | 0 0 3 | 1.5 | Computational Geomechanics and Ground Control Lab | NMNC504 |
| DP 2 | 0 0 3 | 1.5 | Computational Subsurface Ventilation and Environment Lab | NMNC505 |
| DP 3 | 0 0 3 | 1.5 | Numerical Modelling Lab | NMNC506 |
| Total Credits 22.5 | | | | |

### Semester II

| Course Type | L-T-P | Credits | Name of the Course to be offered | Course Code |
|---|---|---|---|---|
| DC 4 | 3 1 0 | 4 | Mine Planning and Design | NMNC515 |
| DC 5 | 3 1 0 | 4 | Mining Equipment Reliability, Maintainability, and Availability | NMNC516 |
| DC 6 | 3 1 0 | 4 | Mass Production Mining Technology | NMNC517 |
| DE 3 | 3 0 0 | | | |
| RM | 3 0 0 | 3 | Research Methodology | NMNC595 |
| DP 4 | 0 0 3 | 1.5 | Mine Simulation and Data Analytics Practical | NMNC518 |
| DP 5 | 0 0 3 | 1.5 | Computer Aided Mine Planning and Design Practical | NMNC519 |
| DP 6 | 0 0 3 | 1.5 | Safety Health and Ergonomics Practical | NMNC520 |
| Total Credits 22.5 | | | | |

## M.Tech ( Geomatics )

### Semester I

| Course Type | L-T-P | Credits | Name of the Course offered | Course Code |
|---|---|---|---|---|
| DC 1 | 3 1 0 | 4 | Mine Surveying Techniques | NMNC509 |
| DC 2 | 3 1 0 | 4 | Geographical Information System | NMNC510 |
| DC 3 | 3 1 0 | 4 | Remote Sensing and Digital Image Processing | NMNC511 |
| DE 1 | 3 0 0 | 3 | | |
| DE 2 | 3 0 0 | 3 | | |
| DP 1 | 0 0 3 | 1.5 | Remote Sensing and Image Processing Lab | NMNC512 |
| DP 2 | 0 0 3 | 1.5 | GIS Lab | NMNC513 |
| DP 3 | 0 0 3 | 1.5 | Advanced Surveying Lab | NMNC514 |
| Total Credits 22.5 | | | | |

### Semester II

| Course Type | L-T-P | Credits | Name of the Course to be offered | Course Code |
|---|---|---|---|---|
| DC 4 | 3 1 0 | 4 | Geodesy and GNSS Survey | NMNC525 |
| DC 5 | 3 1 0 | 4 | Microwave Remote Sensing | NMNC526 |
| DC 6 | 3 1 0 | 4 | Computer Aided Mine Planning and Design | NMNC527 |
| DE 3 | 3 0 0 | 3 | | |
| RM | 3 0 0 | 3 | Research Methodology | NMNC595 |
| DP 4 | 0 0 3 | 1.5 | Microwave Remote Sensing Practical | NMNC528 |
| DP 5 | 0 0 3 | 1.5 | Geospatial Data Modelling Practical | NMNC529 |
| DP 6 | 0 0 3 | 1.5 | Mine Surveying Camp | NMNC530 |
| Total Credits 22.5 | | | | |

## M.Tech ( Tunneling and Underground Space Technology )

### Semester I

| Course Type | L-T-P | Credits | Name of the Course offered | Course Code |
|---|---|---|---|---|
| DC 1 | 3 1 0 | 4 | Geomechanics for Underground Space | NMNC507 |
| DC 2 | 3 1 0 | 4 | Computational Subsurface Ventilation and Environment | NMNC502 |
| DC 3 | 3 1 0 | 4 | Risk and Workplace Safety Management | NMNC503 |
| DE 1 | 3 0 0 | 3 | | |
| DE 2 | 3 0 0 | 3 | | |
| DP 1 | 0 0 3 | 1.5 | Geomechanics Lab | NMNC508 |
| DP 2 | 0 0 3 | 1.5 | Computational Subsurface Ventilation and Environment Lab | NMNC505 |
| DP 3 | 0 0 3 | 1.5 | Numerical Modelling Lab | NMNC506 |
| Total Credits 22.5 | | | | |

### Semester II

| Course Type | L-T-P | Credits | Name of the Course to be offered | Course Code |
|---|---|---|---|---|
| DC 4 | 3 1 0 | 3 | Planning and Design for Tunnels and Caverns | NMNC521 |
| DC 5 | 3 1 0 | 3 | Excavation Methods for Tunnels and Caverns | NMNC522 |
| DC 6 | 3 1 0 | 3 | NATM and TBM Tunneling | NMNC523 |
| DE 3 | 3 0 0 | 3 | | |
| RM | 3 0 0 | 3 | Research Methodology | NMNC595 |
| DP 4 | 0 0 3 | 1.5 | Rock Excavation Practical | NMNC524 |
| DP 5 | 0 0 3 | 1.5 | Mine Simulation and Data Analytics lab | NMNC518 |
| DP 6 | 0 0 3 | 1.5 | Safety Health and Ergonomics Practical | NMNC520 |
| Total Credits 22.5 | | | | |

## Department of Petroleum Engineering

### M.Tech ( Petroleum Engineering )

**Semester I**

| Course Type | L-T-P | Credits | Name of the Course offered | Course Code |
|---|---|---|---|---|
| DC 1 | 3 1 0 | 4 | Advanced Production Technologies | NPEC501 |
| DC 2 | 3 1 0 | 4 | Advanced Well Testing | NPEC502 |
| DC 3 | 3 1 0 | 4 | Formation Evaluation and Production Logging | NPEC503 |
| DE 1 | 3 0 0 | 3 | | |
| DE 2 | 3 0 0 | 3 | | |
| DP 1 | 0 0 3 | 1.5 | Reservoir Characterization | NPEC504 |
| DP 2 | 0 0 3 | 1.5 | Term paper/Mini Project | NPEC505 |
| DP 3 | 0 0 3 | 1.5 | Production Logging Practical | NPEC506 |
| Total Credits 22.5 | | | | |

**Semester II**

| Course Type | L-T-P | Credits | Name of the Course to be offered | Course Code |
|---|---|---|---|---|
| DC 4 | 3 1 0 | 4 | Petroleum Geomechanics and Hydraulic Fractu | NPEC507 |
| DC 5 | 3 1 0 | 4 | Advanced Drilling Technology | NPEC508 |
| DC 6 | 3 1 0 | 4 | Numerical Methods for Petroleum Engineers | NPEC509 |
| DE 3 | 3 0 0 | 3 | | |
| RM | 3 0 0 | 3 | Research Methodology | NPEC595 |
| DP 4 | 0 0 3 | 1.5 | Petroleum Instrumentation and Measurements | NPEC510 |
| DP 5 | 0 0 3 | 1.5 | Development of Working Models | NPEC511 |
| DP 6 | 0 0 3 | 1.5 | Advanced Drilling Simulation Lab | NPEC512 |
| Total Credits 22.5 | | | | |

## Department of Physics

### M.Sc. ( Physics )

**Semester I**

| Course Type | L-T-P | Credits | Name of the Course offered | Course Code |
|---|---|---|---|---|
| DC 1 | 3 1 0 | 4 | Classical Mechanics and Special Theory of Relativity | NPHC501 |
| DC 2 | 3 1 0 | 4 | Methods of Mathematical Physics | NPHC502 |
| DC 3 | 3 1 0 | 4 | Quantum Mechanics-I | NPHC503 |
| DC 4 | 3 0 0 | 3 | Electronics | NPHC504 |
| DC 5 | 3 0 0 | 3 | Numerical Methods and Computer Programming | NPHC505 |
| DP 1 | 0 0 3 | 1.5 | Experimental Physics I | NPHC506 |
| DP 2 | 0 0 3 | 1.5 | Experimental Physics II | NPHC507 |
| Total Credits 21 | | | | |

**Semester II**

| Course Type | L-T-P | Credits | Name of the Course offered | Course Code |
|---|---|---|---|---|
| DC 6 | 3 1 0 | 4 | Quantum Mechanics-II | NPHC508 |
| DC 7 | 3 1 0 | 4 | Electrodynamics and Radiation theory | NPHC509 |
| DC 8 | 3 0 0 | 3 | Nuclear and Particle Physics | NPHC510 |
| DC 9 | 3 0 0 | 3 | Condensed Matter Physics | NPHC511 |
| DE 1 | 3 0 0 | 3 | | |
| DP 3 | 0 0 3 | 1.5 | Experimental Physics III | NPHC512 |
| DP 4 | 0 0 3 | 1.5 | Experimental Physics IV | NPHC513 |
| Total Credits 20 | | | | |

Notification of New Ph.D. Template as per NEP 2020

INDIAN INSTITUTE OF TECHNOLOGY (INDIAN SCHOOL OF MINES) DHANBAD

OFFICE OF THE DEAN (ACADEMIC)

No. IITISM/DAC/841 23.10.2024

NOTIFICATION

**NEW Ph.D. PROGRAM TEMPLATE (AS NEP 2020)**

The new Ph.D. program template, as applicable from the batch admitted in MS 2024-25, is enclosed for the reference of all. The scholars who started their coursework in MS 2024-25 will also follow the new template.

Kindly note that in addition to the given credits, some non-credit units are also required to be necessarily earned to successfully complete the program {notification dated 18.09.2024 enclosed for reference. Office of Dean (Students' Welfare) will provide the details in this regard in due course/shortly}.

Dean (Academic)

Copy to: Director / Dy. Director
All Deans / Assoc. Deans / HoDs
Registrar
DR (Acad) / AR (UG) / AR (PG) / AR (SW)
All Ph.D. scholars

**Detail of minimum credits required for Ph.D.**

| Source of Credits | Minimum no. of Courses or Credits required | Remarks |
|---|---|---|
| **Coursework*** | 4 + 2 (including RM, RTC in S/X mode) for eligible PG scholars; 6 + 2 (including RM, RTC in S/X mode) for scholars with B.Tech | To be considered for CGPA of coursework (except RM, RTC). |
| **Research work ( Thesis Units )** | 100 credits (S/X) | Maximum 20 credits of thesis units allowed to be taken in each regular semester |

*Registration and award of S grade in Research Methodology as well as in Research and Technical Communication courses, after the recommendation of the respective DSC, upon fulfilment of the publication criterion for pre-submission seminar in Ph.D., is also allowed.

**INDIAN INSTITUTE OF TECHNOLOGY (INDIAN SCHOOL OF MINES) DHANBAD**

**OFFICE OF THE DEAN (ACADEMIC)**

No. IITISM/DAC/ 825 18th September, 2024

## NOTIFICATION

## REVISION IN NON CREDIT UNITS

The approved revision in Non Credit Units (in NEP regime), as recommended by the DSW Office, is enclosed for the information of all.

18/09/2024
**Dean (Academic)**

**Copy to:**

1. Director/Deputy Director
2. Registrar
3. All Deans/ Associate Deans/ FIC (Automation)
4. All HODs
5. DR (Acad)/ AR (PG)/ AR(UG)/ AR(SW)/ SPO

## Subject: Proposal for Non-credit Units to be implemented w.e.f. MS 2024-25

*The following proposed is placed before the Senate to give recommendations for the implementation of changes in line with NEP 2020 on the system of Non-Credit Units to be implemented from MS 2024-25. The following are the details:*

## Non-Credit Unit & Minimum Units required for each program:

| Sl.no. | Program | Discipline (2 units per semester) | NCC/NSS/NSO/ CCS/Yoga (2 units per semester for 1st two years ) Sl. No. 1-5 to be assessed during even semesters(2nd & 4th )only & Sl.no. 6-12 to be assessed during odd semester (1st & 3rd ) only Under CCS 101 & CCS 102 | Community Outreach/ Community Services/ Sports/Student Club Activities/ Cultural Activities/ NVCTI Activities (2 units per semester for 1st two years) Sl. No. 1-5 to be assessed during even semesters(2nd & 4th ) only & Sl.no. 6-12 to be assessed during odd semester (1st & 3rd ) only | Other CCA or recognition in Inter IIT / Inter University / State / National / International events (during entire period) * | Maximum non-credit units that can be earned | Minimum noncredit units to be earned for the successful completion of the program [C(50 %)+D (at least 2 units) + E(at least 2 units)+F(Optional Or Add on)]= H |
|---|---|---|---|---|---|---|---|
| A | B | C | D | E | F | G | H |
| 1 | B.Tech. | 16 | 4 | 4 | 4 | 28 | 20 |
| 2 | B.Tech. with Minor | 16 | 4 | 4 | 4 | 28 | 20 |
| 3 | Double Major | 20 | 4 | 4 | 4 | 32 | 24 |
| 4 | Dual Degree (Category A/B/C) | 20 | 4 | 4 | 4 | 32 | 24 |
| 5 | Int. M.Tech. | 20 | 4 | 4 | 4 | 32 | 24 |
| 6 | M.Tech. | 8 | 4 | 4 | 4 | 20 | 12 |
| | M.Sc. Tech. | 12 | 4 | 4 | 4 | 24 | 16 |
| 8 | M.Sc. | 8 | 4 | 4 | 4 | 20 | 12 |
| 9 | MBA | 8 | 4 | 4 | 4 | 20 | 12 |
| 10 | MBA (BA) | 8 | 4 | 4 | 4 | 20 | 12 |
| 11 | MA | 8 | 4 | 4 | 4 | 20 | 12 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **12** | **Ph.D. (Full Time)** | 2 per sem. | 4 | 4 | 4 | 12 + 2 per sem. | 40% |

** For participation in Inter IIT / Inter University / State / National / International events, **2 units** will be credited.*

*** For each indiscipline negative 1 unit minimum & maximum up to 4 unit depending upon severity (Discipline grading may be decided by the Office of DSW) will be awarded*

**** Min discipline unit to be decided e.g. 50 % of the total discipline units if 16 then at least 8 and so on.*

*#in the event, if any one shortfalls of minimum non-credit units, a make-up test may be conducted under CCS or special programme at the end of courses if required*

Weightage of different components of evaluation in regular theory Courses

# INDIAN INSTITUTE OF TECHNOLOGY (INDIAN SCHOOL OF MINES) DHANBAD

## OFFICE OF THE DEAN (ACADEMIC)

No. IITISM/DAC/852 30 December 2024

## NOTIFICATION

### WEIGHTAGE OF DIFFERENT COMPONENTS OF EVALUATION IN REGULAR THEORY COURSES WITH EFFECT FROM WINTER SEMESTER 2024-25

The Senate has approved that the following weightage be considered for different components of evaluation in all regular theory courses (except in practical and audit courses) w.e.f. Winter Semester 2024-25:

| | | |
|---|---|---|
| (i) | Quiz/ Case study/ Assignment etc* | - 10 Marks |
| (ii) | Mid Semester Examination | - 30 Marks |
| (iii) | Quiz/ Case study/ Assignment etc* | - 10 Marks |
| (iv) | End Semester Examination | - 50 Marks |
| | Total Marks | - 100 |

* Class attendance should not be a component under this head. Moreover, One Quiz/ Case study/ Assignment etc. of 10 marks should be conducted before mid-semester examination and the other Quiz/ Case study/ Assignment etc. of 10 marks should be conducted after mid-semester examination.

The final grading for a course will be done for the class, based on the total marks received by students out of 100.

Dean (Academic)

**Copy to:**

1. Director/Deputy Director
2. Registrar
3. All Deans/ Associate Deans
4. All HODs
5. DR (Acad)/ Systems Engineer (MIS) / AR (PG)/ AR(UG)