मालवीय राष्ट्रीय प्रौद्योगिकी संस्थान जयपुर

MALAVIYA NATIONAL INSTITUTE OF TECHNOLOGY JAIPUR

Agenda

Senate

62nd Meeting

Date: 08th April, 2026
Time: 4:00 PM
Venue: Niti Sabhagar, Prabha Bhawan
MNIT Jaipur

मालवीय राष्ट्रीय प्रौद्योगिकी संस्थान जयपुर
MALAVIYA NATIONAL INSTITUTE OF TECHNOLOGY JAIPUR

AGENDA FOR THE 62ND MEETING OF THE SENATE TO BE HELD ON 08TH APRIL 2026 (WEDNESDAY) AT 4.00 PM

CONTENTS

मालवीय राष्ट्रीय प्रौद्योगिकी संस्थान् जयपुर
MALAVIYA NATIONAL INSTITUTE OF TECHNOLOGY JAIPUR

Agenda for 62nd Meeting of Senate
(to be held on 08th April 2026 at 4.00 PM in the Niti Sabhagar, Prabha Bhawan, MNIT, Jaipur)

Item No. 62-1.0: To confirm the minutes of 61st meeting of the Senate.

The minutes of the 61stmeeting of the Senate, held on 22nd December 2025, were circulated to all the members. No comments were received; the minutes are placed for confirmation **Annexure-A** (Page-22 to 29).

The minutes are placed before the Senate for confirmation.

Item No. 62-2.0: To note the "Action Taken" on the decisions taken in the 61st meeting of the Senate.

Action Taken on the decisions made in the 61st meeting of the Senate.

ACTION TAKEN REPORT (61st Senate meeting)

Item No.	Particulars	Decision	Action Taken
61-1.0	To confirm the minutes of the 60th meeting of the Senate.	The Senate confirmed the minutes of the 60th meeting of the Senate.	Noted
61-2.0	To note the "Action Taken" on the decisions taken in the 60th meeting of the Senate.	The Senate noted the action taken report on the decisions/resolutions taken in its 60th meeting.	Noted
61-3.0	Items for consideration		
61-3.1	To consider the revision of signing authority in the Academic formats.	The Senate, after due deliberation, approved that in the absence of the Deputy Registrar (Academic), the Assistant Registrar (Academic) shall be the authorized signing authority for academic and student-related documents.	Implemented and Notified vide Office Order No. 5411 dated 12-01-2026

61-3.2	To consider the introduction of Self-Financed Admission Category in Existing M.Tech Programmes at MNIT Jaipur (in line with practices at peer NITs).	The Senate considered the proposal for the introduction of a Self-Financed Admission Category in the existing M.Tech. programmes at MNIT Jaipur, in line with the practices being followed at peer NITs. After detailed deliberation, the Senate approved the introduction of the Self-Financed Admission Category, subject to the following conditions: 1. Selection Procedure Admission under the Self-Financed Admission Category shall be based exclusively on an Institute-level Written Test, carrying a weightage of 100%. 2. Minimum Qualifying Marks The minimum qualifying (passing) marks in Institute-level written Test for candidates of all categories shall be 35% for all M.Tech. programmes of the Institute. 3. Seat Allocation A maximum of ten (10) additional seats per M.Tech. programme shall be created under the Self-Financed category. 4. Preparation of Merit List and Waitlist Candidates who have opted for a particular M.Tech. programme, appeared in the Institute-level Written Test, and qualified the minimum cut-off criteria shall be ranked in order of merit. The top candidates in the merit list, in accordance with the approved seat matrix and reservation roster, shall be declared selected, and the remaining eligible candidates shall be placed on a waitlist, strictly in	Noted and Intimated to the concerned Departments vide Endorsement No. 5410/ Academic/ MNIT dated 12-01-2026. The matter regarding fee was referred to the Institute Fee Committee for the fee structure. The Committee has submitted its recommendations, which shall be placed before the next FC/BoG for consideration.

		order of merit. 5. Utilization of Vacant Seats after CCMT Allotment Apart from the ten (10) seats earmarked for the Full-Time Self-Financed category, any seats remaining vacant after completion of the CCMT allotment process shall be offered to wait-listed Self-Sponsored candidates, strictly in order of merit, in accordance with Institute norms and Clause 6.4.1(a)(ii) of the PG Regulations. 6. Conditions for Running the Postgraduate Programme As per the existing Institute regulations, a postgraduate programme shall be offered only if a minimum of seven (7) students are admitted**.** Admissions through CCMT shall be considered first for assessing the viability of a postgraduate programme. A postgraduate programme shall be permitted to run if any one of the following conditions is satisfied: I. Seven (7) or more candidates are admitted through CCMT; or II. The total number of admitted students, comprising a. candidates admitted through CCMT, and b. confirmed candidates under the Part-Time Sponsored, Full-Time Sponsored, and Self-Financed categories (including wait-listed Self-Sponsored candidates offered admission) who have deposited the prescribed fees, is not less than seven (7); or III. The number of candidates admitted through CCMT is not less than one (1) and not more than six (6), but such candidates opt to continue in the same discipline even after exercising all available options for shifting to another discipline or institute, in which case the programme shall be allowed to run.	

61-3.3	To consider the establishment of a Makerspace / Tinkerers' Lab at MNIT Jaipur.	The Senate considered the proposal for the establishment of a Makerspace / Tinkerers' Lab at MNIT Jaipur. After due deliberation, the Senate appreciated and endorsed the proposal, recognizing its significance in promoting experiential and project-based learning, fostering innovation and creativity, and ensuring alignment with the objectives of the National Education Policy (NEP)-2020.	Noted.
61-3.4	To consider the Articulation Agreement (3+1+1 Undergraduate–Postgraduate Programme) received from San Jose State University (SJSU), USA.	The Senate considered the proposal received from San José State University (SJSU), USA, along with the draft Articulation Agreement for the establishment of a 3+1+1 Undergraduate–Postgraduate Programme between Malaviya National Institute of Technology Jaipur (MNIT Jaipur) and San José State University (SJSU).After due deliberation, the Senate accorded in-principle approval to the proposal and the draft Articulation Agreement. The Senate further resolved that the credit mapping framework for the proposed programme shall be finalized at the earliest and placed before the Senate for consideration in its next meeting. The Senate also suggested that similar articulation arrangements with other reputed foreign universities may be explored on the same framework, wherever feasible. Accordingly, the Senate advised the Dean (Academic) to examine and explore the feasibility of such similar proposals, in consultation with the Dean (International & Alumni Affairs) and the concerned faculty members of the Institute.	Noted and intimated to the concerned departments vide Endorsement No. 5410/ Academic/MNIT dated 12-01-2026.
61-3.5	To consider the proposal of a New PG Open Elective Course Titled "Advanced Qualitative Research Methods in Social Sciences" by Department of Humanities and Social Sciences.	The Senate, after due deliberation, referred back the proposal for the introduction of a new PG Open Elective course titled "Advanced Qualitative Research Methods in Social Sciences" submitted by the Department of Humanities and Social Sciences. The Senate suggested that the Department may review and suitably revise the course title, so as to make the course more inclusive and	Noted and intimated to the Department of Humanities and Social Sciences vide Endorsement No. 5410/ Academic/MNIT dated 12-01-2026.

		attractive across all disciplines. The revised proposal shall be placed before the Senate for consideration in its next meeting.	
61-3.6	To consider the recommendations of the UG Curriculum Review Committee for NEP-2020 compliance.	The Senate, after due deliberation, approved the recommendations of the UG Curriculum Review Committee for compliance with NEP-2020. The Senate further recommended that the distribution of the total 160-166 credits across Institute Core, Programme Core, Programme Electives, Open Electives, PLEAS/BS, Projects, and other curricular components shall be decided discipline-wise, in consultation with the respective Departments.	Has been notified to all concerned departments vide Office Order No. 5413 dated 12-01-2026. Meeting with the Convener DUGC of all the departments was held. The detailed revised UG Scheme approved by the Senate was explained to all. They have been asked to initiate the process of revision of the scheme and curriculum of their respective departments.
61-3.7	To consider the proposal for Introduction of a Full-Time Self-Financed Ph.D. Admission Category at MNIT Jaipur.	The Senate considered the proposal for the introduction of a Full-Time Self-Financed Ph.D. Admission Category at MNIT Jaipur. After detailed deliberation, the Senate approved the introduction of the said category. Applicants under the Full-Time Self-Financed Ph.D. category shall be required to appear in an Institute-level written test, followed by an interview for candidates shortlisted on the basis of their performance in the written test. It was resolved that scholars admitted under the Full-Time Self-Financed Ph.D. category shall not be entitled to any scholarship (Institute Assistantship/ Financial Assistantship). Such scholars shall be governed by the same academic rules, regulations, curriculum, and	Noted and Intimated to all the concerned departments vide Endorsement No. 5410/ Academic/MNIT dated 12-01-2026. The matter regarding fee was referred to the Institute Fee Committee for the fee structure. The Committee has submitted its recommendations, which shall be placed before the next FC/BoG for

		evaluation norms as applicable to other full-time Ph.D. scholars of the Institute. The Senate further resolved that the matter relating to the determination and finalization of the fee structure for the said category shall be referred to the Institute Fee Committee for examination and submission of its recommendations.	consideration.
61-3.8	To consider the policy framework for re-admission of students after termination through Senate-approved Mercy Appeal under UG regulations.	The Senate, after detailed deliberation, resolved that the concerned students shall be permitted to continue their studies on a provisional basis, subject to final decision on the related policy matters. The Senate further resolved that the issue relating to the determination of applicable fees shall be referred to the Institute Fee Committee for detailed examination. The Committee shall, inter alia, examine the existing provisions relating to fees for gap semesters applicable to UG, PG, and Ph.D. programmes, keeping in view the fact that students generally do not avail of the Institute's academic and infrastructural resources during such gap periods. The Senate also recommended that the Institute Fee Committee consider the potential financial hardship that the levy of such fees may impose on economically weaker students and submit its recommendations to the competent authority for further consideration.	Noted and intimated to all departments vide Office Order No. 5412 dated 12-01-2026 The matter related to applicable fee was referred to the Institute Fee Committee for the fee structure. The Committee has submitted its recommendations, which shall be placed before the next FC/BoG for consideration.
61-3.9	To consider the recommendations of the committee constituted under Office Order No. F4/S/VII-I/24-25-Acad (55-Senate)/4270 dated 23.10.2024, pursuant to the directive of the Senate, for framing guidelines for the conversion of a Centre of the institute to a department.	The Committee's recommendations to frame guidelines for the conversion of a Centre of the Institute to a Department were presented by Prof. Lava Bhargava. After due deliberation, the Senate approved the recommendations of the Committee. The Committee further recommended that every Centre of the Institute shall be reviewed once every two years, and the review report shall be placed before the Senate. It was also recommended that proposals for conversion from Centre	Implemented and Notified vide Office Order No. 5414 dated 12-01-2026.

		to Department be examined on a case-by-case basis. Accordingly, the Senate resolved that each such proposal shall be evaluated by the Committee, and its recommendations shall be submitted to the Chairman, Senate. The Senate authorized the Chairman, Senate to accord approval to the recommendations of the Committee on a case-to-case basis.	
61-4.0	**Items for ratification**		
61-4.1	To ratify the name of students for the award of the Director's Outstanding Gold Medal" for overall performance for the academic year 2024-25 in the 19th Convocation was held on 11th October 2025.	The item was ratified	Noted
61-4.2	To ratify the additional names of the students for the award of Ph.D. degree in the 19th Convocation.	The item was ratified	Noted
61-5.0	**Items for reporting**		
60-5.1	To note the Collaborative Dual Degree Ph.D. programme between the Department of Chemical Engineering, MNIT Jaipur and the Department of Chemical & Biological Engineering, University of Saskatchewan (USask), Canada.	Noted	Noted
61-5.2	To note the minutes of the 74th meeting of SPGB.	Noted	Noted
61-5.3	To note the minutes of the 51st and 52ndmeeting of SUGB.	Noted	Noted
61-5.4	To note the minutes of the meetings of the Unfair Means Committee.	Noted	Noted

61-5.5	To note the establishment of a new Centre for Indian Knowledge Systems (IKS) at MNIT Jaipur and IKS-based elective courses proposed.	Noted	Noted
61-6.0	Any other items with permission of chair		

Item No. 62-3.0: Items for consideration.

Item No. 62-3.1: To consider the Academic Calendar for Academic Year 2026-27.

The Academic Calendar for academic year 2026-27, was circulated among the all faculty members for perusal and comments.

The Academic Calendar is placed at **Annexure-B** (Page-30 to 33).

Item is placed for consideration and approval.

Item No. 62-3.2: To consider the revised Scheme and Syllabi of the M.Tech. Programme "Semiconductor Materials and Devices" proposed by the Materials Research Centre (MRC).

The Materials Research Centre (MRC) has proposed to *introduce* a new M.Tech. programme titled *"Semiconductor Materials and Devices"* to address the growing national demand for skilled professionals in the rapidly expanding semiconductor industry.

The proposal was initially considered by the SPGB in its 67th meeting (Item No. 67-3.5), which recommended it to the Senate. The matter was subsequently placed before the 58th Senate Meeting.

As per Resolution No. Senate-58/2025/09 under Agenda Item No. 58-4.9 of the Senate meeting held on 11 March 2025, MRC was advised to organize a curriculum development workshop. In compliance, a one-day hybrid workshop was conducted on 16 May 2025 to deliberate on the proposed programme. During the workshop, the scheme and syllabi of all core and elective courses were reviewed in detail, and feedback from experts was duly incorporated into the curriculum.

The finalized scheme and syllabi were thereafter circulated to all faculty members of the Institute on 4 July 2025 for further feedback.

Subsequently, the proposal was reconsidered in the 72nd meeting of the SPGB held on 04 August 2026 under Item No. 72-3.1. The SPGB recommended the Scheme and Syllabi for the proposed M.Tech. programme, subject to minor corrections regarding the separation of theory and laboratory components in elective courses, and forwarded the same for consideration by the Senate.

The updated scheme and syllabi of the proposed M.Tech. programme are placed in **Annexure-C** (Page-34 to 74).

Item is placed for consideration and approval.

Item No. 62-3.3: To consider the proposal for a new PG Open Elective course titled "Advanced Qualitative Research Methods in Social Sciences" by the Department of Humanities and Social Sciences.

The Department of Humanities and Social Sciences has proposed a new PG Open Elective course titled *"Advanced Qualitative Research Methods in Social Sciences"*, intended for PG and PhD students.

The syllabus of the proposed course was examined in detail and, after incorporating suggestions received from faculty members, was approved by the Departmental Faculty Board (DFB) and the Departmental Postgraduate Committee (DPGC) of the Department. Prior to its approval, the syllabus was circulated to all faculty members for feedback on 8 November 2025. The course is designed to provide in-depth exposure to qualitative research methodologies in the social sciences. It aims to enhance students' understanding of complex social phenomena by fostering methodological rigor, critical thinking, and contextual awareness, which are essential for advanced research.

After due deliberation, the SPGB, in its 74th meeting, recommended the proposal to the Senate for approval. However, the Senate, upon consideration, referred the proposal back to the Department and suggested to review and suitably revise the course title to make it more inclusive and attractive across disciplines. Accordingly, the Department has revised the proposal. The detailed syllabus of the revised course is placed at **Annexure-D** (Page-75 to 76).

The item is placed before the Senate for consideration and approval.

Item No. 62-3.4: To consider the increase in student intake in M.Tech. (Renewable Energy) from 16 to 26 in the Centre for Energy and Environment.

The Departmental Postgraduate Committee (DPGC) of the Centre for Energy and Environment has proposed an increase in the intake of the M.Tech. (Renewable Energy) programme from 16 to 26 seats. The Centre has reported that over the past two years, the programme has achieved near-full admissions through CCMT, with several categories reaching 100% enrolment, along with a consistent 100% placement

record. The intake was reduced to 16 seats for the 2023 batch due to the temporary impact of the COVID-19 pandemic; however, this was an exceptional measure and does not reflect the sustained demand and performance of the programme. With the normalization of the academic environment and the growing demand for renewable energy professionals, the current intake is considered inadequate. The proposed increase is expected to address this temporary constraint, align with industry demand, and strengthen institutional outcomes.

The proposal was earlier discussed in the 71st and 73rd meetings of the SPGB but was deferred due to the incomplete submission of five-year performance data. The Centre has since provided detailed data on enrolment, dropouts, pass-outs, and placements. The matter was subsequently placed in the 75th SPGB meeting under Item No. 75-3.4, wherein the SPGB, after due deliberation and consideration of the data presented by the DPGC of the Centre, recommended to the Senate an increase in student intake in the M.Tech. (Renewable Energy) programme from 16 to 26 seats.

Item is placed for consideration and approval.

Item No. 62-3.5: To consider offering a single M.Tech. programme in Chemical Engineering and Sustainability in the Department of Chemical Engineering in place of the earlier two programmes.

In the previous academic session, the Department of Chemical Engineering offered two M.Tech. programmes, namely *Petrochemicals & Polymer Technology* and *Chemical Engineering and Sustainability*; however, no admissions were made to either programme. In view of this, the Department has proposed to offer only one M.Tech. programme, *Chemical Engineering and Sustainability*, from the next academic session. The matter was placed before the 75th SPGB meeting under Item No. 75-3.5, wherein the SPGB, after due deliberation, recommended to the Senate that a single M.Tech. programme in Chemical Engineering and Sustainability be offered in place of the earlier two programmes.

Item is placed for consideration and approval.

Item No. 62-3.6: To consider the proposal for initiating a merit-based scholarship for meritorious students admitted through JoSAA at MNIT Jaipur.

It is proposed to initiate a merit-based scholarship at Malaviya National Institute of Technology (MNIT) Jaipur, to be named the "Malaviya Ratna Award" with the objective of attracting top-performing candidates admitted to Open Category with a Gender-Neural Rank within the top 1000 in JEE Main (AIR $\leq$ 1000) who secure admission through JoSAA. The initiative aims to strengthen the academic ecosystem of the Institute and enhance its competitive standing at the national level. The scheme is also aligned with similar merit-based initiatives implemented at premier institutions such as IIT Kanpur etc.

Under the proposed scheme, five students per academic year will be awarded a scholarship of ₹2,00,000 per annum for the entire duration of the B.Tech programme (four years), subject to prescribed conditions. The scholarship shall include:

- ₹1,25,000 towards tuition fees (covering two semesters), and
- ₹75,000 towards hostel and mess expenses.

Continuation of the scholarship will be contingent upon:

- Maintaining a minimum CGPA of 8.0 in each semester, and
- Demonstrating good conduct, with no record of disciplinary violations.

The expenditure shall be met from the Institute Revenue Generation (IRG) funds.

Item is placed for consideration and approval.

Item No. 62-3.7: To consider the revised minimum qualification for PG admissions through CCMT in Mechanical Engineering Department.

The Department of Mechanical Engineering proposed to adopt the following minimum educational qualifications for the upcoming PG admissions.

1. **For M.Tech. (Industrial Engineering) Admissions:** It is proposed to merge the existing Group 1 (G1) and Group 2 (G2) seat categories under the Centralized Counselling for M.Tech./M.Arch./M.Plan. Admissions (CCMT) into a single unified group by combining the seats of both categories. Eligible candidates must possess either:

   - A Bachelor's degree in Engineering/Technology (Code: T999) OR
   - A Master's degree in any branch of Science, Mathematics, Statistics, Computer Applications, or equivalent (Code: S599).

Existing GATE Papers	Proposed Revised GATE Papers
• Aerospace Engineering (AE) • Agricultural Engineering (AG) • Mechanical Engineering (ME) • Naval Architecture & Marine Engineering (NM) • Production & Industrial Engineering (PI) • Engineering Sciences (XE)	• Aerospace Engineering (AE) • Agricultural Engineering (AG) • Instrumentation Engineering (IN) • Biomedical Engineering (BM) • Mathematics (MA) • Biotechnology (BT) • Mechanical Engineering (ME) • Civil Engineering (CE) • Mining Engineering (MN) • Chemical Engineering (CH) • Metallurgical Engineering (MT) • Computer Science & Information Technology (CS) • Naval Architecture & Marine Engineering (NM) • Data Science & Artificial Intelligence (DA) • Petroleum Engineering (PE) • Electronics & Communication Engineering (EC) • Physics (PH) • Electrical Engineering (EE) • Production & Industrial Engineering (PI) • Environmental Science & Engineering (ES) • Statistics (ST) • Geomatics Engineering (GE) • Textile Engineering & Fibre Science (TF) • Engineering Sciences (XE)

2. For M.Tech. (Thermal Engineering) Admissions: Eligible candidates must possess either:

- A Bachelor's degree in Engineering/Technology (Code: T999) OR
- A Master's degree in any branch of Science, Mathematics, Statistics, Computer Applications, or equivalent (Code: S599).

Existing GATE Papers	Proposed Revised GATE Papers
• Aerospace Engineering (AE) • Mechanical Engineering (ME) • Naval Architecture & Marine Engineering (NM) • Engineering Sciences (XE)	• Aerospace Engineering (AE) • Agricultural Engineering (AG) • Mathematics (MA) • Biotechnology (BT) • Mechanical Engineering (ME) • Chemical Engineering (CH) • Naval Architecture & Marine Engineering (NM) • Production & Industrial Engineering (PI) • Engineering Sciences (XE)

The SPGB, after due deliberation, recommended to the Senate the adoption of the following minimum educational qualifications for the upcoming PG admissions through CCMT.

Item is placed for consideration and approval.

Item No. 62-3.8: To consider the matter regarding Inactive UG Students who were not registered/absent for more than 2 semesters.

As per the guidelines stipulated in UG Rules & Regulation Clause 14, it is envisaging that,
"The enrolment of the undergraduate programme (B.Tech & B.Arch.) and postgraduate programme (M.Sc. Courses) of a student may be terminated by the Senate if he/she who is:
(a) a first-year student, who is continuously absent from the classes for more than four weeks without authorized leave,
(b) student who is absent without authorized leave of absence for a major part of the semester and does not appear in the end-semester examination of the courses in which he/she is registered,
(c) student who fails to report and register by the last date of registration,
(d) student, who is on academic probation and fails to satisfy the conditions thereof in a particular semester,
(e) Student who involves himself/ herself, in violation of the code of conduct, in ragging, etc. and is punished on disciplinary grounds, in accordance with the Code of Conduct for the Students."

The list of Inactive UG students is as follows:

S No.	Department	Student Id	Student Name
1	Architecture and Planning	2019UAR1072	Rahul Rawat
2	Architecture and Planning	2022UAR1055	Aman Ansari
3	Architecture and Planning	2024UAR1197	Somendra Kumar Meena
4	Chemical Engineering	2020UCH1591	Dhruv Goreta
5	Computer Science and Engineering	2021UCP1102	Vaishnavi Singh
6	Electrical Engineering	2023UEE1539	Kuldeep
7	Metallurgical and Materials Engineering	2021UMT1815	Vinod Kumar Choudhary

Academic Section has already sent emails/letters to these students through post regarding semester registration in the Institute. The matter was placed in the 53rd SUGB meeting under Item No. 53-3.2, the SUGB recommended the termination of the above students who have been absent for more than 2 semesters from the Institute.

Item is placed for consideration and approval.

Item No. 62-3.9: To consider the mercy request of Ms. Prity Kumari (2025PCE5323).

A mercy request/appeal has been submitted by Ms. Prity Kumari (2025PCE5323) for continuation of M.Tech. (Environmental Engineering) programme. She was admitted in M.Tech. (Environmental Engineering) programme in the Department of Civil Engineering in Academic Year 2025-26 under the Full-time category. She obtained an SGPA/CGPA of 4.68 in her first semester (2025-26 Odd semester), less than the required CGPA for the semester promotion. The matter was placed in the 75th SPGB meeting under Item No. 75-3.10 the recommendations are as under:

S. No.	Name & ID	Recommendation & Justification of DPGC, if any	Recommendation & Justification of SPGB
1..	Ms. Prity Kumari (2025PCE5323)	The DPGC considered the mercy application submitted by Ms. Prity Kumari and recommended approval of mercy chance to continue her M.Tech. (Environmental Engineering) programme.	The SPGB recommended that Ms. Prity Kumari (2025PCE5323) be given an opportunity to re-register for the First Semester and repeat all courses. Her eligibility for promotion to the next semester will be evaluated on the basis of her performance after re-registration.

Item is placed for consideration and approval.

Item No. 62-3.10: To consider the mercy request of Mr. Vankudothu Vamshi (2020UCH1915).

Mr Vankudothu Vamshi (2020UCH1915) was admitted to B.Tech. Chemical Engineering program in the year 2020 through JoSAA/ CSAB 2020 centralized counselling under ST category at MNIT Jaipur. Till his 8.5th semester, he has earned total of 165 credits out of 196 registered credits required for the award of B.Tech. Degree in Chemical Engineering program. His CGPA till 8.5th semester is 4.79 and has backlog courses of 31 credits. Due to his inactivity for more than two semesters, he has been terminated from the Institute Rolls as per the Office Order No. F4/I-X-I/20-21-Acad-UG-I/2023-24-Acad-UG/5448 Dated 22-01-2026.

Thereafter, Mr. Vamshi has submitted a written request through DUGC, seeking reconsideration of his case under mercy grounds on 03.02.2026. As informed by the DUGC, he stated that due to financial difficulties, he was unable to pay the registration fee, which consequently led to his termination.

The matter was placed in the 53rd SUGB meeting under Item No. 53-3.6 the recommendations are as under:

S. No.	Name & ID	Recommendation & Justification of DUGC, if any	Recommendation & Justification of SUGB
1.	Mr. Vankudothu Vamshi (2020UCH1915)	The DUGC of the Chemical Engineering Department reviewed academic credits earned and examined the supporting documents related to Mr. Vankudothu Vamshi's financial conditions and recommended the same.	Considering the credits earned, and the supporting documents related to Mr. Vankudothu Vamshi's financial conditions, SUGB recommended the mercy request to the Senate.

Item is placed for consideration and approval.

Item No. 62-3.11: To consider the seat matrix for admission to PG programs through CCMT and CCMN for the Academic Session 2026-27.

The seat matrix of the PG program for admission through CCMT and CCMN for the Academic Session 2026-27 is placed at **Annexure- E** (Page-77 to 78).

Item is placed for consideration and approval.

Item No. 62-4.0: ***Items for ratification***

Item No. 62-4.1: To ratify the seat matrix for admission to various UG programs through JoSAA for the Academic Session 2026-27.

The seat matrix of the UG programs for admission through JoSAA for the Academic Session 2026-27 is placed at **Annexure-F** (Page-79 to 80).

Item is placed for ratification.

Item No. 62-4.2: To ratify the seat matrix for admission in UG and PG programs through DASA for the Academic Session 2026-27.

The seat matrix for admission in UG and PG programs through DASA for the Academic Session 2026-27 is placed at **Annexure-G** (Page-81 to 82).

Item is placed for ratification.

Item No. 62-4.3: To ratify the termination of 10 Inactive UG students who were not registered/absent for more than 2 semesters.

In line with the approval granted by the SUGB in its 52nd meeting and the subsequent approval of the Chairman Senate, the enrolment of 10 inactive undergraduate students, who remained unregistered/absent for more than two semesters, were terminated vide Office Order No. F4/1-X-1/20-21-Acad-UG-1/2023-24-Acad-UG/5448 dated 22-01-2026, placed at **Annexure-H** (Page-83)**.**

Item is placed for ratification.

Item No. 62-4.4: To ratify the mercy request submitted by Mr. Lalit Choudhary (2021UCH1833).

The mercy case of Mr. Lalit Choudhary (2021UCH1833) was discussed and recommended by the SUGB in its 52nd meeting held on 15th December 2025 under the Item No. 52-3.9. The then the mercy request of Mr. Lalit Choudhary was placed before the Chairman Senate for approval. The Chairman Senate approved the mercy request and allowed to register in VI Semester (2025-26).

Item is placed for ratification.

Item No. 62-5.0: ***Items for reporting.***

Item No. 62-5.1: To note the minutes of the 75th meeting of SPGB.

Minutes of the 75th meeting of SPGB held on 18th March 2026 is placed before the Senate for information. **(Annexure -I,** Page-84 to 89**).**

Item is placed for information.

Item No. 62-5.2: To note the minutes of the 53rd meeting of SUGB.

Minutes of the 53rd meeting of SUGB held on 16th March 2026 is placed before the Senate for information. **(Annexure-J,** Page-90 to 92**).**

Item is placed for information.

Item No. 62-5.3 To note the minutes of the meetings of the Unfair Means Committee.

The minutes of the meetings of the Unfair Means Committee held on 09th March 2026 are placed for information to the Senate **(Annexure-K,** Page-93 to 94**).**

Item is placed for information.

Item No. 62-5.4 To note the commencement of 02 new Undergraduate programmes (B.Tech.) from Academic Session 2026-27.

The Senate in its 54th meeting vide Resolution No. Senate-54/2024/14 and Senate-54/2024/15 recommended to the BoG to start two new UG programmes in B. Tech. Engineering and B. Tech. Mathematics and Computing with initially 30 seats in each programme. The Board of Governors vide Resolution No. BOG-57-4/2024/10 considered and approved the proposal. The matter was then submitted to the Ministry for grant of additional seats in new undergraduate programmes vide letter No. 910 dated 24th January 2026 and letter No. 1882 dated 30th January 2026.

The approval to start above 02 prorammes was granted by the Under Secretary, Government of India, Ministry of Education, New Delhi vide letter No. F.No. 20-1/2024-TS.III dated 17th February 2026 from the academic session 2026-27. The requirement of engaging faculty, if any, for running of these two programmes may be met out from the already sanctioned faculty positions to the Institute.

Item is placed for information.

Item No. 62-5.5 To note the cases of Ph.D. students for termination from the Institute roles due to absence without authorized leave.

The matter regarding the cases of Ph.D. students for termination from the Institute rolls due to absence without authorized leave was placed in the 75th SPGB meeting under Item No. 75-3.3. The SPGB, after deliberation, approved the termination of following 06 students from the Institute roles due to absence without authorized leave under the PG RR 2024 11.7(b).

S. No.	Student Id	Name
1	2024RMA9556	Dipin Yadav
2	2023RPY9071	Sanjay Yadav
3	2025RCE9029	Deepak Meena
4	2023RCP9028	Astha Joshi
5	2020REC9004	PriyaKaith
6	2024RME9562	Praveen Kumar Rao

Item is placed for information.

Item No. 62-5.6 To note the list of PG students for termination of enrolment who secured a CGPA of less than 5.5 in the academic session 2025–26.

Following 23 students of respective departments have scored less than 5.5 CGPA due to shortage of attendance and poor performance in academic session 2025-26. As per clause 8 of PG Regulation they are not allowed to continue their respective PG programmes.

S. No.	Student Id	Student Name	Department	Specialization
1	2025PAR5307	Parag Patel	Architecture and Planning	Urban Planning
2	2025PBM5046	Md Ismail Shaukat	Management Studies	Management Studies
3	2025PCE5196	Gopal Singh Gurjar	Civil Engineering	Environmental Engineering
4	2025PCE5323	Prity Kumari	Civil Engineering	Environmental Engineering
5	2025PCE5326	Priya Choudhary	Civil Engineering	Environmental Engineering
6	2025PCE5400	Sher Singh Meena	Civil Engineering	Environmental Engineering
7	2025PCS5138	Atiba Qureshi	Civil Engineering	Structural Engineering
8	2025PCT5108	Amrit Singh	Civil Engineering	Transportation Engineering

9	2025PCY5447	Tushar	Chemistry	Chemistry
10	2025PES5315	Prajwal S	Electrical Engineering	Power Systems
11	2025PES5443	Tanuj Jangid	Electrical Engineering	Power Systems
12	2025PEV5072	Abhi Kalodia	Electronics and Communication Engineering	VLSI Design
13	2025PIS5185	Gagan Preet Singh	Computer Science and Engineering	Computer Science and Information Security
14	2025PIS5236	Karan Tanwar	Computer Science and Engineering	Computer Science and Information Security
15	2025PIS5393	Saurabh Kumar Meena	Computer Science and Engineering	Computer Science and Information Security
16	2025PMA5312	Pinki Meena	Mathematics	Mathematics
17	2025PPD5349	Ranveer Singh Sepat	Electrical Engineering	Power Electronics and Drives
18	2025PPH5259	Madhu Saini	Physics	Physics
19	2025PPH5294	Neelam Lora	Physics	Physics
20	2024PCE5102	Jagender Baknad	Civil Engineering	Environmental Engineering
21	2024PDE5027	Deepak	Mechanical Engineering	Design Engineering
22	2024PMA5385	Anil Kumar	Mathematics	Mathematics
23	2024PPD5120	Prakhar Gupta	Electrical Engineering	Power Electronics and Drives

The matter was placed in 75th SPGB meeting under Item No. 75-3.6, the SPGB, after due deliberation, approved the list of 23 PG students for termination of enrolment who secured a CGPA of less than 5.5 in the academic session 2025–26.

Item is placed for information.

Item No. 62-5.7 To note the case of PG students allotted MNIT Jaipur through CCMT/CCMN 2025 who have not reported and/or have not deposited the balance fee.

27 PG students were allotted MNIT Jaipur through CCMT/CCMN 2025, but they have not reported to the Institute and have not deposited the balance fee. The matter was placed in 75th SPGB meeting under Item No. 75-3.8, the SPGB approved the withdrawal of the IDs/names of 26 such students from the Institute ERP and the cancellation of their enrolment/allotment details are as under:

S. No.	Student Id	Student Name	Department	Specialization	Selection Board
1	2025PAR5133	Aryan Basumatary	Architecture and Planning	Urban Planning	CCMT
2	2025PCE5262	Mahika Saxena	Civil Engineering	Environmental Engineering	CCMT

3	2025PCE5296	Neeraj Meena	Civil Engineering	Environmental Engineering	CCMT
4	2025PCP5276	Mehul Kumar Dahmiwal	Computer Science and Engineering	Computer Science and Engineering	CCMT
5	2025PCP5388	Sattvik Lavaniya	Computer Science and Engineering	Computer Science and Engineering	CCMT
6	2025PCW5377	Saloni Verma	Civil Engineering	Water Resources Engineering	CCMT
7	2025PEB5161	Debanjan Kundu	Electronics and Communication Engineering	Embedded Systems	CCMT
8	2025PEB5212	Himanshu Jain	Electronics and Communication Engineering	Embedded Systems	CCMT
9	2025PEB5461	Vidip Raj Sharma	Electronics and Communication Engineering	Embedded Systems	CCMT
10	2025PIS5143	Avi Chourasiya	Computer Science and Engineering	Computer Science and Information Security	CCMT
11	2025PPD5471	Vishal Hardasbhai Karena	Electrical Engineering	Power Electronics and Drives	CCMT
12	2025PTE5342	Rajesh Singh	Mechanical Engineering	Thermal Engineering	CCMT
13	2025PCY5372	Sahil	Chemistry	Chemistry	CCMN
14	2025PMA5117	Anjali Tiwari	Mathematics	Mathematics	CCMN
15	2025PMA5328	Priyanshi Sharma	Mathematics	Mathematics	CCMN
16	2025PMA5338	Rahul Kumar	Mathematics	Mathematics	CCMN
17	2025PMA5424	Soniya	Mathematics	Mathematics	CCMN
18	2025PMA5436	Sun Daimary	Mathematics	Mathematics	CCMN
19	2025PCE5348	Ramswaroop Choudhary	Civil Engineering	Environmental Engineering	Departmental Entrance Exam
20	2025PCT5383	Sanjay Kumar Meena	Civil Engineering	Transportation Engineering	Departmental Entrance Exam
21	2025PCW5417	Shweta Meena	Civil Engineering	Water Resources Engineering	Departmental Entrance Exam
22	2025PIE5472	Vishal Mathur	Mechanical Engineering	Industrial Engineering	Departmental Entrance Exam
23	2025PML5206	Harshit Kumar Meena	Metallurgical and Materials Engineering	Materials Engineering	Departmental Entrance Exam
24	2025PBM5014	D S B L Subhashree	Management Studies	MBA	Departmental Entrance Exam

25	2025PBM5035	Shashwat Kumar	Management Studies	MBA	Departmental Entrance Exam
26	2025PBM5047	Nandini Bharti	Management Studies	MBA	Departmental Entrance Exam

Item is placed for information.

Item No. 62-5.8 To note the case of PG students allotted MNIT Jaipur through CCMN 2025–26 who were unable to produce the qualifying degree certificate with the minimum required percentage.

The following PG students were allotted MNIT Jaipur through CCMN 2025-26, but they have not submitted the qualifying degree certificate. It is proposed that the ID's/names of the following 02 students may be withdrawn from the Institute ERP and their enrolment/allotment may be cancelled:

S. No.	Student Id	Student Name	Department	Specialization	Selection Board
1.	2025PCY5199	Hanni	Chemistry	Chemistry	CCMN
2.	2025PCY5242	Khushi Bharti	Chemistry	Chemistry	CCMN

The matter was placed in 75th SPGB meeting under Item No. 75-3.9, the SPGB approved the cancellation of enrolment/allotment of such PG students who were allotted MNIT Jaipur through CCMN 2025–26 but were unable to produce the qualifying degree certificate with the minimum required percentage.

Item is placed for information.

Item No. 62-6.0: Any other items with permission of chair.

Annexures

मालवीय राष्ट्रीय प्रौद्योगिकीसंस्थानजयपुर

Malaviya National Institute of Technology Jaipur

(An Institute of National Importance under Ministry of Education, Govt. of India)

MINUTES OF 61ST SENATE MEETING HELD 22ND DECEMBER 2025

The 61st meeting of the Senate was held on 22nd December 2025 from 11:00 AM onwards in Niti Sabhagar, Prabha Bhawan of the Institute. The attendance list is placed at **Annexure-A.**

The Chairman Senate, in his opening remarks, welcomed all members attending the meeting.

The agenda items were discussed one by one, and resolutions for each agenda items are as follows:

Item No. 61-1.0	:	***To confirm the minutes of the 60th meeting of the Senate.*** The Senate confirmed the minutes of the 60th meeting of the Senate.
Item No. 61-2.0	:	***To note the "Action Taken" on the decisions taken in the 60th meeting of the Senate.*** The Senate noted the action taken report on the decision/resolutions taken in its 60th meeting.
Item No. 61-3.0	:	**Item for consideration.**
Item No. 61-3.1	:	**To consider the revision of signing authority in the Academic formats.** The Senate, after due deliberation, approved that in the absence of the Deputy Registrar (Academic), the Assistant Registrar (Academic) shall be the authorized signing authority for academic and student-related documents.
Item No. 61-3.2	:	**To consider the introduction of Self-Financed Admission Category in Existing M.Tech Programmes at MNIT Jaipur (in line with practices at peer NITs).** The Senate considered the proposal for the introduction of a Self-Financed Admission Category in the existing M.Tech. programmes at MNIT Jaipur, in line with the practices being followed at peer NITs. After detailed deliberation, the Senate approved the introduction of the Self-Financed Admission Category, subject to the following conditions: 1. Selection Procedure Admission under the Self-Financed Admission Category shall be based exclusively on an Institute-level Written Test, carrying a weightage of 100%.

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22

2. Minimum Qualifying Marks

The minimum qualifying (passing) marks in Institute –level written Test for candidates of all categories shall be 35% for all M.Tech. programmes of the Institute.

3. Seat Allocation

A maximum of ten (10) additional seats per M.Tech. programme shall be created under the Self-Financed category.

4. Preparation of Merit List and Waitlist

Candidates who have opted for a particular M.Tech. programme, appeared in the Institute-level Written Test, and qualified the minimum cut-off criteria shall be ranked in order of merit. The top candidates in the merit list, in accordance with the approved seat matrix and reservation roster, shall be declared selected, and the remaining eligible candidates shall be placed on a waitlist, strictly in order of merit.

5. Utilization of Vacant Seats after CCMT Allotment

Apart from the ten (10) seats earmarked for the Full-Time Self-Financed category, any seats remaining vacant after completion of the CCMT allotment process shall be offered to wait-listed Self-Sponsored candidates, strictly in order of merit, in accordance with Institute norms and Clause 6.4.1(a)(ii) of the PG Regulations.

6. Conditions for Running the Postgraduate Programme

As per the existing Institute regulations, a postgraduate programme shall be offered only if a minimum of seven (7) students are admitted. Admissions through CCMT shall be considered first for assessing the viability of a postgraduate programme. A postgraduate programme shall be permitted to run if any one of the following conditions is satisfied:

I. Seven (7) or more candidates are admitted through CCMT; or
II. The total number of admitted students, comprising
    a. candidates admitted through CCMT, and
    b. confirmed candidates under the Part-Time Sponsored, Full-Time Sponsored, and Self-Financed categories (including wait-listed Self-Sponsored candidates offered admission) who have deposited the prescribed fees,

    is not less than seven (7); or
III. The number of candidates admitted through CCMT is not less than one (1) and not more than six (6), but such candidates opt to continue in the same discipline even after exercising all available options for shifting to another discipline or institute, in which case the programme shall be allowed to run

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23

Item No. 61-3.3	:	**To consider the establishment of a Makerspace / Tinkerers' Lab at MNIT Jaipur.** The Senate considered the proposal for the establishment of a Makerspace / Tinkerers' Lab at MNIT Jaipur. After due deliberation, the Senate appreciated and endorsed the proposal, recognizing its significance in promoting experiential and project-based learning, fostering innovation and creativity, and ensuring alignment with the objectives of the National Education Policy (NEP)-2020.
Item No. 61-3.4	:	**To consider the Articulation Agreement (3+1+1 Undergraduate–Postgraduate Programme) received from San Jose State University (SJSU), USA.** The Senate considered the proposal received from San José State University (SJSU), USA, along with the draft Articulation Agreement for the establishment of a 3+1+1 Undergraduate–Postgraduate Programme between Malaviya National Institute of Technology Jaipur (MNIT Jaipur) and San José State University (SJSU). After due deliberation, the Senate accorded in-principle approval to the proposal and the draft Articulation Agreement. The Senate further resolved that the credit mapping framework for the proposed programme shall be finalized at the earliest and placed before the Senate for consideration in its next meeting. The Senate also suggested that similar articulation arrangements with other reputed foreign universities may be explored on the same framework, wherever feasible. Accordingly, the Senate advised the Dean (Academic) to examine and explore the feasibility of such similar proposals, in consultation with the Dean (International & Alumni Affairs) and the concerned faculty members of the Institute.
Item No. 61-3.5	:	**To consider the proposal of a New PG Open Elective Course Titled "Advanced Qualitative Research Methods in Social Sciences" by Department of Humanities and Social Sciences.** The Senate, after due deliberation, referred back the proposal for the introduction of a new PG Open Elective course titled "Advanced Qualitative Research Methods in Social Sciences" submitted by the Department of Humanities and Social Sciences. The Senate suggested that the Department may review and suitably revise the course title, so as to make the course more inclusive and attractive across all disciplines. The revised proposal shall be placed before the Senate for consideration

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		in its next meeting.
Item No. 61-3.6	:	**To consider the recommendations of the UG Curriculum Review Committee for NEP-2020 compliance.** The Senate, after due deliberation, approved the recommendations of the UG Curriculum Review Committee for compliance with NEP-2020. The Senate further recommended that the distribution of the total 160-166 credits across Institute Core, Programme Core, Programme Electives, Open Electives, PLEAS/BS, Projects, and other curricular components shall be decided discipline-wise, in consultation with the respective Departments.
Item No. 61-3.7	:	**To consider the proposal for Introduction of a Full-Time Self-Financed Ph.D. Admission Category at MNIT Jaipur.** The Senate considered the proposal for the introduction of a Full-Time Self-Financed Ph.D. Admission Category at MNIT Jaipur. After detailed deliberation, the Senate approved the introduction of the said category. Applicants under the Full-Time Self-Financed Ph.D. category shall be required to appear in an Institute-level written test, followed by an interview for candidates shortlisted on the basis of their performance in the written test. It was resolved that scholars admitted under the Full-Time Self-Financed Ph.D. category shall not be entitled to any scholarship (Institute Assistantship/ Financial Assistantship). Such scholars shall be governed by the same academic rules, regulations, curriculum, and evaluation norms as applicable to other full-time Ph.D. scholars of the Institute. The Senate further resolved that the matter relating to the determination and finalization of the fee structure for the said category shall be referred to the Institute Fee Committee for examination and submission of its recommendations.
Item No. 61-3.8	:	**To consider the policy framework for re-admission of students after termination through Senate-approved Mercy Appeal under UG regulations.** The Senate, after detailed deliberation, resolved that the concerned students shall be permitted to continue their studies on a provisional basis, subject to final decision on the related policy matters. The Senate further resolved that the issue relating to the determination of applicable fees shall be referred to the Institute Fee Committee for detailed examination. The Committee shall, inter alia, examine the existing provisions relating to fees for gap semesters applicable to UG, PG, and Ph.D. programmes, keeping in view the fact that students generally do not avail of the Institute's academic and infrastructural

Registrar.

		resources during such gap periods. The Senate also recommended that the Institute Fee Committee consider the potential financial hardship that the levy of such fees may impose on economically weaker students, and submit its recommendations to the competent authority for further consideration.
Item No. 61-3.9	:	**To consider the recommendations of the committee constituted under Office Order No. F4/S/VII-I/24-25-Acad (55-Senate)/4270 dated 23.10.2024, pursuant to the directive of the Senate, for framing guidelines for the conversion of a Centre of the institute to a department.** The Committee's recommendations to frame guidelines for the conversion of a Centre of the Institute to a Department were presented by Prof. Lava Bhargava. After due deliberation, the Senate approved the recommendations of the Committee. The Committee further recommended that every Centre of the Institute shall be reviewed once every two years, and the review report shall be placed before the Senate. It was also recommended that proposals for conversion from Centre to Department be examined on a case-by-case basis. Accordingly, the Senate resolved that each such proposal shall be evaluated by the Committee, and its recommendations shall be submitted to the Chairman, Senate. The Senate authorized the Chairman, Senate to accord approval to the recommendations of the Committee on a case-to-case basis.
Item No. 61-4.0	:	**Items for ratification**
Item No. 61-4.1	:	**To ratify the name of students for the award of the Director's Outstanding Gold Medal" for overall performance for the academic year 2024-25in the 19th Convocation was held on 11th October 2025.** Item was ratified.
Item No. 61-4.2	:	**To ratify the additional names of the students for the award of Ph.D. degree in the 19th Convocation.** Item was ratified.
Item No. 61-5.0	:	**Items for reporting**
Item No. 61-5.1	:	**To note the Collaborative Dual Degree Ph.D. programme between the Department of Chemical Engineering, MNIT Jaipur and the Department of Chemical & Biological Engineering, University of Saskatchewan (USask), Canada.** Noted.
Item No. 61-5.2	:	**To note the minutes of the 74th meeting of SPGB.**

		Noted.
Item No. 61-5.3	:	**To note the minutes of the 51st and 52nd meeting of SUGB.** Noted.
Item No. 61-5.4	:	**To note the minutes of the meetings of the Unfair Means Committee.** Noted.
Item No. 61-5.5	:	**To note the establishment of a new Centre for Indian Knowledge Systems (IKS) at MNIT Jaipur and IKS-based elective courses proposed.** Noted.
Item No. 61-6.0	:	***Any other items with permission of chair***

The meeting ended with a vote of thanks to the Chair.

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5/1/2016

Registrar & Secretary

Annexure-A

List of Senate members who attended the 61st Senate meeting offline/online:

S.No.	Name
1.	Prof.N. P. Padhy
2.	Dr. Ramachandran C. N.
3.	Prof. Umakant Dash
4.	Prof. Amar Patnaik
5.	Prof. D. Boolchandani
6.	Prof. Dilip Sharma
7.	Prof. G. D. Agarwal
8.	Prof. Ghanshyam Singh
9.	Prof. Girdhari Singh
10.	Prof. Gunwant Sharma
11.	Prof. Harlal Singh Mali
12.	Prof. Jyotirmay Mathur
13.	Prof. K. K. Sharma
14.	Prof. Kailash Singh
15.	Prof. Kanupriya Sachdev
16.	Prof. Lava Bhargava
17.	Prof. M. K. Shrimali
18.	Prof. M. M. Sharma
19.	Prof. Madhu Agarwal
20.	Prof. Monica Sharma
21.	Prof. Nikhil Gupta
22.	Prof. Ragini Gupta
23.	Prof. Raj Kumar Vyas
24.	Prof. Rajeev Shringi
25.	Prof. Rajendra Kumar Goyal
26.	Prof. Rajive Tiwari
27.	Prof. Rohit Goyal
28.	Prof. Rohit Bhakar
29.	Prof. S. D. Bharti
30.	Prof. Tarush Chandra
31.	Prof. UpendraPandel
32.	Prof. VineetSahula
33.	Dr. Kapil Pareek
34.	Dr. Dinesh Gopalani
35.	Dr. Rajeev Kumar Dohre
36.	Dr. Divesh Kumar
37.	Dr. Santosh Chaudhary
38.	Dr. Sumanta Kuma Meher
39.	Dr. Mushtaq Ahmed
40.	Dr. Nishant Roy
41.	Dr. KamlendraAwasthi
42.	Dr. Yogesh Kumar Meena (ADPG)
43.	Dr. Ram Dayal (ADUG)

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List of members who had submitted leave of absence for the 61st Senate Meeting:

S.No.	Name
1.	Prof. Tripta Thakur
2.	Prof. A. B. Gupta
3.	Prof. Manish Vashishtha
4.	Prof. Manju Singh
5.	Prof. Nupur Tandon
6.	Prof. Sumit Khandelwal
7.	Dr. Bhagwati Sharma

The list of members who could not attend the 61st Senate meeting:

S.No.	Name
1.	Prof.A.K.Vyas
2.	Prof. Ajay Singh Jethoo
3.	Prof. Arun Gaur
4.	Prof. Jyoti Joshi
5.	Prof. K. R. Niazi
6.	Prof. M. L. Mittal
7.	Prof. Mahender Choudhary
8.	Prof. Mahesh Kumar Jat
9.	Prof. Manoj Fozdar
10.	Prof. Nirutpam Rohtagi
11.	Prof. R. C. Gupta
12.	Prof. R. P. Yadav
13.	Prof. Rajesh Kumar
14.	Prof. Rakesh Jain
15.	Prof. S. K. Tiwari
16.	Prof. S. P. Chaurasia
17.	Prof. Sanjay Mathur
18.	Prof. Sudhir Kumar
19.	Prof. Suja George
20.	Prof. T. C.Gupta
21.	Prof. Urmila Brighu
22.	Prof. Vibhuti Singh Shekhawat
23.	Prof. Vijay Janyani
24.	Prof. Vijay Laxmi

MALAVIYA NATIONAL INSTITUTE OF TECHNOLOGY JAIPUR

ACADEMIC CALENDAR FOR ODD SEMESTER (Except UG/PG 1st Semester) 2026-27

EVENTS	From	To
	Day & Date	Day & Date
Opening of ERP portal for fee deposition and course Registration for Existing Students	Wednesday, July 01, 2026	Monday, July 27, 2026
Registration of New Ph.D. entrants	Monday, July 27, 2026	
Commencement of classes for students of all existing UG/PG and new entrants of MBA programmes	Monday, July 27, 2026	
Fee deposition and course registration of existing students with a late fee of Rs.1,000/-	Tuesday, July 28, 2026	Monday, August 03, 2026
Fee deposition and course registration of existing students with late fee of Rs. 10,000 (No registration after the last date)	Tuesday, August 04, 2026	Monday, August 10, 2026
Registration of New UG students admitted through JoSAA/CSAB/DASA/ICCR	To be announced	
Orientation programme for new UG & MBA students	To be announced	
Commencement of classes for new UG students	To be announced	
Last date for adding/dropping course(s)	Tuesday, August 11, 2026	Wednesday, August 12, 2026
Registration of new PG Full-time, Part-time & sponsored candidates (except MBA students)	To be announced	
Orientation program for new PG (except MBA) students by the respective department	To be announced	
Commencement of classes for new PG (except MBA) students by the respective department	To be announced	
Last date of submission of mandatory documents for newly admitted students, if any	Wednesday, September 30, 2026	
Mid Term Examiantion of Laboratory courses (during class hours)	Monday, September 14, 2026	Friday, September 18, 2026
Mid Term Examination (MTE)	Monday, September 21, 2026	Monday, September 28, 2026
Mid term evaluation of Projects/dissertations	Monday, September 14, 2026	Friday, September 25, 2026
Last date for submission of application (to the course instructor)by the absentees for special MTE (on medical ground only)	Monday, October 05, 2026	
Last date for showing the answer scripts of MTE	Friday, October 09, 2026	
Annual Athletic Meet 2026	Saturday, October 10, 2026	Sunday, October 11, 2026
Last date of Application for Course withdrawal	Monday, November 09, 2026	
Mid Term Break (only for UG students)	Monday, October 19, 2026	Friday, October 23, 2026
Technical Fest "SPHINX"	Saturday, October 31, 2026	Sunday, November 01, 2026
Pre-registration of courses for Even semester	Monday, November 16, 2026	Tuesday, November 17, 2026
End Term online feedback	Monday, November 16, 2026	Friday, November 20, 2026
Last date of classes	Friday, November 20, 2026	
Last date of communication of shortage of attendance to Students and Academic Section	Friday, November 20, 2026	
End Term Examinations (ETE) of Laboratory and Theory Courses. (Exam of practical courses will be conducted after theory courses)	Monday, November 23, 2026	Friday, December 11, 2026
Evaluation of dissertations, seminar and project work of PG programmes	Monday, December 07, 2026	Friday, December 11, 2026
Ph.D. Progress report submission	Monday, December 07, 2026	Thursday, December 24, 2026
Last date for submission of application (to the course instructor) by the absentees for special ETE (on medical ground only)	Wednesday, December 16, 2026	
Last date for showing the marked answer scripts of the ETE to students.	Tuesday, December 15, 2026	
Grades submission to DUGC /DPGC	Wednesday, December 16, 2026	
Grade Moderation Committee meeting	Thursday, December 17, 2026	Thursday, December 17, 2026
Grade Submission by Course Coordinators on ERP	Monday, November 23, 2026	Thursday, December 17, 2026
Final locking of grades by Convener DUGC/DPGC on ERP	Friday, December 18, 2026	
Grades display to the students on ERP	Saturday, December 19, 2026	
Winter vacation for UG students	Monday, December 14, 2026	Thursday, December 31, 2026
Opening of ERP portal for fee deposition and course Registration for all Students for Even Semester 2026-27	Monday, December 07, 2026	Sunday, January 04, 2026
Commencement of Classes for Even Semester 2026-27	Sunday, January 04, 2026	
Fee deposition and course registration of existing students with late fee of Rs 1,000/-	Monday, January 05, 2026	Sunday, January 11, 2026
Fee deposition and course registration of existing students with late fee of Rs 10,000 (No registration after the last date)	Monday, January 12, 2026	Sunday, January 18, 2026

** Subject to confirmation of DSW

Teaching days for Odd Semester 2026-27 (w.e.f. 20-07-2026 to 20-11-2026)

Days	Months																												Less for MTE/ETE	Total Teaching days
	July				August					September					October					November					December						
Mon		-	-	27	3	10	17	24	31		7	14	**21**	**28**	-	5	12	-	26	2	9	16	**23**	30		**7**	-	-	-	**4**	15
Tue		-	-	28	4	11	18	25	-	1	8	15	**22**	29	-	6	13	-	27	3	10	17	**24**	-	**1**	**8**	-	-	-	**4**	15
Wed		-	-	29	5	12	19	-	-	2	9	16	**23**	30	-	7	14	-	28	4	11	18	**25**	-	**2**	**9**	-	-	-	**4**	14
Thu		-	-	30	6	13	20	27	-	3	10	17	**24**	-	1	8	15	-	29	5	12	19	**26**	-	**3**	**10**	-	-	-	**4**	15
Fri		-	-	31	7	14	21	28	-	-	11	18	**25**	-	-	9	16	-	30	6	13	20	**27**	-	**4**	**11**	-	-	-	**4**	13
Sat	-		-	-	-	-	-	-	-	-	-	-	**26**		-	-	-	-	-	-	-	-	-		-	-	-	-	-	**1**	
Total days	5				20					15					16					16					-					**21**	**72**

Commencement of Classes	**July 27, 2026**
Mid Term Examiantion	**September 21 - 28, 2026**
Annual Atheletic Meet 2026	**October 10 - 11, 2026**
Mid Term Break (only UG students)	**October 19 - 23, 2026**
Technical Fest "SPHINX"	**October 31, 2026 - November 01, 2026**
Last Date of Teaching	**November 20, 2026**
End Term Examiantion	**November 23 - December 11, 2026**

List of Holidays

Independence Day	Saturday, August 15, 2026
Milad un Nabi (Prohet Mohammad's Birthday*	Wednesday, August 26, 2026
Janmashtami	Friday, September 04, 2026
Mahatma Gandhi's Birthday	Friday, October 02, 2026
Dussehra	Tuesday, October 20, 2026
Diwali	Sunday, November 08, 2026
Guru Nanak's Birthday	Tuesday, November 24, 2026
Christmas day	Friday, December 25, 2026

*Subject to change in the visibility of the moon

** Subject to confirmation of DSW

MALAVIYA NATIONAL INSTITUTE OF TECHNOLOGY JAIPUR

ACADEMIC CALENDAR FOR EVEN SEMESTER 2026-27

EVENTS	From	To
	Day & Date	Day & Date
Opening of ERP portal for fee deposition and course Registration for all Students for Even Semester 2026-27	Monday, December 07, 2026	Monday, January 04, 2027
Commencement of Classes for Even Semester 2026-27	Monday, January 04, 2027	
Fee deposition and course registration of existing students with late fee of Rs 1,000/-	Tuesday, January 05, 2027	Monday, January 11, 2027
Fee deposition and course registration of existing students with late fee of Rs 10,000 (No registration after the last date)	Tuesday, January 12, 2027	Tuesday, January 19, 2027
Opening of ERP for course addition/drop	Tuesday, January 19, 2027	Wednesday, January 20, 2027
Malaviya Sports Tournament 2027 (MST-2027)	Friday, January 29, 2027	Sunday, January 31, 2027
Last date for conversion to audit	Saturday, January 30, 2027	
Cultural Fest- Blitzschlag	Friday, February 05, 2027	Sunday, February 07, 2027
MTE for lab courses (during class hours)	Friday, February 12, 2027	Thursday, February 18, 2027
Mid Term Examination	Monday, February 22, 2027	Monday, March 01, 2027
Mid Term evaluation of B.Tech/M.Tech Projects	Monday, February 15, 2027	Friday, February 26, 2027
Last date for submission of application (to the course instructor) by the absentees for special MTE (on medical grounds only)	Friday, March 05, 2027	
Last date for showing the answer scripts of MTE	Friday, March 12, 2027	
Pre-registration of courses for next semester	Thursday, April 08, 2027	Monday, April 12, 2027
End Term online feedback	Monday, April 19, 2027	Friday, April 23, 2027
Last date of communication of shortage of attendance to Students and Academic Section	Friday, April 23, 2027	
Last date for application of course withdrawal	Wednesday, April,15, 2027	
Last date of classes	Friday, April 23, 2027	
End Term Examinations (ETE) of laboratory and theory courses	Monday, April 26, 2027	Friday, May 14, 2027
Evaluation of dissertation of PG program	Monday, April 26, 2027	Wednesday, June 30, 2027
Opening of ERP portal for grade submission	Monday, April 26, 2027	
Project viva voce of Undergraduate programs	Thursday, May 13, 2027	Friday, May 14, 2027
Ph.D. Progress report submission	Tuesday, May 18, 2027	Wednesday, June 30, 2027
Last date for showing the marked answer scripts of the ETE to students	Tuesday, May 18, 2027	
Last date for submission of application (to the course instructor) by the absentees for special ETE (on medical ground only)	Thursday, May 20, 2027	
Last date of primary lock for grades/grade submission to DUGC / DPGC	Thursday, May 20, 2027	
Grade Moderation Committee meeting	Friday, May 21, 2027	
Summer vacation for UG students	Monday, May 17, 2027	Sunday, July 25, 2027
Last date for final submission of grades by the course coordinator after grade moderation	Monday, May 24, 2027	
Final locking of grades by convener DUGC/DPGC on ERP	Tuesday, May 25, 2027	
Display of grades to the students on ERP	Wednesday, May 26, 2027	

Supplementary Examination, 2026-27		
Registration for Supplementary Examination	Friday, June 18, 2027	Friday, June 25, 2027
Supplementary Examination	Monday, July 12, 2027	Monday, July 19, 2027
Last date of submission of grades of Supplementary Examination by convener DUGC on ERP portal	Thursday, July 22, 2027	
Odd Semester (Academic Session 2027-28)		
Opening of ERP portal for fee deposition and course Registration for all continuing Students	Thursday, July 01, 2027	Sunday, July 25, 2027
Commencement of classes for all continuing students	Monday, July 26, 2027	
Registration of continuing students with late fee of Rs 1,000/-	Tuesday, July 27, 2027	Tuesday, August 03, 2027
Registration of continuing students with late fee of Rs. 10,000 (No registration after this date)	Wednesday, August 04, 2027	Tuesday, August 10, 2027

* subject to change in the date of holiday

Teaching days for Even Semester 2026-27 (w.e.f. 04.01.2027 to 23.04.2027)

Days	Months																									Less for MTE/ETE	Total Teaching
	Jan					Feb				March					April					May								
Mon		4	11	18	25	1	8	15	22	1	8	15	-	29	-	5	12	-	26		3	10				5	12
Tue		5	12	19	-	2	9	16	23	2	9	16	23	30	-	6	13	20	27		4	11				4	14
Wed		6	13	20	27	3	10	17	24	3	-	17	24	31	-	7	14	21	28		5	12				4	14
Thu		7	-	21	28	4	11	18	25	4	11	18	25	-	1	8	15	22	29		6	13				4	14
Fri		8	15	22	-	-	12	19	26	5	12	19	-	-	2	9	16	23	30	-	7	14				4	12
Sat		-	-	-	-	-	-	-	27	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		1	-
Sun		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-
Total days	17					14				20					16					-						22	66

Commencement of Classes	**January 05, 2027**
Malaviya Sports Tournament 2027 (MST-2027)	**January 29 - 31, 2027**
Mid Term Examiantion	**February 22 - March 01, 2027**
Last Date of Teaching	**April 23, 2027**
End Term Examiantion	**April 26 - May 14, 2027**
No Teaching day for Blitzchlag	**February 05 , 2027**
No Teaching day for MST	**January 29 , 2027**

33

List of Holidays

Makar Sankranti	14-Jan-27	Wednesday
Republic Day	26-Jan-27	Tuesday
Maha Shivaratri	6-Mar-27	Saturday
Id-ul-Fitr**	10-Mar-27	Wednesday
Holi	22-Mar-27	Monday
Good Friday	26-Mar-27	Friday
Mahavir Jayanti	19-Apr-27	Monday
Budha Purnima	20-May-27	Thursday

**Subject to change in the visibility of the moon

Annexure-C

MALAVIYA NATIONAL INSTITUTE OF TECHNOLOGY JAIPUR

MATERIALS RESEARCH CENTRE

Scheme for M. Tech in Semiconductor Materials and Devices

Semester I

S. No.	Course Title	Course Category	Type	Credits	L-T-P
1	Fundamentals of Semiconductor Materials	Core	Theory	3	3-0-0
2	Structural and Functional Characterization of Materials	Core	Theory	3	3-0-0
3	Semiconductor Material Characterization lab	Core	Lab	3	0-0-6
4	Program Elective-I	Elective	Theory	3	3-0-0
5	Program Elective-II	Elective	Theory	3	3-0-0
6	Program Elective-III	Elective	Theory	3	3-0-0

List of Elective Courses in Semester I

S. No.	Course Title	Course Category	Type	Credits	L-T-P
1	Physical Processes in Microfabrication	Elective	Theory	3	3-0-0
2	Electronic Oxide Materials	Elective	Theory	3	3-0-0
3	Materials for Flexible Electronics	Elective	Theory	3	3-0-0
4	Computational Methods in Material Science	Elective	Theory	3	3-0-0
5	Energy Materials and Their Applications	Elective	Theory	3	3-0-0
6	2D Materials: Synthesis, Properties and Applications	Elective	Theory	3	3-0-0

Semester II

S. No.	Course Title	Course Category	Type	Credits	L-T-P
1	Thin Film Technology	Core	Theory	3	3-0-0
2	Physics of Semiconductor Devices	Core	Theory	3	3-0-0
3	Semiconductor Device Characterization Lab	Core	Lab	3	0-0-6
4	Program Elective- IV	Elective	Theory	3	3-0-0
5	Program Elective-V	Elective	Theory	3	3-0-0
6	Open Elective-I	Elective	Theory	3	3-0-0

List of Elective Courses in Semester II

S. No.	Course Title	Course Category	Type	Credits	L-T-P
1	Quantum Heterostructures and Their Applications	Elective	Theory	3	3-0-0
2	Electronic Materials and Devices	Elective	Theory	3	3-0-0
3	Machine Learning for Materials Science	Elective	Theory	3	3-0-0
4	Compound Semiconductor Devices	Elective	Theory	3	3-0-0
5	Photonics Technology	Elective	Theory	3	3-0-0
6	Electrochemical Processes in Semiconductors	Elective	Theory	3	3-0-0

Semester III

S. No.	Course Title	Course Category	Type	Credit	L	T	P
1	Seminar	Program Core	-	3	0	0	6
2	Dissertation - I	Program Core	-	9	0	0	18

Semester IV

S. No.	Course Title	Course Category	Type	Credit	L	T	P
1	Dissertation - II	Program Core	-	12	0	0	24

Malaviya National Institute of Technology Jaipur
Materials Research Centre

Syllabus of core courses for M. Tech Program in Semiconductor Materials and Devices

Fundamentals of Semiconductor materials			
Prerequisite: 1.) Introductory Physics (Electricity and Magnetism 2.) Basic Chemistry 3.) Introduction to Materials Science (recommended but not required)	L	T	P
Type: Program core	3	0	0
Credit: 03			
Course Description: Course Description: This course provides a comprehensive introduction to semiconductor materials, focusing on their properties, processing, and applications. It covers the fundamental physics and chemistry underlying semiconductor behavior, types of semiconductor materials, crystal structures, electronic properties, and the basics of device fabrication.			
Course Content			
Unit 1 (7L)	**Electronic Properties and Band Structure of Semiconductors** Energy Bands in Solids: Valence and Conduction Bands, Band Gap: Direct vs. Indirect Semiconductors, Effective Mass of Electrons and Holes, Carrier Concentration in Intrinsic and Extrinsic Semiconductors, Effects of Temperature on Carrier Concentration, Doping and the Creation of n-type and p-type Semiconductors		
Unit 2 (7L)	**Carrier Dynamics, Defects, and Impurity Effects** Carrier Mobility and Conductivity, Drift and Diffusion of Carriers, Recombination and Generation Processes, Einstein Relation and Continuity Equation, Types of Defects: Point, Line, and Planar, Role of Impurities in Semiconductor Properties, Impact of Defects on Electrical and Optical Properties		
Unit 3 (7L)	**Semiconductor Junctions and Devices** pn Junctions, Formation and Equilibrium Conditions, Built-in Potential and Depletion Region, Diode I-V Characteristics and Capacitance, Diode Applications: Rectifiers, Photodiodes, Zener Diodes, **Semiconductor Junctions and Devices:** Metal-Semiconductor Junctions, Schottky Barrier Formation, Schottky Diode Characteristics and Uses.		
Unit 4 (10L)	**Bipolar Junction Transistors (BJTs)** Structure and Operation (npn, pnp), Modes of Operation and Current Gain, Applications in Switching and Amplification **Field-Effect Transistors (FETs):** MOSFET: Structure, Working Principles, Threshold Voltage, Types: nMOS, pMOS, CMOS Technology, scaling and Short-Channel Effects **Advanced Devices and**		

	Applications: Power Devices: IGBT, SiC/GaN MOSFETs, Optoelectronic Devices: LEDs, Laser Diodes, Solar Cells, Sensors and High-Frequency Devices, Device Integration and CMOS Scaling Trends, Semiconductor Hetrostructures.
Unit 5 (8L)	**Optical Properties of Semiconductors, Fabrication and Processing of Semiconductors:** Absorption, Emission, and Photoluminescence, Photovoltaic Effect and Solar Cells, LEDs and Lasers, Crystal Growth Techniques: Czochralski Process, Bridgman Method, Wafer Preparation and Doping Techniques.
References	1. Semiconductor Physics and Devices by Donald A. Neamen 2. Fundamentals of Semiconductor Fabrication by Gary S. May and Simon M. Sze 3. Physics of Semiconductor Devices by Simon M. Sze and Kwok K. Ng
Course Outcome	1. Understand the basic properties of semiconductors and the physical principles that govern their behavior. 2. Describe different types of semiconductor materials and their crystal structures. 3. Explain intrinsic and extrinsic semiconductor behavior, charge carrier dynamics, and doping. 4. Recognize the role of defects and impurities in semiconductor materials. 5. Comprehend the basics of semiconductor devices such as diodes, transistors, and photovoltaic cells. 6. Acquire knowledge about the fabrication processes for semiconductor materials and devices.

Structural and Functional Characterization of Materials			
Prerequisite: 1. Introduction to Materials Science or Chemistry 2. Basic Physics (particularly atomic and molecular physics) 3. Understanding of crystallography is recommended but not required	L	T	P
Type: Program core	3	0	0
Course Description: This course offers an in-depth exploration of techniques used to characterize the structure and functionality of materials. It covers methods to determine the atomic, molecular, and crystalline structure of materials, as well as techniques for evaluating their physical, chemical, and functional properties.			
Course Content			
Unit 1 (2L)	**Introduction to Material Characterization:** Overview of Material Properties and Characterization Techniques, Importance of Structural and Functional Characterization, Brief Overview of Analytical Techniques in Materials Science		
Unit 2 (6L)	**Structure characterization techniques:** Fundamental crystallography, Generation and detection of X-rays, X-ray diffraction techniques, Phase identification, indexing and lattice parameter determination, Secondary Ion Mass Spectrometry (SIMS)		
Unit 3 (7L)	**Thermal, electrical and magnetic characterization techniques:** Differential thermal analysis (DTA), Differential Scanning Calorimetry (DSC), Thermo-gravimetric analysis (TGA), Electrical resistivity in bulk and thin films, Hall effect, Dielectirc Measurements, Ferroelectric and Piezoelectric properties, Magnetic Property Characterization: Vibrating Sample Magnetometer (VSM), SQUID		
Unit 4 (10L)	**Microscopy characterization techniques:** Scanning Electron Microscopy (SEM): Imaging, Elemental Analysis, and Applications, Transmission Electron Microscopy (TEM): High-Resolution Imaging, SAED, Sample Preparation Techniques for SEM and TEM, Atomic Force Microscopy (AFM): Imaging Modes and Applications, Scanning Tunneling Microscopy (STM): Basics and Applications in Surface Analysis		
Unit 5 (12L)	**Spectroscopic Characterization Techniques:** X-ray Photoelectron		

	Spectroscopy (XPS) for Surface Chemistry, Auger Electron Spectroscopy (AES) for Surface Composition, Energy Dispersive X-ray Spectroscopy (EDS) in Conjunction with SEM, Fourier-Transform Infrared Spectroscopy (FTIR) and Raman Spectroscopy, UV-Visible Spectroscopy for Bandgap and Optical Properties, Applications of Spectroscopic Techniques in Material Analysis.
References	1. Characterization of Materials (Materials Science and Technology:A Comprehensive Treatment,Vol 2A & 2B, VCH (1992). 2. Semiconductor Material and Device Characterization, 3rd Edition, D.K. Schroder, Wiley-IEEE Press (2006). 3. Materials Characterization Techniques,S Zhang, L. Li and Ashok Kumar, CRC Press (2008). 4. Physical methods for Materials Characterization,P.E. J. Flewitt and R K Wild, IOP Publishing (2003). 5. Characterization of Nanophase materials,Ed. Z LWang, Willet-VCH (2000).
Course Outcome	1. Understand the principles and applications of various structural and functional characterization techniques. 2. Be able to select appropriate methods to characterize materials based on their structural, chemical, and physical properties. 3. Gain hands-on experience (if applicable) in using different characterization tools. 4. Develop skills to analyze and interpret data from characterization techniques. 5. Apply characterization methods to solve real-world materials science and engineering problems.

Semiconductor Material Characterization Lab			
Prerequisite: Basic material characterization techniques	L	T	P
Type: Program core	0	0	6
Credit: 03			
Course Description: The course will provide hands on exposure to various characterization techniques used for semiconductor materials.			
Course Content			
Experiment 1: X-ray diffraction studies of basic semiconductor materials like Si, TiNiSn etc. **Experiment 2**: Optical Band gap determination of semiconductor materials like Si, TiNiSn etc using UV-visible spectroscopy. **Experiment 3**: Electrical Band gap determination of semiconductor materials like Si, TiNiSn etc. using SDA. **Experiment 4**: Determination of surface roughness of semiconductor materials through AFM. **Experiment 5**: Surface morphological studies of semiconductor materials using SEM **Experiment 6**: Growth of SiO2 on Si and determination of its thickness with time **Experiment 7**: Determination of chemical composition and trap charges in SiO2 grown over Si. **Experiment 8**: Mechanical properties determination of SiO2 grown over Si. **Experiment 9**: Study of residual stress in a sample using X-ray diffraction.			

Thin Film Technology			
Prerequisite: Basic physics and materials science	L	T	P
Type: Program core	3	0	0
Credit: 03			
Course Description: The course will provide basic understanding of various thin film deposition techniques.			
Course Content			
Unit 1 (5L)	**Vacuum components and systems**: Need for vacuum, ways to achieve vacuum, determination of vacuum, dry and vapour pumps, pressure measurement gauges, conductance and other system design considerations.		
Unit 2 (13L)	**Thin film deposition techniques**: Physical and chemical vapour deposition techniques, including molecular beam epitaxy, laser ablation and hot wire and microwave CVD techniques. Film contamination, cosine law of deposition, conformal coverage and line of sight deposition		
Unit 3 (7L)	**Growth of thin films**: Thermodynamic and kinetic considerations of deposition of thin films by both CVD and PVD, including magnetron sputtering. In situ characterization of thin film deposition process.		
Unit 4 (4L)	**Epitaxy and Epitaxial growth and characterization:** Types of epitaxy, Vapour phase epitaxy, Metal-organic CVD, Molecular beam epitaxy, *In situ* monitoring techniques (RHEED, STM, AFM).		
Unit 5 (6L)	**Characterization of thin films**: Different methods of thickness measurements, electrical, optical, chemical and structural property determination.		
Unit 6 (4L)	**Applications of thin films:** Hard and decorative coatings, semiconductor thin films, organic thin films. Applications in optical windows, integrated circuits, micro-electro-opto-mechanical systems and photovoltaics.		
References	1. Ohring, M., *The Materials Science of Thin Films*, 2nd Edition, Academic press, 2002. 2. Smith, D.L., *Thin-Film Deposition: Principles and Practice*, McGraw-Hill, 1995. 3. Soriaga, M.P., Stickney, J., Bottomley, L.A., and Kim Y.G, *Thin Films: Preparation, Characterization, Applications*, Springer Science, 2011. 4. Chopra, K. L., *Thin Film Phenomena*, McGraw Hill, 1969.		

Course Outcome	CO1. To understand the principle, differences and similarities, advantages, and disadvantages of different thin film deposition techniques. CO2. To understand and evaluate and use models for understanding nucleation and growth of thin films. CO3. To understand about different instrumentation techniques and to analyze thin film properties to apply for various applications. CO4. To improve problems solving skills related to evaluation of different properties of thin films.

Physics of Semiconductor Devices			
Prerequisite: 1. Basic understanding of quantum mechanics and solid-state physics. 2. Fundamentals of electrical circuits and electromagnetism.	L	T	P
Type: Program Core	3	0	0

Course Description: This course introduces the fundamentals of semiconductor physics. Exploration of the working principles of basic semiconductor devices. This will help student to understand device fabrication processes and performance metrics. It will provide analytical and numerical approaches to device behavior.ter understanding of how to integrate ML with existing computational material science tools.

Course Content

Unit 1 (3L)	**Fundamentals of Semiconductor Physics:** Introduction to Semiconductors: Semiconductor materials, elemental vs. compound semiconductors, energy bands. Carrier Statistics: Fermi-Dirac distribution, intrinsic and extrinsic semiconductors, doping. Carrier Transport Mechanisms: Drift, diffusion, mobility, and scattering mechanisms. Generation and Recombination: Carrier lifetime, Shockley-Read-Hall (SRH) recombination, Auger recombination.
Unit 2 (10L)	**P-N Junctions:** Formation of the P-N Junction: Band diagram, depletion region, built-in potential. Electrostatics of the P-N Junction: Space charge region, electric field, and potential distribution. P-N Junction Under Forward and Reverse Bias: Current-voltage characteristics, diffusion and drift currents. Breakdown Mechanisms in P-N Junctions: Zener and avalanche breakdown. Small-Signal and High-Frequency Analysis: Capacitance-voltage characteristics, transient behavior. **Bipolar Junction Transistors (BJTs):** Basic Structure and Operation: NPN and PNP transistors, current flow, modes of operation. BJT I-V Characteristics: Input and output characteristics, Early effect. Current Gain and Base Transport Factor: Gain mechanisms, recombination in the base.
Unit 3 (8L)	**Metal-Semiconductor Contacts:** Schottky Contacts: Formation, energy band diagrams, thermionic emission. Ohmic Contacts: Contact resistance, tunneling, and fabrication techniques. Applications of Metal-Semiconductor Junctions Applications in rectifiers, detectors, and Schottky diodes.

Unit 4 (8L)	**Metal-Oxide-Semiconductor (MOS) Structures:** Introduction to MOS Capacitors: Energy band diagrams, accumulation, depletion, and inversion. Capacitance-Voltage Characteristics: High-frequency and low-frequency C-V analysis. Interface States and Their Effects: Trap states, Dit measurement techniques. MOS Fabrication Techniques: Oxidation, photolithography, and thin-film deposition.
Unit 5 (8L)	**Semiconductor Devices:** Charge-Coupled Devices (CCDs): Principles of operation, applications in imaging. Photodetectors and Solar Cells: Principles, characteristics, and performance metrics. Light-Emitting Diodes (LEDs): Radiative recombination, efficiency, and device design. Power Devices: Diodes, BJTs, and MOSFETs for power applications, memory devices.
References	1. "Semiconductor Physics and Devices: Basic Principles" by Donald A. Neamen, Fourth Edition, McGraw-Hill, March 2011. 2. Fundamentals of Semiconductor Devices" by Pierret Robert F., 1st Edition, Pearson, January 2006.
Course Outcome	Students will: 1. Gain a strong foundation in semiconductor physics and device principles. 2. Analyze and model the behavior of basic devices such as diodes, BJTs, and MOSFETs. 3. Understand fabrication processes and device performance metrics. 4. Be prepared for advanced studies or careers in semiconductor device engineering.

Fabrication of semiconductor device and electrical characterization lab			
Prerequisite: Course on semiconductor materials and semiconductor device physics	L	T	P
Type: Program core	0	0	6
Credit: 03			
Course Description: The course will deal with the fabrication of devices using thin film growth method and the electrical characterization of the devices.			
Course Content			
Experiment 1: Study of I-V characteristics of a diode. **Experiment 2:** Study of I-V characteristics of a transistor. **Experiment 3:** Cyclic voltammetric characteristics of fuel cells. **Experiment 4:** Calculation of capacitance of a supercapacitor using Cyclic voltammetry. **Experiment 5:** Growth of graphene on a substrate using CVD technique. **Experiment 6:** Electrical characterization of graphene grown using CVD. **Experiment 7:** Structural characterization of a metallic thin film grown using magnetron sputtering. **Experiment 8:** Fabrication of metallic thin film on semiconductor substrate using magnetron sputtering.			

Malaviya National Institute of Technology Jaipur
Materials Research Centre

Syllabus of elective courses for M. Tech Program in Semiconductor Materials and Devices

Physical Processes in Microfabrication			
Prerequisite: Basic Thermodynamics and materials science	L	T	P
Type: Program core	3	0	0
Credit: 03			
Course Description: The course will provide basic understanding of diffusion and oxidation in materials.			
Course Content			
Unit 1 (7L)	**Diffusion and mechanism:** Thermodynamic basis of diffusion, chemical potential gradients, Theory of diffusion, diffusion in various geometries, mechanisms for diffusion: Vacancy diffusion, Interstitial diffusion, concept of random walk; substitutional diffusion, Activation energy for diffusion, orientation dependence, diffusion in ordered phases.		
Unit 2 (5L)	**Laws of diffusion**: Fick's first law, Fick's second law, methods for analysing diffusion		
Unit 3 (8L)	**Diffusion in metals and semiconductors:** self-diffusion, interstitial solutes, dilute substitutional alloys, binary intermetallics, quasi-crystalline alloys, foreign atom diffusion and its impact, interstitial-substitutional diffusion.		
Unit 4 (4L)	**Temperature Dependence and Diffusion Kinetics:** Arrhenius equation for diffusion, Activation energy and pre-exponential factor, Diffusion-controlled phase transformations, Role of microstructure and defects.		
Unit 5 (6L)	**Role of diffusion and case studies:** grain growth, high temperature corrosion and creep, Ion implantation: physics and damage, diffusion doping, annealing and activation, junction formation.		
Unit 6 (9L)	**Thermodynamics and Kinetics of Oxidation:** Oxidation reactions in metals and ceramics, Ellingham diagram, Gibbs free energy, oxidation states and phase stability, Growth kinetics of oxide layers, Wagner's theory of oxidation and ionic transport, Pilling-Bedworth ratio and protective vs. non-protective oxides, Internal oxidation, selective oxidation		
References	1. Shewmon, P. G., *Diffusion in Solids*, 2nd Edition, Wiley-TMS, 1991. 2. Helmut, M., *Diffusion in Solids: Fundamentals, Methods, Materials, Diffusion-Controlled Processes*, Springer, 2007. 3. Paul, A., Laurila, T., Vuorinen, V., Divinski, S. V., *Thermodynamics, Diffusion and the Kirkendall effect in Solids,* Springer, 2014.		

	4. Birks, N., Meier, G. H., Pettit, F. S., *Introduction to the High Temperature Oxidation of Metals*, Cambridge University Press, 2006.
Course Outcome	CO1. Understand and apply the fundamental principles of atomic diffusion in various types of solid materials. CO2: Analyze diffusion data using Fick's laws, and understand the significance of diffusion coefficients in material design and processing. CO3: Apply the theory of diffusion to understand different material properties in various types of solids. CO4: Predict oxidation behavior of different materials using thermodynamic and kinetic tools.

Electronic Oxide Materials			
Prerequisite: Basic knowledge of physical chemistry, physics, and material characterization	L	T	P
Type: Program elective	3	0	0
Credit: 03			
Course Description: This course deals with the science and engineering of oxide materials, their properties and applications.			
Course Content			
Unit 1 (4L)	**Introduction**: Overview of functional oxides, Classes of oxides: perovskites, spinels, pyrochlores, fluorites, Key electronic functions: insulating, semiconducting, superconducting, ferroelectric, magnetic.		
Unit 2 (10L)	**Bonding, crystal structures and electronic structures in oxides**: Coordination, crystal field theory, and ionic radii, Common oxide structures: perovskite (ABO_3), rutile, corundum, Structure-property correlations. Band theory in oxides, Mott insulators and charge transfer insulators, Role of d- and f-electrons, Oxide semiconductors and wide-bandgap materials, Density of states and band gap engineering.		
Unit 3 (6L)	**Defects and doping in oxide materials:** Point defects: vacancies, interstitials, anti-sites, Defect chemistry using Kröger-Vink notation, Oxygen vacancies and redox reactions, n-type and p-type doping in oxides		
Unit 4 (8L)	**Dielectric, ferroelectric, magnetic oxide and multiferroics:** Polarization mechanisms: electronic, ionic, orientation, Ferroelectricity, piezoelectricity, pyroelectricity, Soft vs. hard ferroelectrics, Hysteresis behavior and fatigue, Key materials: $BaTiO_3$, PZT, HfO_2-based ferroelectrics. Magnetism in solids: paramagnetism, ferromagnetism, antiferromagnetism, Double exchange and super exchange interactions, Spinel ferrites and manganites, Multiferroic materials and magnetoelectric coupling.		
Unit 5 (4L)	**Oxide semiconductors and conductors:** Transparent conducting oxides (TCOs): ITO, ZnO, SnO_2, Oxide thin-film transistors (TFTs), Amorphous vs. crystalline oxides, Mobility mechanisms in disordered oxides.		
Unit 6 (7L)	**Energy applications of electronic oxides:** Oxides in fuel cells and batteries, Oxides in photocatalysis and solar cells (e.g., TiO_2, $BiVO_4$), Thermoelectric		

	oxides, Electrochemical stability and conductivity.
References	1. Sze, S. M. and Ng, K., *Physics of Semiconductor Devices*. John Wiley & Sons, 2007. 2. Coey, J.M.D., *Magnetism and Magnetic Materials*, Cambridge University Press, 2012. 3. Various research and review papers.
Course Outcomes	CO1: Analyze the structure-property relationships in electronic oxide materials. CO2: Explain the role of defects and dopants in controlling electronic behavior in oxides. CO3: Evaluate the dielectric, ferroelectric, and magnetic properties of various oxide classes. CO4: Propose material selection and design strategies for specific oxide-based applications.

Materials for Flexible Electronics			
Prerequisite: 1. Introductory courses in Polymer Science or Materials Science 2. Basic Chemistry and Physics	L	T	P
Type: Program elective	3	0	0
Credit: 03			
Course Description: This course explores the synthesis, properties, and applications of functional polymers and composite materials, emphasizing their use in semiconductor devices and electronic applications. Students will learn the key relationships between the structure and properties of polymers, and how these materials are engineered for specific functionalities, such as thermal management, dielectric applications, and flexible electronics.			
Course Content			
Unit 1 (3L)	**Introduction to Functional Polymers and Composites:** Overview of polymer and composite materials, Types of functional polymers: conductive, dielectric, structural, and biodegradable, Applications and importance across industries, particularly in electronics and semiconductors		
Unit 2 (6L)	**Polymer Synthesis and Processing Techniques:** Polymerization techniques: addition, condensation, and controlled polymerization, Chemical modification for functionality enhancement, Processing methods: extrusion, solution casting, and spin coating, relevant to electronic devices		
Unit 3 (8L)	**Structure and Mechanical Properties of Polymers:** Understanding polymer morphology: crystalline, semi-crystalline, and amorphous structures, Mechanical properties: tensile strength, flexibility, toughness, Effects of fillers and reinforcements in polymer composites		
Unit 4 (7L)	**Electrical, Dielectric, Thermal Properties and Thermal Management Applications:** Conductive polymers and applications in electronics (e.g., polyaniline, PEDOT), Dielectric polymers for insulators and capacitors in semiconductor devices, Low-K and high-K dielectric materials for energy-efficient devices. Thermal properties: glass transition temperature, melting point, and decomposition,		

	Thermally conductive composites for electronic and semiconductor applications, Role of polymers in managing heat dissipation in devices.
Unit 5 (10L)	**Emerging Applications and Trends in Functional Polymers, Relevance of Functional Polymers in the Semiconductor Industry:** Encapsulation, packaging, and insulation materials for semiconductor devices, Polymers for flexible electronics and wearable devices, Advantages over traditional materials: weight reduction, flexibility, and cost-effectiveness, Advances in nanocomposites, smart polymers, and self-healing materials, Applications in 3D printing and additive manufacturing for microelectronics, Case studies on polymer applications in semiconductor devices and consumer electronics
References	1. "Polymer Science and Technology" by Joel R. Fried 2. "Functional Materials: Preparation, Processing, and Applications" by S. Banerjee 3. "Handbook of Polymer Composites for Engineers" by L.C. Hollaway
Course Outcomes	1. Describe the properties and synthesis of functional polymers and composites. 2. Relate polymer structure to its thermal, mechanical, and electrical properties. 3. Understand the use of polymers and composites in semiconductor and electronic devices. 4. Identify the latest advancements in polymer composites for flexible and wearable electronics.

Computational Methods for Material Science			
Prerequisite: 1. Basic knowledge of material science principles 2. Familiarity with linear algebra, calculus, and differential equations 3. Programming skills (preferably Python or MATLAB)	L	T	P
Type: Program elective	3	0	0
Credit: 03			
Course Description: This course introduces fundamental computational methods used in material science. It provides information about computational tools and software. The course will enable students to model, simulate, and analyze materials at various scales, from atomic to macroscopic.			
Course Content			
Unit 1 (5L)	**Introduction to Computational Material Science:** Overview of Computational Material Science, Introduction to the field, scope, and importance of computational methods in material research. Basic Concepts in Material Modeling Brief overview of atomic structures, crystallography, and material properties. Computational Techniques and Approaches, Overview of atomistic, mesoscale, and macroscale modeling; multiscale modeling concepts.		
Unit 2 (5L)	**Quantum Mechanics and Electronic Structure Methods:** Fundamentals of Quantum Mechanics, Review of quantum mechanical principles relevant to material science.		
Unit 3 (10L)	**Density Functional Theory (DFT)** - Introduction to DFT and its applications in material science. Basics DFT calculation using different software. Calculation of Band Structure and Density of States Practical session focused on electronic properties determination using DFT.		
Unit 4 (10L)	**Molecular Dynamics (MD):** Molecular Dynamics - Introduction and Basics of MD simulations, force fields, and algorithms. Setting up and running an MD simulation. Analyzing MD data: calculating radial distribution functions, diffusion coefficients, and thermal properties.		
Unit 5 (10L)	**Monte Carlo Methods in Material Science**: Introduction to Monte Carlo		

	simulations and their application in material science. Applications of MD and MC Simulations, Case studies: phase transitions, defect studies, and nanomaterials. Kinetic Monte Carlo (KMC) Methods: Introduction to KMC and its application in studying diffusion and reaction kinetics.
References	1. Computational Materials Science: An Introduction by June Gunn Lee 1st Edition, CRC press, October 2011. 2. Introduction to Computational Materials and Sciences: Fundamentals to Applications by Richard LeSar, 1st Edition, Cambridge University Press, March 2023. 3. Molecular Dynamics Simulation: Elementary Methods by J. M. Haile SBN: 978-0-471-18439-3, March 1997
Course Outcome	1. Students develop an understanding of materials behavior across scales—atomic, mesoscale, and macroscale—using computational models like DFT, molecular dynamics, and finite element methods. 2. Ability to predict properties such as mechanical strength, thermal conductivity, and electronic behavior, aiding in material selection and design. 3. Ability to predict properties such as mechanical strength, thermal conductivity, and electronic behavior, aiding in material selection and design.

Energy Materials and their applications			
Prerequisite: Basic understanding of physics and electrochemistry	L	T	P
Type: Program Elective	3	0	0
Credit: 03			
Course Description: The main objective of this course is to give students an overview of energy materials and their utility in various sectors.			
Course Content			
Unit 1 (10L)	**Photovoltaic Solar Energy Materials**: Solar cell principles and its characterization. Absorption and minority carrier life time, Single crystalline and polycrystalline silicon solar cells, Amorphous silicon solar cells, Cadmium Telluride thin film solar cells, Transparent conductive oxide materials, Chalcopyrite based solar cells, Organic and dye sensitized solar cells.		
Unit 2 (8L)	**Thermoelectric Materials**: Physics of thermoelectricity, Peltier, Seebeck and Thomson effects, Types of thermoelectric materials, Thermoelectric generators, Peltier cooler.		
Unit 3 (10L)	**Electrochemical Energy Materials**: Fundamentals of electrochemical energy conversions, Primary batteries - Zn-MnO_2 system, carbon-zinc and carbon-zinc chlorides performance characteristics and zinc-silver oxide. Secondary batteries – lead acid, nickel cadmium, nickel metal hydride, silver oxide zinc system, lithium ion battery, Batteries beyond Lithium Ion, Introduction to super capacitors, types of super capacitors, Introduction to fuel cells, Types of fuel cells and technology development.		
Unit 4 (8L)	**Hydrogen Energy**: Hydrogen; its merit as a fuel; Applications, Hydrogen production methods, Production of hydrogen from fossil fuels, Electrolysis, Thermal decomposition, Photochemical and photo-catalytic methods, Hydrogen storage methods, Metal hydrides, Metallic alloy hydrides, Carbon nano-tubes, Sea as source of Deuterium.		
References	(i) Markvart ,T., Castaner L., *Solar Cells-Materials, Manufacture and Operation*, 2nd ed., Elsevier Ltd. 2012 (ii) Nolas, G. S., Sharp, J., Goldsmid ,J., . Schwartz, M.M., *Thermoelectric: Basic Principles and New Materials Developments*, Springer series 2001 (iii) Bard, J., Allen. and Larry Faulkner,R.,*Electrochemical methods: Fundamentals*		

	and Applications , 2nd Edition John Wiley & Sons. Inc 2004 (iv). Linden, D., *Handbook of Batteries*, 2nd edition, McGraw-Hill, New York 1995
Course Outcome	CO1: Grasp the basics of Energy materials and their properties. CO2: Understanding the working principle of devices made of energy materials. CO3: Synthesis routes for energy materials for different targeted applications.

2D Materials: Synthesis, Properties, and Applications			
Prerequisite: 1. Basics of Solid State Physics (crystal structures, band theory) 2. Introduction to Materials Science and Engineering 3. Fundamentals of Semiconductor Physics (charge carriers, p–n junctions)	L	T	P
Type: Program Elective	3	0	0
Course Description: This course offers an in-depth exploration of techniques used to characterize the structure and functionality of materials. It covers methods to determine the atomic, molecular, and crystalline structure of materials, as well as techniques for evaluating their physical, chemical, and functional properties.			
Course Content			
Unit 1 (4L)	**Introduction to 2D Materials:** Overview of 2D materials: Graphene, MXenes, Transition Metal Dichalcogenides (MoS_2, WS_2), h-BN, Phosphorene. Importance and uniqueness of 2D materials in electronics and energy devices.		
Unit 2 (5L)	**Structural and Electronic Properties:** Crystal structure and lattice dynamics of 2D materials, Electronic band structure and surface states, Mechanical and thermal properties, Role of surface terminations and defects.		
Unit 3 (10L)	**Synthesis Techniques:** Top-down methods: Mechanical exfoliation, liquid-phase exfoliation, Bottom-up methods: CVD, ALD, MBE for 2D semiconductors, Etching and delamination techniques for MXenes and MAX phases, Growth of van der Waals heterostructures.		
Unit 4 (10L)	**Surface Engineering and Doping Strategies:** Surface functionalization and defect engineering, Substitutional doping, molecular doping, and electrostatic gating, Environmental stability, passivation, and surface protection.		
Unit 4 (10L)	**Devices Based on 2D Materials:** Field-effect transistors and logic devices, Photodetectors, LEDs, and optical modulators, Supercapacitors, lithium-ion and sodium-ion batteries, and catalysis, Sensors: gas, strain, biomedical, and environmental, Flexible, wearable, and printable electron.		
References	1. 2D Materials: Properties and Devices, Phaedon Avouris and Tony F. Heinz, Cambridge University Press (2017). 2. 2D Materials for Electronics, Sensors and Devices: Synthesis,		

	Characterization, Fabrication and Applications, S. Balendhran, S. Walia and M. Bhaskaran, Elsevier (2019) 3. 2D Materials: Sensing Applications, Edited by A. K. Mishra, CRC Press (2023)
Course Outcome	1) To understand the structural, electronic, optical, and mechanical properties of 2D materials. 2) To learn the fabrication and processing techniques for 2D materials. 3) To gain insight into their applications in electronics, optoelectronics, energy storage/conversion, and sensors. 4) To explore the state-of-the-art advances and future directions in 2D material research.

Quantum Heterostructures and Their Applications			
Prerequisite: Basic knowledge of Chemistry, Physics and Biology	L	T	P
Type: Program elective	3	0	0
Credit: 03			

Course Description:
The course will cover the principles, synthesis, and diverse applications of quantum dots (QDs), which are semiconductor nanocrystals with unique optical and electronic properties due to quantum confinement effects.

Course Content

Unit 1 (3L)	**Introduction to Quantum Heterostructures**: Overview of heterostructures, Dimensionality and quantum confinement, Types of quantum heterostructures: wells, wires, dots, superlattices.
Unit 2 (4L)	**Quantum Wells:** Potential well models (finite and infinite), Bound states and energy quantization, Tunneling and resonant states, Density of states in 2D systems.
Unit 3 (5L)	**Quantum Well Lasers:** Principles of operation, threshold current, gain, and confinement factor. Strained-layer and multiple quantum well designs, Performance comparison with bulk lasers
Unit 4 (6L)	**Quantum dots**: What are quantum dots? Definition, size, and quantum confinement. Understanding quantum mechanical principles in nanomaterials, Energy quantization in low-dimensional systems, Comparison of bulk materials and nanomaterials. Types of quantum dots: Semiconductor quantum dots (CdSe, CdTe, PbS, etc.), Core-shell quantum dots, carbon quantum dots.
Unit 5 (7L)	**Synthesis of Quantum dots**: Solution-phase methods: hot injection, colloidal synthesis, and chemical vapor deposition. Green and environmentally friendly synthesis routes: non-toxic precursors, surfactant-free methods. Surface modification and passivation strategies to improve optical properties and stability. Synthesis parameters affecting quantum dot properties, Methods for tuning optical properties.
Unit 6 (5L)	**Optical and Electronic Properties of Quantum dots:** Optical properties: Quantum dot absorption and emission spectra, Photoluminescence, fluorescence,

	and quantum yield, Excited-state dynamics and carrier relaxation. Electronic properties: Energy band structure and density of states, Carrier transport and trapping.
Unit 7 (9L)	**Applications of Quantum Dots:** Quantum dots for photovoltaic applications: Quantum dot solar cells (QDSCs), Carrier dynamics in QDs: Charge transport, recombination, and exciton dissociation, Types of quantum dot solar cells: Sensitized, all-solution-processed, and hybrid systems. Quantum dots in light-emitting diodes (LEDs): Mechanisms of electroluminescence, Color-tunable emission in QD-LEDs and quantum dot displays, Quantum dots for lasing applications: Thresholds, stimulated emission, and QD lasers.
References	1. Bimberg, D., Grundmann, M., Ledentsov, N. N., *Quantum Dot Heterostructure*, Wiley, 1999. 2. Rogach, A. L., *Semiconductor Nanocrystal Quantum Dots,* Springer, New York, 2008. 3. Harrison, P., *Quantum Wells, Wires and Dots: Theoretical and Computational Physics of Semiconductor Nanostructures,* John Wiley & Sons, Ltd. 2005. 4. Meng, H., *Colloidal Quantum Dot Light Emitting Diodes: Materials and Devices*, Wiley-VCH, 2023. 5. Various research and review papers.
Course Outcomes	CO1: Understand the principles of quantum confinement and how they give rise to unique properties in quantum heterostructures. CO2: Understand the concept of Quantum wells and quantum well lasers. CO3: Be proficient in various synthesis methods for quantum dots and their surface modifications. CO4: Explore the diverse applications of quantum heterostructures in areas such as photovoltaics and optoelectronics.

Electronic Materials and Devices			
Prerequisite: 1. Introductory Physics or Materials Science 2. Basic knowledge of Solid-State Physics or Chemistry	L	T	P
Type: Program elective	3	0	0
Credit: 03			

Course Description: This course explores the synthesis, properties, and applications of functional polymers and composite materials, emphasizing their use in semiconductor devices and electronic applications. Students will learn the key relationships between the structure and properties of polymers, and how these materials are engineered for specific functionalities, such as thermal management, dielectric applications, and flexible electronics.

Course Content

Unit 1 (3L)	**Fundamentals of Electronic Materials:** Classification of electronic materials: conductors, semiconductors, and insulators, Band theory and energy bands in solids, Charge carriers: electrons and holes, Electrical conductivity, resistivity, and mobility, Temperature dependence of electrical properties, Thermal conductivity and heat management in electronic devices
Unit 2 (9L)	**Dielectric and Ferroelectric Materials:** Understanding dielectric constant and different polarization mechanisms (electronic, ionic, dipolar). Key applications include capacitors and memory devices that rely on dielectric behavior. Study of spontaneous polarization, hysteresis loops, and phase transitions. Important applications in non-volatile ferroelectric memories (FeRAM), sensors, and actuators.
Unit 3 (8L)	**Optical Materials and Optoelectronic Devices:** Interaction with light: Fundamentals of absorption, emission, and transmission of light through materials, along with key optical properties like refractive index and absorption coefficient. Optoelectronic devices: Basics and working principles of LEDs, semiconductor lasers, and photodetectors, highlighting their roles in communication and sensing. Transparent conductive materials: Characteristics and use of materials like Indium Tin Oxide (ITO) in displays, touchscreens, and solar cells.

Unit 4 (7L)	**Magnetic Materials and Their Applications:** Magnetic properties: paramagnetism, diamagnetism, ferromagnetism, Magnetic domains, hysteresis, and magnetic permeability, Applications in data storage, sensors, and inductors
Unit 5 (7L)	**Emerging Trends and Advanced Applications in Electronic Materials:** Overview of emerging materials: 2D materials, organic semiconductors, and topological insulators, Nanoelectronics and quantum materials, Advanced applications in flexible electronics, sensors, and wearable devices
References	1. "Solid State Electronic Devices" by Ben G. Streetman and Sanjay Kumar Banerjee 2. "Electronic Properties of Materials" by Rolf E. Hummel 3. "Physics of Semiconductor Devices" by Simon M. Sze and Kwok K. Ng
Course Outcomes	1. Understand the fundamental properties of electronic materials. 2. Analyze the behavior of materials in electronic devices. 3. Gain knowledge on the specific role of semiconductors in electronics. 4. Apply principles of electronic materials to understand device functionality and applications. 5. Stay informed on emerging trends in electronic materials for next-generation devices.

Machine Learning For Materials Science			
Prerequisite: 1. Introduction to Materials Science or Chemistry 2. Basic Physics (particularly atomic and molecular physics) 3. Programming knowledge (Python recommended)	L	T	P
Type: Program Elective	3	0	0
Course Description: This course offers an exploration to introduce machine learning concepts and algorithms relevant to material science. Equip students with skills to handle material-related datasets and apply ML techniques. Demonstrate ML applications in material discovery, property prediction, and process optimization. Foster understanding of how to integrate ML with existing computational material science tools.			
Course Content			
Unit 1 (7L)	**Introduction to Machine Learning (ML) and Material Science:** Introduction to ML and Its Importance in Material Science. Overview of ML methods and their relevance in solving material science challenges. Basics of material science data, types of material data: structural, compositional, mechanical, electronic, and thermal properties. Data Preparation for ML, Data cleaning, normalization, and handling missing data in material datasets.		
Unit 2 (10L)	**Machine Learning Fundamentals:** Supervised Learning Overview, Concepts of regression and classification with material science examples. Regression Models in Material Science, Linear regression, polynomial regression, and regularization methods. Classification Models and Applications, Logistic regression, support vector machines, and their applications in materials categorization. Unsupervised Learning Basics Clustering (e.g., K-means, hierarchical clustering) and dimensionality reduction (e.g., PCA) techniques.		
Unit 3 (11L)	**Advanced ML Algorithms:** Decision Trees and Ensemble Methods Random Forest, Gradient Boosting, and their applications in property prediction. Neural Networks (NN) Basics, Introduction to NN architectures and their relevance in complex materials data. Deep Learning for Material Science CNNs and RNNs for imaging and sequence data in material science. Bayesian Methods and Gaussian Processes, Probabilistic modeling for uncertainty quantification in material predictions.		

Unit 4 (11L)	**Material-Specific Applications:** Property Prediction with ML, Predicting properties like bandgap, elasticity, and thermal conductivity. Material Classification and Discovery ML for finding novel alloys, polymers, and composites. ML for Process Optimization Applications in manufacturing, crystal growth, and additive manufacturing. Case Study: Predicting catalytic activity Hands-on example for materials discovery.
References	1. Machine Learning in Materials Informatics: Theory and Applications" edited by Tingyu Zhu, Zi-Kui Liu, and Mo Li 2. Materials Data Science: Introduction to Data Mining, Machine Learning, and Data-Driven Predictions for Materials Science and Engineering (The Materials Research Society Series) by Stefan Sandfeld, 1st edition, Springer, May 2024
Course Outcome	Students will: 1) Acquire hands-on skills in applying ML to materials challenges. 2) Develop ML models for property prediction, process optimization, and materials discovery. 3) Gain proficiency in modern ML tools and computational techniques, enabling impactful research and industry contributions. 4) Demonstrate ML applications in material discovery, property prediction, and process optimization. 5) Foster understanding of how to integrate ML with existing computational material science tools.

Compound Semiconductor Devices			
Prerequisite: Basic solid state and quantum physics	L	T	P
Type: Program elective	3	0	0
Credit: 03			
Course Description: This course is designed to familiarize post graduate students to key concepts in compound semiconducting devices			
Course Content			
Unit 1 (12L)	Semiconductor crystal structures- diamond, zinc-blende & wurtzite structure, reciprocal lattice, diffraction condition & brillioun zone, band structures of common semiconductors, structural & electrical properties of compound semiconductor crystals, III-V compound semiconductors – lattice constant & band gap engineering, group III nitrides.		
Unit 2 (10L)	Heterostructure fundamentals – energy band alignment, Anderson's electron affinity model, strained layer structures, heterostructure band diagrams, current confinement in double heterostructures, density of states.		
Unit 3(6L)	Crystal growth techniques, epitaxy- liquid phase epitaxy, vapor phase epitaxy, molecular beam epitaxy.		
Unit 4 (7L)	Electrical properties of compound semiconductor heterostructures, abrupt heterojunction under equilibrium, p-N heterojunction under bias, quantum well heterostructures, superlattices & mini bands, resonant tunnelling.		
Unit 5 (7L)	Heterostructure electronic devices – MESFETs, basic operation principles, current voltage characteristics, high electron mobility transistor basics, HEMT operation, heterojunction bipolar transistors (HBTs), basic theory, band discontinuity, high frequency operation.		
References	1. T. Steiner, Semiconductor Nanostructures for Optoelectronic Applications 2. U. W. Pohl, Epitaxy of Semiconductors: Introduction to Physical Principles 3. S.M. Sze and K.K. Ng, Physics of Semiconductor Devices 4. M. Shur, Physics of Semiconductor Devices, 5. J. H. Davies, The Physics of Low Dimensional Semiconductors.		

	6. K. Y. Cheng, III–V Compound Semiconductors and Devices - An Introduction to Fundamentals, Springer.
Course Outcome	CO1: The student will be equipped with the ability to model and apply compound semiconductors in electronic, optoelectronic, and photonic devices and integrated circuits. CO2: The student will acquire comprehension of the properties, preparation, and processing of compound semiconductors. CO3: The student will be able apply the knowledge of heterojunctions and quantum structures for practical work. CO4: The student will have ability to independently carry out research/investigation, design and development in the area of compound semiconductors.

Photonics Technology			
Prerequisite: 1. Basics of electromagnetic theory 2. Wave optics 3. Basic quantum mechanics and semiconductor physics	L	T	P
Type: Program Elective	3	0	0

Course Description: This course introduces the fundamentals of photonics, including light-matter interaction and photonic devices. This will explore the principles and applications of lasers, optical fibers, and photonic integrated circuits. Discuss advanced photonic technologies and their applications in communications, sensing, and quantum systems.

Course Content

Unit 1 (5L)	**Fundamentals of Photonics:** Introduction to Photonics, Overview of photonics and its importance in modern technology. Nature of Light, Wave-particle duality, electromagnetic spectrum, and photon energy. Basics of Wave Optics Reflection, refraction, interference, and diffraction. Polarization of Light Types of polarization, birefringence, and applications. Light-Matter Interaction Absorption, emission, scattering, and nonlinear optical effects.
Unit 2 (5L)	**Optical Waveguides and Fibers:** Introduction to Optical Waveguides, Slab waveguides, modes, and confinement of light. Optical Fibers: Types and Properties, Single-mode, multi-mode, graded-index, and step-index fibers. Signal Propagation in Optical Fibers, Attenuation, dispersion, and polarization effects. Fiber Fabrication and Testing, Techniques for manufacturing and characterizing optical fibers.
Unit 3 (5L)	**Lasers and Light Sources:** Basics of Laser Operation: Stimulated emission, population inversion, and optical cavities. Types of Lasers: Gas, solid-state, semiconductor, and fiber lasers. Laser Characteristics and Applications: Coherence, monochromaticity, power, and uses in various domains. Nonlinear Optical Effects in Lasers: Harmonic generation, self-focusing, and Raman scattering. LEDs and Other Light Sources: Principles of operation, materials, and applications.
Unit 4 (4L)	**Photonic Devices and Components:** Photodetectors and Photodiodes: Principles, types, and performance metrics. Electro-Optic and Acousto-Optic Modulators: Modulation techniques for controlling light properties. Optical Amplifiers: Erbium-doped fiber amplifiers (EDFAs) and semiconductor

	optical amplifiers. Micro-Optomechanical Systems (MOEMS): Integration of photonics with mechanical components. Photonic Integrated Circuits (PICs) Design, fabrication, and applications in communication systems.
Unit 5 (8L)	**Photonic Technologies:** Silicon Photonics Integration of photonics with CMOS technologies. Plasmonics: Surface plasmon resonance, waveguides, and sensors. Quantum Photonics: Entangled photons, single-photon sources, and quantum cryptography. Photonic Crystals: Bandgap engineering, waveguiding, and filters. Terahertz Photonics Generation, detection, and applications in imaging and spectroscopy.
Unit 6 (8L)	**Applications of Photonics:** Photonics in Healthcare: Optical coherence tomography, biosensing, and laser surgery. Photonics in Sensing: Environmental, structural, and industrial sensors. Photonics in Renewable Energy: Solar cells, light management, and photovoltaics. Photonics for Security and Defense: LIDAR, laser-guided weapons, and secure communications.
References	1. "Photonics: Optical Electronics in Modern Communications" by Amnon Yariv and Pochi Yeh, Oxford University Press, 2007 2. "Fundamentals of Photonics" by Bahaa E. A. Saleh and Malvin Carl Teich, John Wiley & Sons, Inc. DOI:10.1002/0471213748
Course Outcome	1. Develop a strong foundation in photonic principles and devices. 2. Gain insights into designing and analyzing photonic systems. 3. Understand applications of photonics in industries such as telecommunications, healthcare, and defense. 4. Be equipped to pursue advanced research or careers in photonic technologies.

Electrochemical Processes in Semiconductors			
Prerequisite: 1. Basic knowledge in Semiconductor Physics or Materials Science 2. Introductory courses in Electrochemistry are beneficial	L	T	P
Type: Program elective	3	0	0
Credit: 03			
Course Description: This course focuses on the electrochemical processes that play a vital role in the fabrication, modification, and functionality of semiconductor devices. Students will explore the principles of semiconductor electrochemistry, including material processing, interface reactions, and electrochemical techniques essential in device fabrication. Applications in energy storage, sensors, and semiconductor devices are emphasized, providing students with knowledge relevant to both research and industry.			
Course Content			
Unit 1 (3L)	**Fundamentals of Electrochemistry in Semiconductors:** Basic principles of electrochemistry relevant to semiconductors, Redox reactions, Nernst equation, and electrode potentials, Electrochemical cell setup and potential distributions in semiconductor materials		
Unit 2 (9L)	**Semiconductor/Electrolyte Interfaces:** Formation and characteristics of the semiconductor/electrolyte interface, Space charge layer, Helmholtz layer, and electric double layer, Charge transfer kinetics and their impact on device performance		
Unit 3 (8L)	**Electrochemical Deposition and Etching Techniques:** Principles of electrochemical deposition and its applications in microelectronics, Electrochemical etching processes for device fabrication, Control of deposition and etching parameters for thin films and interconnects in semiconductor devices		
Unit 4 (7L)	**Photoelectrochemical Processes in Semiconductor Devices:** Fundamentals of photoelectrochemistry and photogenerated charge carriers, Semiconductor materials for solar water splitting and photodetectors, Applications in photovoltaic cells, water-splitting, and energy harvesting		

Unit 5 (7L)	**Electrochemical Energy Storage in Semiconductor Materials:** Role of semiconductors in lithium-ion and other advanced batteries, Electrochemical processes for energy storage in semiconductor-based materials, Key performance metrics: capacity, rate capability, cycling stability
Unit 6 (5L)	**Electrochemical Sensing and Semiconductor Sensors:** Semiconductor-based electrochemical sensors: principles and applications, Electrochemical sensing mechanisms, sensitivity, and selectivity, Case studies: gas sensors, biosensors, and environmental monitoring applications, Cyclic voltammetry (CV) and electrochemical impedance spectroscopy (EIS), Mott-Schottky analysis for semiconductor doping profile characterization, Advanced techniques such as scanning electrochemical microscopy (SECM) and in-situ monitoring of device processes, Charge carrier concentration using CV curves and electrochemical etching.
References	1. "Electrochemical Methods: Fundamentals and Applications" by Allen J. Bard and Larry R. Faulkner 2. "Semiconductor Electrochemistry" by Rudolf Memming 3. "Electrochemistry of Silicon and its Oxide" by Xiaoge Gregory Zhang
Course Outcomes	1. Understand the fundamental electrochemical properties of semiconductors. 2. Learn how electrochemical processes are applied in semiconductor fabrication. 3. Analyze the behavior of semiconductor/electrolyte interfaces. 4. Gain knowledge in the application of electrochemical techniques for characterization and device optimization. 5. Investigate real-world applications of electrochemical processes in semiconductor-based devices.

Malaviya National Institute of Technology Jaipur

Materials Research Centre

J.L.N. MARG, JAIPUR-302017

Eligibility criteria for M. Tech program in Semiconductor Materials and Devices

The student intending to get enrolled in the M. Tech program in Semiconductor Materials and Devices must have qualified GATE examination in one of the following GATE papers:

Group	Qualifying Degree	GATE paper
G1	T999- B.E./ B. Tech. in any of the disciplines in B.E./ B. Tech. degree	Biomedical Engineering- (BM)
G1	T999- B.E./ B. Tech. in any of the disciplines in B.E./ B. Tech. degree	Biotechnology- (BT)
G1	T999- B.E./ B. Tech. in any of the disciplines in B.E./ B. Tech. degree	Chemical Engineering- (CH)
G1	T999- B.E./ B. Tech. in any of the disciplines in B.E./ B. Tech. degree	Electronics and Communication Engineering- (EC)
G1	T999- B.E./ B. Tech. in any of the disciplines in B.E./ B. Tech. degree	Electrical Engineering- (EE)
G1	T999- B.E./ B. Tech. in any of the disciplines in B.E./ B. Tech. degree	Mining Engineering- (MN)
G1	T999- B.E./ B. Tech. in any of the disciplines in B.E./ B. Tech. degree	Mechanical Engineering – (ME)
G1	T999- B.E./ B. Tech. in any of the disciplines in B.E./ B. Tech. degree	Metallurgical Engineering- (MT)
G1	T999- B.E./ B. Tech. in any of the disciplines in B.E./ B. Tech. degree	Production and Industrial Engineering- (PI)
G1	T999- B.E./ B. Tech. in any of the disciplines in B.E./ B. Tech. degree	Engineering Sciences- (XE)
G1	T999- B.E./ B. Tech. in any of the disciplines in B.E./ B. Tech. degree	Instrumentation Engineering- (IN)
G1	S599- M. Sc. in any of the disciplines in M. Sc. degree	Chemistry- (CY)
G1	S599- M. Sc. in any of the disciplines in M. Sc. degree	Electronics and Communication Engineering- (EC)
G1	S599- M. Sc. in any of the disciplines in M. Sc. degree	Engineering Sciences- (XE)
G1	S599- M. Sc. in any of the disciplines in M. Sc. degree	Physics- (PH)

Seat allocation in each category of the GATE paper:

Semiconductor Materials and Devices	
Group	**Seats**
G1	15

MALAVIYA NATIONAL INSTITUTE OF TECHNOLOGY JAIPUR
Department of Humanities and Social Sciences

PG/PhD	Department of Humanities and Social Sciences
Course Name	**Advanced Qualitative Research Methods in Social Sciences**
Course Code	To be assigned
Credit Structure	3 (L-T-P: 3-0-0)
Version	Open/Program Elective
Course Duration	13-14 Weeks
Pre-requisite Course	Nil
Introduction to the Course	This course offers an in-depth exploration of qualitative research methods in social sciences and sociology, equipping students with the approaches and tools to investigate complex social phenomena through qualitative research approaches. Emphasizing the significance of context, meaning, and lived experience, it uncovers deeper social connotations beyond numerical data. The course fosters critical thinking, contextual awareness, and methodological rigour essential for advanced social research.
Course Objectives	The objectives of the course are: ▪ To understand the meaning and significance of qualitative research. ▪ To introduce different types of qualitative methods and how they are used in social science research. ▪ To build skills for planning, collecting, and making sense of qualitative data. ▪ To encourage students to understand the role of the researcher in the qualitative research process.
Course Outcomes	At the end of the course, students will be: ▪ Understand and critically assess foundational approaches of qualitative research. ▪ Distinguish between qualitative and quantitative approaches. ▪ Design and conduct qualitative studies using appropriate methods. ▪ Understand the reflexive, interpretive, and ethical dimensions of qualitative inquiry.
Course Assessment	The assessment will be as per the following. ▪ Internal Assessment: 30% ▪ Mid-term Examination: 30% ▪ End-term Examination: 40%
Course Content	**Unit I:** o Introduction to Qualitative Research in Social Sciences o Nature and Purpose of Qualitative Research o Contrast with Quantitative Research o Interpretivism o Verstehen o Constructivism o Critical Theory
	Unit II o Phenomenology o Ethnography o Case Study o Grounded Theory o Narrative Research o Participatory Rural Appraisal o Discourse Analysis
	Unit III o Observation o Interviewing o Documents analysis o Visual and Online Data o Role of the Researcher, Reflexivity and Positionality o Analysis and Interpretation of Qualitative Data

Suggested Readings	Charmaz, K. (2014). Constructing grounded theory: A practical guide through qualitative analysis (2nd ed.). Sage Publications. Creswell, J. W. (2013). *Qualitative inquiry and research design: Choosing among five approaches* (3rd ed.). Sage Publications. Denzin, N. K., & Lincoln, Y. S. (Eds.). (2011). The SAGE handbook of qualitative research (4th ed.). Sage Publications. Jayaram, N. (Ed.). (2025). *Studies in Indian sociology: Identity, community/ethnicity, and conflict*. Rawat Publications. Marshall, C., Rossman, G. B., & Blanco, G. L. (2022). *Designing qualitative research* (7th ed.). SAGE Publications. Marvasti, A. B. (2004). *Qualitative research in sociology: An introduction* (1st ed.). SAGE Publications.
Additional Resources	MOOC Online Resources

DPGC Convener

(Dr. Nidhi Bansal)
Course Coordinator

MNIT Jaipur Seat Matrix for Centralized Counselling for M.Tech./M.Plan: Admission (CCMT Counselling 2026-27)														
Department	**Programme**	**Group**	**OPEN**	**OPEN-PWD**	**EWS**	**EWS-PWD**	**SC**	**SC-PWD**	**ST**	**ST-PWD**	**OBC**	**OBC-PWD**	**Total**	**Quota**
Department of Architecture & Planning -(AP)	Urban Planning-(UP)	Group 1	7	1	2	0	3	0	2	0	4	0	19	AI
Department of Architecture & Planning -(AP)	Urban Planning-(UP)	Group 2	3	0	0	0	1	0	0	0	3	0	7	AI
Department of Civil Engineering-(CE)	Environmental Engineering-(EV)	Group 1	6	1	2	0	2	0	1	0	4	0	16	AI
Department of Civil Engineering-(CE)	Structural Engineering-(SU)	Group 1	6	0	2	1	2	0	1	0	4	0	16	AI
Department of Civil Engineering-(CE)	Transportation Engineering-(TE)	Group 1	6	0	2	0	2	1	1	0	4	0	16	AI
Department of Civil Engineering-(CE)	Water Resources Engineering-(WR)	Group 1	6	0	1	0	2	0	2	0	4	1	16	AI
Department of Computer Science & Engineering-(CT)	Computer Science & Information Security-(CQ)	Group 1	10	0	2	0	4	1	2	0	7	0	26	AI
Department of Computer Science & Engineering-(CT)	Computer Science & Engineering-(XG)	Group 1	10	0	2	0	4	0	2	0	7	1	26	AI
Centre for Energy & Environment-(CY)	Renewable Energy-(RE)#	Group 1	9	1	3	0	4	0	2	0	7	0	26	AI
Department of Electronics & Communication Engineering-(EC)	Embedded Systems-(EB)	Group 1	7	1	2	0	3	0	2	0	4	0	19	AI
Department of Electronics & Communication Engineering-(EC)	Embedded Systems-(EB)	Group 2	3	0	0	0	1	1	0	0	3	0	8	AI
Department of Electronics & Communication Engineering-(EC)	Electronics & Communication Engineering-(EF)	Group 1	8	0	2	0	3	0	2	1	5	0	21	AI
Department of Electronics & Communication Engineering-(EC)	VLSI Design-(VN)	Group 1	8	1	2	0	3	0	1	0	5	0	20	AI
Department of Electronics & Communication Engineering-(EC)	VLSI Design-(VN)	Group 2	2	0	1	0	1	0	0	0	2	0	6	AI
Department of Electrical Engineering-(EE)	Power Eletronics & Drives-(PD)	Group 1	10	1	2	0	4	0	2	0	7	0	26	AI
Department of Electrical Engineering-(EE)	Power Systems Management-(PN)	Group 1	6	0	2	0	2	0	1	0	4	1	16	AI
Department of Electrical Engineering-(EE)	Power Systems-(PO)	Group 1	8	0	2	0	3	0	2	1	5	0	21	AI
Department of Mechanical Engineering-(ME)	Design Engineering-(DG)	Group 1	8	0	2	0	3	0	1	0	6	1	21	AI
Department of Mechanical Engineering-(ME)	Industrial Engineering-(IG)	Group 1	4	1	1	0	1	0	1	0	3	0	11	AI
Department of Mechanical Engineering-(ME)	Industrial Engineering-(IG)	Group 2	2	0	1	0	1	0	0	0	1	0	5	AI
Department of Mechanical Engineering-(ME)	Thermal Enginering-(TI)	Group 1	9	0	1	0	3	0	2	0	4	1	20	AI
National Centre for Disaster Mitigation and Management-(DM)	Earthquake Engineering-(EE)	Group 1	6	0	2	1	2	0	1	0	4	0	16	AI
Department of Metallurgical and Materials Engineering (MT)	Materials Engineering	Group 1	6	0	2	0	2	0	1	0	4	0	15	AI
Department of Chemical Engineering	Chemical Engineering and Sustainability (CE&S)	Group 1	6	1	1	0	2	0	1	0	4	0	15	AI
Materials Research Centre-(MRC)	Semiconductor Material & Devices-(SM)*	Group 1	5	1	1	0	2	0	1	0	5	0	15	AI
Total Seats			**161**	**9**	**40**	**2**	**60**	**3**	**31**	**2**	**110**	**5**	**423**	

Note: 1) #Subject to approval of Senate for increasing intake from 16 to 26. 2) *Subject to Approval of Senate

Annexure-E

MNIT Jaipur Seat Matrix for Centralized Counselling for M.Sc. Admission (CCMN Counselling 2026-27)

Department	Programme	Group	OPEN	OPEN-PWD	EWS	EWS-PWD	SC	SC-PWD	ST	ST-PWD	OBC	OBC-PWD	Total	Quota
Department of Chemistry	Chemistry	Group 1	16	0	4	0	6	1	3	0	10	1	41	AI
Department of Mathematics	Mathematics	Group 1	16	1	3	1	6	0	3	0	11	0	41	AI
Department of Physics	Physics	Group 1	16	1	4	0	6	0	3	0	10	1	41	AI
Total Seats			**48**	**2**	**11**	**1**	**18**	**1**	**9**	**0**	**31**	**2**	**123**	

Annexure-B

Seat Matrix (Academic Year 2026-27)

Institute Code	Institute Name	Program Code	Program Name	Seat Pool (State Quota or Other State/All India Quota)	Seat Pool (Gender-Neutral or Female-only)	OPEN	OPEN-PwD	GEN-EWS	GEN-EWS-PwD	SC	SC-PwD	ST	ST-PwD	OBC-NCL	OBC-NCL-PwD	Total (includes Female Supernumerary)	Program-Total	
																	Seat Capacity	Female Supernumerary
202	Malaviya National Institute of Technology Jaipur	5101	Architecture	Rajasthan	Gender-Neutral	11	1	3	0	5	0	2	0	8	0	30	38	0
					Female-only (including supernumerary)	3	0	0	0	1	0	1	0	2	1	8		
				Other than Rajasthan	Gender-Neutral	12	1	3	0	5	0	2	0	7	1	31	39	0
					Female-only (including supernumerary)	3	0	1	0	1	0	1	0	2	0	8		
		4107	Chemical Engineering	Rajasthan	Gender-Neutral	19	1	4	1	6	0	4	0	11	1	47	58	0
					Female-only (including supernumerary)	4	0	1	0	2	0	1	0	3	0	11		
				Other than Rajasthan	Gender-Neutral	18	1	5	0	6	0	4	0	11	1	46	57	0
					Female-only (including supernumerary)	4	0	1	0	2	0	1	0	3	0	11		
		4109	Civil Engineering	Rajasthan	Gender-Neutral	16	2	5	0	6	1	3	0	12	0	45	57	0
					Female-only (including supernumerary)	5	0	1	0	2	0	1	0	3	0	12		
				Other than Rajasthan	Gender-Neutral	17	1	4	1	6	1	4	0	12	0	46	58	0
					Female-only (including supernumerary)	5	0	1	0	2	0	1	0	3	0	12		
		4110	Computer Science and Engineering	Rajasthan	Gender-Neutral	17	1	4	1	7	0	3	0	13	1	47	58	0
					Female-only (including supernumerary)	5	0	1	0	2	0	1	0	2	0	11		
				Other than Rajasthan	Gender-Neutral	17	1	5	0	7	1	3	0	12	1	47	59	0
					Female-only (including supernumerary)	5	1	1	0	1	0	1	0	3	0	12		
		4111	Electrical Engineering	Rajasthan	Gender-Neutral	18	0	5	0	7	1	3	0	12	1	47	58	0
					Female-only (including supernumerary)	4	1	1	0	1	0	1	0	3	0	11		
				Other than Rajasthan	Gender-Neutral	18	1	4	0	7	0	3	1	12	1	47	59	0
					Female-only (including supernumerary)	5	0	1	0	2	0	1	0	3	0	12		
		4114	Electronics and Communication Engineering	Rajasthan	Gender-Neutral	18	0	5	0	8	0	2	1	12	1	47	59	0
					Female-only (including supernumerary)	5	1	1	0	1	0	1	0	3	0	12		
				Other than Rajasthan	Gender-Neutral	18	0	4	1	8	0	3	0	12	1	47	58	0
					Female-only (including supernumerary)	4	1	1	0	1	0	1	0	3	0	11		
		4125	Mechanical Engineering	Rajasthan	Gender-Neutral	18	1	4	0	6	1	4	0	12	1	47	59	0
					Female-only (including supernumerary)	5	0	1	0	2	0	1	0	3	0	12		
				Other than Rajasthan	Gender-Neutral	18	1	4	1	6	1	2	0	12	0	45	57	0
					Female-only (including supernumerary)	5	0	1	0	1	0	1	0	4	0	12		
		4127	Metallurgical and Materials Engineering	Rajasthan	Gender-Neutral	12	1	3	0	4	0	1	1	7	0	29	37	0
					Female-only (including supernumerary)	3	0	1	0	0	1	1	0	2	0	8		
				Other than Rajasthan	Gender-Neutral	12	1	2	0	4	0	2	0	8	0	29	37	0
					Female-only (including supernumerary)	2	0	1	0	1	0	1	0	2	1	8		

Sr. Assistant

Sr. Superintendent

Assistant Registrar (Academic)

Associate Dean (UG)

for

Dean Academic

Annexure-F

Seat Matrix (Academic Year 2026-27)

Institute Code	Institute Name	Program Code	Program Name	Seat Pool (State Quota or Other State/All India Quota)	Seat Pool (Gender-Neutral or Female-only)	OPEN	OPEN-PwD	GEN-EWS	GEN-EWS-PwD	SC	SC-PwD	ST	ST-PwD	OBC-NCL	OBC-NCL-PwD	Total (includes Female Supernumerary)	Program-Total	
																	Seat Capacity	Female Supernumerary
202	Malaviya National Institute of Technology Jaipur	411G	Artificial Intelligence and Data Engineering	Rajasthan	Gender-Neutral	7	0	1	0	2	0	1	0	5	0	16	20	0
					Female-only (including supernumerary)	0	0	1	0	1	0	1	0	1	0	4		
				Other than Rajasthan	Gender-Neutral	7	0	2	0	2	0	1	0	4	0	16	20	0
					Female-only (including supernumerary)	1	0	1	0	1	0	0	0	1	0	4		
			Mathematics and Computing	Rajasthan	Gender-Neutral	5	0	1	0	1	0	1	0	3	1	12	15	0
					Female-only (including supernumerary)	1	0	0	0	1	0	0	0	1	0	3		
				Other than Rajasthan	Gender-Neutral	5	0	1	0	1	0	1	0	4	0	12	15	0
					Female-only (including supernumerary)	1	0	1	0	1	0	0	0	0	0	3		
			Engineering Physics	Rajasthan	Gender-Neutral	5	1	1	0	1	0	1	0	2	0	11	15	0
					Female-only (including supernumerary)	1	0	1	0	1	0	0	0	1	0	4		
				Other than Rajasthan	Gender-Neutral	4	1	1	0	1	1	1	0	3	0	12	15	0
					Female-only (including supernumerary)	1	0	0	0	1	0	0	0	1	0	3		
					Total	364	20	90	5	134	8	68	3	243	13	948	948	0

Sr. Assistant

Sr. Superintendent

Assistant Registrar (Academic)

Associate Dean (UG)

for Dean Academic

80

DASA UG Seat Matrix (Academic Year 2026-27) Annexure VI

Institute Code	Institute Name	Program Code	Program Name	Seats for the Children of Indian Workers in Gulf Countries (CIWG)	Others	Total Seats (CIWG+Others)
202	Malaviya National Insatitute of Technology Jaipur		Architecture	0	1	1
			Artificial Intelligence and Data Management	4	8	12
			Chemical Engineering	2	4	6
			Civil Engineering	2	5	7
			Computer Science and Engineering	12	23	35
			Electrical Engineering	5	10	15
			Electronics and Communication Engineering	10	20	30
			Mechanical Engineering	7	14	21
			Metallurgical and Materials Engineering	1	2	3
			Engineering Physics	1	3	4
			Mathematics and Computing	3	5	8
			Total	**47**	**95**	**142**

Senior Assistant | Senior Superintendent | Assistant Registrar (UG) | Associate Dean (UG) | Dean Academic

अधिष्ठाता, शैक्षणिक
Dean, Academic
मालवीय राष्ट्रीय प्रौद्योगिकी संस्थान जयपुर
Malaviya National Institute of Technology Jaipur
जे.एल.एन मार्ग, जयपुर–302017
J.L.N. Marg, JAIPUR-302017

18

Annexure-G

DASA PG Seat Matrix (Academic Year 2026-27) Annexure X

Institute Code	Institute Name	Program Code	Program Name	Seats for the children of Indian Workers in Gulf Countries (CIWG)	Others	Total
202	Malaviya National Institute of Technology Jaipur		Computer Science and Engineering	3	5	8
			Electronics and Communication Engineering	1	1	2
			Industrial Engineering	1	1	2
			M. Planning (Urban Planning)	1	1	2
			Power Systems	1	1	2
			Structural Engineering	1	1	2
			Thermal Engineering	1	1	2
			Transportation Engineering	1	1	2
			VLSI Design	1	1	2
			Master of Business Administration (MBA)	1	2	3
			Total	12	15	27

Senior Assistant

17/3/26
Assistant SG-I

17/03/2026
Assistant Registrar (PG)

Associate Dean (PG)

17/03/2026
Dean Academic

अधिष्ठाता, शैक्षणिक
Dean, Academic
मालवीय राष्ट्रीय प्रौद्योगिकी संस्थान जयपुर
Malaviya National Institute of Technology Jaipur
जे.एल.एन. मार्ग, जयपुर-302017
J.L.N. Marg, JAIPUR-302017

82

Annexure-H

MALAVIYA NATIONAL INSTITUTE OF TECHOLOGY, JAIPUR

ACADEMIC SECTION

File No. – F4/I-X-I/20-21-Acad-UG-I/2023-24-Acad-UG/ 5448 **Date:** 22-01-2026

OFFICE ORDER

In accordance with the approval granted by the SUGB in its 52nd meeting under agenda item No. 52-3.1 held on 15-12-2025 and as per guidelines stipulated in the clause 14 of UG Rules & Regulation - Termination of Enrolment to the Programme, the following students who have not reported and registered in the Institute for more than 2 semesters, have been removed/ terminated from their respective enrolled programme.

S No.	Degree	Department	Student Id	Student Name
1	B.Arch	Architecture And Planning	2023UAR1276	YUVRAJ NAGAR
2	B.Tech	Chemical Engineering	2020UCH1915	VANKUDOTHU VAMSHI
3	B.Tech	Chemical Engineering	2021UCH1833	LALIT CHOUDHARY
4	B.Tech	Civil Engineering	2022UCE1333	PRIYANSHU SHARMA
5	B.Tech	Electrical Engineering	2019UEE1262	JANGALE ABHISHEK YOGESH
6	B.Tech	Electronics And Communication Engineering	2020UEC1722	MAYANK KASOTIYA
7	B.Tech	Mechanical Engineering	2020UME1109	DEEPANSHU NEHRA
8	B.Tech	Metallurgical And Materials Engineering	2019UMT1527	RAJVEER MEENA
9	B.Tech	Metallurgical And Materials Engineering	2021UMT1838	PIYUSH SOLANKI
10	B.Tech	Metallurgical And Materials Engineering	2021UMT1855	KUNDAN KUMAR

21/1/2026
Registrar

Copy for information and necessary action:

1. Dean Academic
2. Associate Dean (PG)
3. Associate Dean (UG)
4. Concerned HOD
5. Concerned DUGC Convener
6. Dean, Student Welfare
7. Coordinator, Training & Placement
8. Chief Warden, Hostel
9. Assistant Registrar (Accounts)
10. Librarian
11. Senior SAS Officer, Sports Section
12. PS to Director
13. PA to Registrar
14. Personal file of the concerned student

16/01/26
Assistant Registrar Academic

Annexure-I

मालवीय राष्ट्रीय प्रौद्योगिकी संस्थान जयपुर
MALAVIYA NATIONAL INSTITUTE OF TECHNOLOGY JAIPUR

18 मार्च 2026 को आयोजित सीनेट स्नातकोत्तर बोर्ड (एसपीजीबी) की 75वीं बैठक के कार्यवृत्त
MINUTES OF THE 75th MEETING OF THE SPGB HELD ON 18th MARCH 2026

सीनेट स्नातकोत्तर बोर्ड (एसपीजीबी) की 75वीं बैठक 18 मार्च 2026 को सायं: 04:00 बजे सभा कक्ष संख्या–3, प्रभा भवन, मा. रा. प्रौ. सं. जयपुर मे आयोजित की गइ थी।
The 75thmeeting of the SPGB was held on 18 March 2026 at 04:00 PM in the meeting room no.3, Prabha Bhawan, MNIT Jaipur.

निम्नलिखित एजेंडा मदों पर चर्चा की गई, और सिफारिशे इस प्रकार हैं:
The following agenda items were discussed, and the recommendations are as follows:

Item No. 75-1.0	**To confirm the minutes of the 74th meeting of the SPGB held on 08.12.2025.** The minutes of the 73rd meeting of the SPGB held on 08.12.2025 was confirmed.
Item No. 75-2.0	**To note the "Action Taken" on the decisions taken in the 74th meetings of the SPGB.** The SPGB noted the action taken report on the decisions taken in the 74th meeting.
Item No. 75-3.0	**Items for Consideration.**
Item No. 75-3.1	**To consider the matter regarding issuance of a compliance certificate stating that the Ph.D. degree awarded by the Institute is in accordance with UGC Regulations-2018 (Minimum Standards and Procedure for Award of M.Phil./Ph.D. Degrees).** The SPGB, after due deliberation, constituted a committee comprising the following faculty members to examine the matter related to the issuance of the compliance certificate: 1. Prof. Kailash Singh (Convener, DPGC – Chemical Engineering) 2. Prof. Manju Singh (Convener, DPGC – Humanities and Social Sciences) 3. Dr. Manoj Kumar (Convener, DPGC – Physics) 4. Dr. Pradeep Kumar (Convener, DPGC – Chemistry) 5. Dr. Om P. Suthar (Convener, DPGC – Mathematics) The committee is requested to submit its recommendations by next SPGB meeting.
Item No. 75-3.2	**To consider the proposal to offer online coursework for part-time Ph.D. programs.** After due deliberation, the SPGB referred the proposal back to the Department of Metallurgical and Materials Engineering, with a request to submit a detailed mechanism along with a category-wise blueprint of the programs, duly approved by the Departmental Faculty Board (DFB).

Item No. 75-3.3 **To consider the cases of Ph.D. students for termination from the Institute rolls due to absence without authorized leave.**

The SPGB, after deliberation, approved the cases of following Ph.D. students for termination from the Institute rolls due to absence without authorized leave.

S. No	Student Id	Name
1	2024RMA9556	Dipin Yadav
2	2023RPY9071	Sanjay Yadav
3	2025RCE9029	Deepak Meena
4	2023RCP9028	Astha Joshi
5	2020REC9004	PriyaKaith
6	2024RME9562	Praveen Kumar Rao

Item No. 75-3.4 **To consider the increase in student intake in M.Tech (Renewable Energy), offered by the Centre for Energy and Environment, from 16 to 26.**

The SPGB, after due deliberation, recommended to the Senate an increase in student intake in M.Tech (Renewable Energy), offered by the Centre for Energy and Environment, from 16 to 26.

Item No. 75-3.5 **To consider running a single M.Tech. programme in Chemical Engineering and Sustainability in the Department of Chemical Engineering in place of the earlier two programmes.**

The SPGB, after due deliberation, recommended to the Senate to run a single M.Tech. programme in Chemical Engineering and Sustainability in the Department of Chemical Engineering in place of the earlier two programmes.

Item No. 75-3.6 **To consider the list of PG students for termination of enrolment who secured a CGPA of less than 5.5 in the academic session 2025–26.**

The SPGB, after due deliberation, approved the list of PG students for termination of enrolment who secured a CGPA of less than 5.5 in the academic session 2025–26.

Item No. 75-3.7 **To consider the list of PG students absent without authorized leave for termination from the programme.**

The SPGB, after due deliberation, advised that the concerned DPGC Convener(s) of the respective departments should personally review and interact with the concerned students and encourage them to complete their degree within the stipulated time.

Item No. 75-3.8 **To consider the case of PG students allotted MNIT Jaipur through CCMT/CCMN 2025–26 who have not reported and/or have not deposited the balance fee.**

The SPGB, after due deliberation, approved the withdrawal of the IDs/names of 26 such students from the Institute ERP and the cancellation of their enrolment/allotment.

<table>
<tr><td>Item No. 75-3.9</td><td>To consider the case of PG students allotted MNIT Jaipur through CCMN 2025–26 who were unable to produce the qualifying degree certificate with the minimum required percentage.

The SPGB, after due deliberation, approved the cancellation of enrolment/allotment of such PG students who were allotted MNIT Jaipur through CCMN 2025–26 but were unable to produce the qualifying degree certificate with the minimum required percentage.</td></tr>
<tr><td>Item No. 75-3.10</td><td>To consider the mercy request of Ms. Prity Kumari (2025PCE5323) M.Tech. (Environmental Engineering) Programme in Civil Engineering Department.
<table>
<tr><th>S. No.</th><th>Name & ID</th><th>Recommendation & Justification of DPGC, if any</th><th>Recommendation & Justification of SPGB</th></tr>
<tr><td>1.</td><td>Ms. Prity Kumari (2025PCE5323)</td><td>The DPGC considered the mercy application submitted by Ms. Prity Kumari and recommended approval of mercy chance to continue her M.Tech. (Environmental Engineering) programme.</td><td>The SPGB recommended that Ms. Prity Kumari (2025PCE5323) be given an opportunity to re-register for the First Semester and repeat all courses. Her eligibility for promotion to the next semester will be evaluated on the basis of their performance after re-registration.</td></tr>
</table></td></tr>
<tr><td>Item No. 75-3.11</td><td>To consider the minimum qualification for Ph.D. admissions from Odd Semester 2026–27 onwards for the Department of Chemical Engineering, Centre for Energy and Environment, Metallurgical & Materials Engineering, and Mechanical Engineering.

The SPGB, after due deliberation, referred the proposal back to the concerned departments/centres to justify, in detail, the inclusion of various degree disciplines as minimum educational qualifications for Ph.D. admissions.</td></tr>
<tr><td></td><td>Items for reporting</td></tr>
<tr><td>Item No. 75-4.1</td><td>To report the termination of Ph.D. scholars from the Ph.D. program due to non-fulfilment of PG RR.

Noted.</td></tr>
<tr><td>Item No. 75-4.2</td><td>To note the list of the Ph.D. students of change of supervisor.

Noted.</td></tr>
<tr><td>Item No. 75-4.3</td><td>To note the list of PhD students permitted for comprehensive exam extension.

Noted.</td></tr>
<tr><td>Item No. 75-4.4</td><td>To note the list of MNIT Faculty permitted to supervise Ph.D. students of other institutes.

Noted.</td></tr>
</table>

Item No. 75-4.5	To note the list of Ph.D. students converted from Full-time to Part-time. Noted.
Item No. 75-4.6	To note the list of Ph.D. students permitted for research work in other institutes. Noted.
Item No. 75-4.7	To note the list of Ph.D. Students permitted for semester extension from January 2026 to June 2026. Noted.
Item No. 75-4.8	To note the list of Ph.D. students permitted for Semester Withdrawal. Noted.
Item No. 75-4.9	To note the list of Ph.D. students whose supervisors (Internal/External)are added. Noted.
Item No. 75-4.10	To note the list of PG students converted from Full-time to Part-time. Noted.
Item No. 75-4.11	To note the list of PG students permitted for internship work in other institutes. Noted.
Item No. 75-4.12	To note the list of PG Students permitted to withdraw from the Institute. Noted.
	Any other items with the permission of chair.
Item No 75-5.1	**To consider the minimum qualification for PG admissions through CCMT in Mechanical Engineering Department** The SPGB, after due deliberation, recommended to the Senate the adoption of the following minimum educational qualifications for the upcoming PG admissions through CCMT. **1. For M.Tech. (Industrial Engineering) Admissions:** Eligible candidates must possess either: • A Bachelor's degree in Engineering/Technology (Code: T999) OR • A Master's degree in any branch of Science, Mathematics, Statistics, Computer Applications, or equivalent (Code: S599).

Existing GATE Papers	Revised GATE Papers
• Aerospace Engineering (AE) • Agricultural Engineering (AG) • Mechanical Engineering (ME) • Naval Architecture & Marine Engineering (NM)	• Aerospace Engineering (AE) • Agricultural Engineering (AG) • Instrumentation Engineering (IN) • Biomedical Engineering (BM) • Mathematics (MA) • Biotechnology (BT) • Mechanical Engineering (ME) • Civil Engineering (CE)

• Production & Industrial Engineering (PI) • Engineering Sciences (XE)	• Mining Engineering (MN) • Chemical Engineering (CH) • Metallurgical Engineering (MT) • Computer Science & Information Technology (CS) • Naval Architecture & Marine Engineering (NM) • Data Science & Artificial Intelligence (DA) • Petroleum Engineering (PE) • Electronics & Communication Engineering (EC) • Physics (PH) • Electrical Engineering (EE) • Production & Industrial Engineering (PI) • Environmental Science & Engineering (ES) • Statistics (ST) • Geomatics Engineering (GE) • Textile Engineering & Fibre Science (TF) • Engineering Sciences (XE)

2. For M.Tech. (Thermal Engineering) Admissions: Eligible candidates must possess either:

- A Bachelor's degree in Engineering/Technology (Code: T999) OR
- A Master's degree in any branch of Science, Mathematics, Statistics, Computer Applications, or equivalent (Code: S599).

Existing GATE Papers	Revised GATE Papers
• Aerospace Engineering (AE) • Mechanical Engineering (ME) • Naval Architecture & Marine Engineering (NM) • Engineering Sciences (XE)	• Aerospace Engineering (AE) • Agricultural Engineering (AG) • Mathematics (MA) • Biotechnology (BT) • Mechanical Engineering (ME) • Chemical Engineering (CH) • Naval Architecture & Marine Engineering (NM) • Production & Industrial Engineering (PI) • Engineering Sciences (XE)

The meeting ended with a vote of thanks to the Chair.

सह अधिष्ठाता (स्नातकोत्तर)
Associate Dean (PG)

सभापति, ~~सीनेट~~ स्नातकोत्तर बोर्ड
Chairman SPGB

09.12.2025 को आयोजित 74वीं एसपीजीबी बैठक मे निम्न सदस्यों ने भाग लिया:
The following members attended the 74th SPGB Meeting held on 09.12.2025:

S. No.	Name of Faculty	Designation
1.	Prof. Suja George	Chairman, SPGB
2.	Prof. D. Boolchandani	Dean Academic
3.	Prof. R. K. Vyas	Nominee, Chairman Senate
4.	Dr. Yogesh Meena	Associate Dean, PG
5.	Dr. Ram Dayal	Associate Dean, UG
6.	Dr. Gireendra Kumar	Convener DPGC, Architecture and Planning
7.	Dr. Amartya Chowdhury	Convener DPGC, Centre For Energy and Environment
8.	Prof. Kailash Singh	Convener DPGC, Chemical Engineering
9.	Dr. Amit Kumar	Representative, Convener DPGC, Civil Engineering
10.	Prof. Vijay Laxmi	Convener DPGC, Computer Science and Engineering
11.	Dr. Neeli Satyanarayana	Convener DPGC, Electrical Engineering
12.	Prof. Manju Singh	Convener DPGC, Humanities and Social Science
13.	Dr. Reeta Singh	Convener DPGC, Management Studies
14.	Dr. Bhagwati Sharma	Convener DPGC, Material Research Center
15.	Prof. Amar Patnaik	Convener DPGC, Mechanical Engineering
16.	Dr. Swati Sharma	Convener DPGC, Metallurgical and Materials Engineering
17.	Dr. Rajnish Dhiman	Representative, Convener DPGC, Physics

निम्न सदस्य बैठक में शामिल नहीं हो सके:
The following members could not attend the meeting:

1.	Prof. Lava Bhargava	Chairman, SUGB
2.	Prof. Dilip Sharma	Ex-Chairman, SPGB
3.	Dr. Satyendra Singh Chouhan	Convener DPGC, Artificial Intelligence and Data Engineering
4.	Dr. Makkhan Lal Meena	Convener DPGC, Centre For Rural Development
5.	Dr. Pradeep Kumar	Convener DPGC, Chemistry
6.	Dr. Ravi Kumar Maddila	Convener DPGC, Electronics and Communication Engineering
7.	Dr. Om P. Suthar	Convener DPGC, Mathematics
8.	Prof. S. D. Bharti	Convener DPGC, National Centre For Disaster Mitigation and Management

Annexure-J

मालवीय राष्ट्रीय प्रौद्योगिकी संस्थान जयपुर

MALAVIYA NATIONAL INSTITUTE OF TECHNOLOGY JAIPUR

MINUTES OF THE 53rd MEETING OF SUGB HELD ON 16th March 2026

53rd Meeting of SUGB held on 16th March 2026 at 4:00 PM in the Meeting Hall No. 3, Prabha Bhawan, MNIT Jaipur.

The following agenda items were discussed, and the recommendations are as follows:

Item No. 53-1.0	**To confirm the minutes of the 52nd meeting of SUGB.** The minutes were confirmed.
Item No. 53-2.0	**To note the "Action Taken" on the decisions taken in the 52nd meeting of SUGB.** Action taken on the decision made was noted.
Item No. 53-3.0	**Items for Consideration.**
Item No. 53-3.1	**To consider the proposal for the revision of the Internship Rules.** After detailed deliberation, the SUGB decided that the proposal submitted by the Department of Electronics and Communication Engineering for the revision of the internship rule be circulated to all DUGC conveners and the coordinator of the Training and Placement Cell, along with the internship guidelines. The comments submitted by the DUGC conveners and placement cell will be placed before the next SUGB meeting.
Item No. 53-3.2	**To consider the matter regarding Inactive UG Students who were not registered/absent for more than 2 semesters.** SUGB recommended the termination of the students who have been absent for more than 2 semesters from the Institute as per UG regulations.
Item No. 53-3.3	**To consider the matter regarding Inactive UG Students who were not registered/absent for 2 or less than 2 semesters.** After detailed deliberation, the SUGB advised that the concerned DUGC Convener of the department should personally interact with the potential students and encourage them to complete their degree in due course.
Item No. 53-3.4	**To consider the retention of Basic Economics as an Institute Core Course in the First Year B.Tech. Curriculum.** The SUGB, after careful deliberation, resolved to uphold the Review Committee's recommendations and agreed that *Basic Economics* to be repositioned outside the Institute Core framework for the first year of the B.Tech. programme. However, recognizing the importance of the subject, all DUGCs were advised to consider incorporating an Economics course within their curriculum as a PLEAS component in an appropriate semester.
Item No. 53-3.5	**To consider the inclusion of the one credit course – Human Values and Professional Ethics in the B.Tech II Year curriculum from the Academic Year 2026-27 onwards.** The course - Human Values and Professional Ethics- has already been included as a mandatory institute core in the proposed curriculum revision to be implemented from Academic Year 2026-27 onwards. Therefore, the placed agenda has been dropped.

Item No. 53-3.6 — **To reconsider the mercy request of Mr. Vankudothu Vamshi (2020UCH1915) regarding his Registration.**

S. No.	Student Name/ ID/status and Dept.	Recommendation of DUGC	The decision of the 53rd SUGB
1.	Mr. Vankudothu Vamshi (2020UCH1915)	The DUGC of the Chemical Engineering Department reviewed academic credits earned and examined the supporting documents related to Mr. Vankudothu Vamshi's financial conditions and recommended the same.	Considering the credits earned, and the supporting documents related to Mr. Vankudothu Vamshi's financial conditions, SUGB recommended the mercy request to the Senate.

Item No. 53-3.7 — **To consider the mercy request of Mr. Ambuj Singh (2019UME1291) for extension of the period to complete the degree.**

S. No.	Student Name/ ID/status and Dept.	Recommendation of DUGC	The decision of the 53rd SUGB
1.	Mr. Ambuj Singh (2019UME1291)	The DUGC of the Mechanical Engineering Department forwarded the mercy plea of Mr. Ambuj Sing.	SUGB, after deliberation, referred the Mercy request of Mr. Ambuj back to the Mechanical Engineering Department for submission of recommendations with clarity & justification.

Item No. 53-4.0 — **Items for Reporting**

Item No. 53-4.1 — **To report the approval of the Ministry of Education regarding the commencement of 02 New Undergraduate Programmes (B.Tech.) at MNIT-Jaipur from Academic Session 2026-27.**

Noted.

Item No. 53-4.2 — **To report the list of UG students permitted for internship during the Academic Year 2025-26 (Even Semester).**

Noted.

The meeting ended with a vote of thanks to the Chair.

Chairman SUGB

Associate Dean (UG)

The 53rd SUGB meeting (16tth March 2026) was attended by the following members:

S. No.	Name of Faculty	Designation
1.	Prof. Lava Bhargava	Chairman SUGB
2.	Prof. Suja George	Chairman SPGB
3.	Prof. D. Boolchandani	Dean Academic
4.	Dr. Yogesh Meena	Associate Dean PG
5.	Dr. Ram Dayal	Associate Dean UG
6.	Dr. Chandra Prakash	Representative Convener DUGC, Department of Artificial Intelligence and Data Engineering
7.	Dr. Rajesh Kumar Rai	Convener DUGC, Department of Metallurgical and Materials Engineering
8.	Dr. Sunanda Sinha	Convener DUGC, Department of Centre for Energy and Environment
9.	Dr. Biman Bandyopadhyay	Convener DUGC, Department of Chemistry
10.	Dr. Prasanta Majumdar	Representative Convener DUGC, Department of Computer Science and Engineering
11.	Dr. Dipti Sharma	Convener DUGC, Department of Humanities and Social Science
12.	Dr. Sanjay Bhatter	Convener DUGC, Department of Mathematics
13.	Dr. Anirban Dutta	Convener DUGC, Department of Physics
14.	Dr. Neha Srivastava	Convener DUGC, Department of Civil Engineering
15.	Dr. Subbaramaiah V.	Convener DUGC, Department of Chemical Engineering
16.	Dr. Gunjan Soni	Convener DUGC, Department of Mechanical Engineering
17.	Dr. Sundeep Kumar	Convener DUGC, Department of Management Studies
18.	Dr. Amit Mahesh Joshi	Convener DUGC, Department of Electronics and Communication Engineering
19.	Dr. Nidhi Sharma	Special Invitee, Department of Humanities and Social Science

The following members couldn't attend the meeting:

S. No.	Name of Faculty	Designation
1.	Dr. Nivedita Kaul	Nominee Chairman Senate
2.	Dr. Vinay Pratap Singh	Convener DUGC, Department of Electrical Engineering
3.	Prof. Rajeev Shringi	Ex-Chairman, SUGB
4.	Ms. Kalpana Pandit	Convener DUGC, Department of Architecture and Planning
5.	Dr. Neetu Kumari	Convener DUGC, Department of Materials Research Center

Annexure-K

मालवीय राष्ट्रीय प्रौद्योगिकी संस्थान जयपुर
MALAVIYA NATIONAL INSTITUTE OF TECHNOLOGY JAIPUR

09 मार्च 2026 को आयोजित अनुचित साधन समिति (अनफेयर मीन्स कमीटी) की बैठक के कार्यवृत्त
Minutes of Unfair Means Committee Meeting held on 09th March 2026

अनुचित साधन समिति की बैठक 09 मार्च 2026 को सांय 4:00 बजे बैठक कक्ष सख्यां 03 (ओल्ड सिनेट हॉल), प्रभा भवन, माराप्रौ संस्थान जयपुर में आयोजित की गई। बैठक में निम्नलिखित सदस्यों ने भाग लिया:
The meeting of the Unfair Means Committee was held on 09th March 2026, at 4:00 PM in Meeting Room No.03 (Old Senate Hall), Prabha Bhawan MNIT Jaipur. The meeting was attended by the following members:

1.	प्रो. डी. बूलचन्दानी (अधिष्ठाता, शैक्षणिक) Prof. D. Boolchandani (Dean, Academics)
2.	प्रो. लव भार्गव (सभापति, सीनेट स्नातक बोर्ड (एसयूजीबी)) Prof. Lava Bhargava (Chairman, SUGB)
3.	डॉ. योगेश कुमार मीणा (सह अधिष्ठाता, स्नातकोत्तर) Dr. Yogesh Kumar Meena (Associate Dean PG)
4.	डॉ. राम दयाल (सह अधिष्ठाता, स्नातक) Dr. Ram Dayal (Associate Dean UG)
5.	डॉ. सुमन्ता कुमार मेहर (निरीक्षक) Dr. Sumanta K Meher (Invigilator)
6.	डॉ. बन्दी सुरेश (निरीक्षक) Dr. Bandi Suresh (Invigilator)
7.	डॉ. यशवन्त कोली (प्रतिनिधि डॉ. गुन्जन सोनी) Dr. Yashwant koli (Representative Dr. Gunjan Soni)
8.	डॉ. प्रसान्ता मजूमदार (निरीक्षक) Dr. Prasanta Majumdar (Invigilator)
9.	डॉ. दिनेश कुमार त्यागी (प्रतिनिधि विभागाध्यक्ष कम्प्यूटर विज्ञान एवं अभियान्त्रिकी) Dr. Dinesh Kumar Tyagi (Representative, Head, Department of Computer Science and Engineering)
10.	डॉ. यू.के. अरूण कुमार (निरीक्षक) Dr. U. K. Arun Kumar (Invigilator)

The following agenda items were discussed:

Item No. 1.0 **To confirm the minutes of the Unfair Means Committee meeting dated 04th December 2025.**

The minutes of the Unfair Means Committee meeting, dated 04th December 2025, were confirmed.

Item No. 2.0 **To Note the "Action Taken" on the decisions taken in the Unfair Means Committee meeting dated 04th December 2025.**

The Unfair Means Committee noted the action taken report on the decisions taken on 04th December 2025.

Item No. 3.0 ***Items for Consideration.***

Item No. 3.1 **To discuss the unfair means cases reported in the Mid-term Examinations Even Semester 2025-26 from 23.02.2026 to 27.02.2026.**

Cases of unfair means were observed in recently held Mid-term examinations Even Semester 2025-26 from 23.02.2026 to 27.02.2026. The cases were reported during Mid-term examinations pertaining to the Department of Mechanical Engineering, Department of Metallurgical and Materials Engineering, Department of Computer Science and Engineering and the Department of Chemical Engineering. The concerned course coordinator/invigilator/flying squads reported the cases to the respective DUGCs. The DUGC has forwarded the cases to the Unfair Means Committee:

S. No.	Name & ID of the student	Course details	Examination	Decision
1.	Piyush Meena (2025UCH1563)	1(A) 22CYT101 Engineering Chemistry	II Semester Mid-Term Examinations Even Semester 2025-26	'FP' grade will be awarded in all courses of the current semester.
		1(B) 22CHT152 Process Instrumentation	II Semester Mid-Term Examinations Even Semester 2025-26	
2.	Alok Meena (2025UME1081)	22CST101 Programming With Python	II Semester Mid-Term Examinations Even Semester 2025-26	'FP' grade in the 22CST101 Programming With Python course and reduction of grade by 1 level in all courses of the current semester.
3.	Aneek Chakraborty (2025UCP1903)	22MET101 Introduction to mechanical system	II Semester Mid-Term Examinations Even Semester 2025-26	'FP' grade in the 22MET101 Introduction to mechanical system course.
4.	Chirag Tuli (2023UME1730)	22MET353 Refrigeration and air conditioning	VI Semester Mid-Term Examinations Even Semester 2025-26	'FP' grade in the 22MET353 Refrigeration and air conditioning course.
5.	Manav Pawan Jangid (2022UMT1716)	22MTT933 Nuclear Materials	VIII Semester Mid-Term Examinations Even Semester 2025-26	Reduction of grade by 1 level in the 22MTT933 Nuclear Material course
6.	Mayank (2022UMT1728)	22MTT933 Nuclear Materials	VIII Semester Mid-Term Examinations Even Semester 2025-26	'FP' grade in the 22MTT933 Nuclear Material course and reduction of grade by 1 level in all courses of the current semester.
7.	Kadamanchi Jatin (2024UCP1903)	22CST253 Database Information Systems	IV Semester Mid-Term Examinations Even Semester 2025-26	'FP' grade in the 22CST253 Database Information System course.

The meeting was concluded with a vote of thanks to the chair.

(डी. बूलचन्दानी)
अधिष्ठाता, शैक्षणिक
(D. Boolchandani)
Dean Academic

(लव भार्गव)
सभापति, सीनेट स्नातक बोर्ड
(एसयूजीबी)
(Lava Bhargava)
Chairman SUGB

(सुजा जॉर्ज)
सभापति, सीनेट स्नातकोत्तर बोर्ड
(एसपीजीबी)
(Suja George)
Chairman SPGB

योगेश कुमार मीणा
सह अधिष्ठाता स्नातकोत्तर
(Yogesh Kumar Meena)
Associate Dean PG

राम दयाल
सह अधिष्ठाता, स्नातक
(Ram Dayal)
Associate Dean UG