

बत्तीसवीं सिनेट बैठक का कार्यवृत्त

**MINUTES OF THE 32nd SENATE MEETING OF
IIT MANDI**

22nd SEPTEMBER, 2021



भारतीय प्रौद्योगिकी संस्थान मण्डी
कमांद— 175075, हिमाचल प्रदेश

**INDIAN INSTITUTE OF TECHNOLOGY MANDI
KAMAND – 175075, HIMACHAL PRADESH**

**INDIAN INSTITUTE OF TECHNOLOGY MANDI
KAMAND, HIMACHAL PRADESH**



32nd SENATE MEETING OF IIT MANDI

22nd SEPTEMBER, 2021

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INDIAN INSTITUTE OF TECHNOLOGY MANDI

**Minutes of the 32nd Senate Meeting of IIT Mandi held on 22nd September, 2021
at 04:00 PM in A1 NKN Room, IIT Mandi, Kamand.**

The following were present:

In the Chair

Prof. Ajit K. Chaturvedi, Director, IIT Mandi

Members:

Prof. Rowena Robinson, Deptt. of HSS, IIT Bombay
 Prof. Tarun Kant, Visiting Distinguished Professor, SE, IIT Mandi
 Prof. S. C. Jain, Emeritus Professor, SE, IIT Mandi
 Prof. Subrata Ghosh, Professor, SBS, IIT Mandi
 Prof. Prem Felix Siril, Professor, SBS, Dean (Faculty) & Associate Dean (Faculty), IIT Mandi
 Prof. Suman Kalyan Pal, Professor & Chairperson (SBS), IIT Mandi
 Prof. Chayan K. Nandi, Professor, SBS, & Associate Dean (Research), IIT Mandi
 Prof. Pradeep C. Parameswaran, Professor, SBS, IIT Mandi
 Prof. Bharat Singh Rajpurohit, Professor, SCEE & Dean (I&S), IIT Mandi
 Prof. Satinder K. Sharma, Professor, SCEE & Co-ordinator, C4DFED, IIT Mandi
 Prof. Rajeev Kumar, Professor, SE, IIT Mandi
 Prof. Rahul Vaish, Professor, SE & Dean (Academics), IIT Mandi
 Dr. Vishal Singh Chauhan, Dean (F & A), IIT Mandi
 Dr. Venkata Krishnan, Dean (SRIC & IR), IIT Mandi
 Dr. Manoj Thakur, Dean (Students), IIT Mandi
 Dr. Samar, Chairperson, SCEE, IIT Mandi
 Dr. Viswanath Balakrishnan, Chairperson, SE, IIT Mandi
 Dr. Shyamasree Dasgupta, Chairperson, SHSS, IIT Mandi
 Dr. Prosenjit Mondal, Co-ordinator, BioX Centre, IIT Mandi
 Dr. Rik Rani Koner, Co-ordinator, AMRC, IIT Mandi
 Dr. Srikant Srinivasan, Associate Professor, SCEE, IIT Mandi
 Dr. Aditi Halder, Associate Professor, SBS, IIT Mandi
 Dr. Sunny Zafar, Assistant Professor, SE, & Chief Warden, IIT Mandi
 Dr. Qaiser Jahan, Assistant Professor, SBS, IIT Mandi
 Dr. Gopi Shrikanth Reddy, Assistant Professor, SCEE, IIT Mandi
 Dr. Rajeshwari Dutt, Chair, Library Advisory Committee (LAC), IIT Mandi
 Mr. Naresh Singh Bhandari, Deputy Librarian, IIT Mandi
 Dr. Nadeem Akhtar, M/s Arista Networks
 Shri K. K. Bajre, Registrar & Secretary-Senate, IIT Mandi

Invitees:

Dr. Arnav Bhavsar, Associate Dean (SRIC), IIT Mandi
 Dr. Kaustav Sarkar, Associate Dean (Infrastructure), IIT Mandi
 Dr. Devika Sethi, Associate Dean (International Relations), IIT Mandi
 Dr. Kala V. Uday, Chair, CPC, IIT Mandi
 Dr. Syed Abbas, Associate Professor, SBS, IIT Mandi
 Dr. Dileep A. D., Associate Professor, SCEE, IIT Mandi
 Dr. Ajay Soni, Associate Professor, SBS, IIT Mandi

Dr. Varun Dutt, Associate Professor, SCEE & SHSS, IIT Mandi
 Dr. Padmanabhan Rajan, Associate Professor, SCEE, IIT Mandi
 Dr. Arpan Gupta, Associate Professor, SE, IIT Mandi
 Dr. Hitesh Shrimali, Associate Professor, SCEE, IIT Mandi
 Dr. Shubhajit Roy Chowdhury, Associate Professor, SCEE, IIT Mandi
 Dr. C. S. Yadav, Associate Professor, SBS, IIT Mandi
 Dr. Ramna Thakur, Associate Professor, SHSS, IIT Mandi
 Dr. Deepak Swami, Associate Professor, SE, IIT Mandi
 Dr. Muslim Malik, Associate Professor, SBS, IIT Mandi
 Dr. Tulika Srivastava, Associate Professor, SBS, IIT Mandi
 Dr. Atul Dhar, Associate Professor, SE, IIT Mandi
 Dr. Rajanish Giri, Associate Professor, SBS, IIT Mandi
 Dr. Shyam Kumar Masakapalli, Associate Professor, SBS, IIT Mandi
 Dr. Tushar Jain, Associate Professor, SCEE, IIT Mandi
 Dr. Amit Prasad, Associate Professor, SBS, IIT Mandi
 Dr. Pradeep Kumar, Associate Professor, SBS, IIT Mandi
 Dr. Renu M. Rameshan, Assistant Professor, SCEE, IIT Mandi
 Dr. Bhaskar Mondal, Assistant Professor, SBS, IIT Mandi
 Dr. Narsa Reddy Tummuru, Assistant Professor, SCEE, IIT Mandi
 Dr. Manas Thakur, Assistant Professor, SCEE, IIT Mandi
 Dr. Adarsh Patel, Assistant Professor, SCEE, IIT Mandi
 Dr. Ashutosh Kumar, Assistant Professor, SE, IIT Mandi
 Dr. Trayambak Basak, Assistant Professor, SBS, IIT Mandi
 Dr. Sayantan Sarkar, Assistant Professor, SE, IIT Mandi
 Dr. Sandip Kumar Saha, Assistant Professor, SE, IIT Mandi
 Dr. Neha Kaushik, Assistant Professor, SHSS, IIT Mandi
 Dr. Garima Agrawal, Assistant Professor, SBS, IIT Mandi
 Dr. Varunkumar Jayapaul, Assistant Professor, SCEE, IIT Mandi
 Dr. Moumita Das, Assistant Professor, SCEE, IIT Mandi
 Dr. Himanshu Misra, Assistant Professor, SCEE, IIT Mandi
 Dr. Gaurav Bhutani, Assistant Professor, SE, IIT Mandi
 Dr. Maheshreddy Gade, Assistant Professor, SE, IIT Mandi
 Dr. Siddhartha Sarma, Assistant Professor, SCEE, IIT Mandi
 Dr. Amit Balkrishna Pawar, Assistant Professor, SBS, IIT Mandi
 Dr. Srinivasu Bodapati, Assistant Professor, SCEE, IIT Mandi
 Dr. Baskar Bakthavachalu, Assistant Professor, SBS, IIT Mandi
 Dr. Pratim Kundu, Assistant Professor, SCEE, IIT Mandi
 Dr. Satyajit Thakor, Assistant Professor, SCEE, IIT Mandi
 Dr. Prasad Kasturi, Assistant Professor, SBS, IIT Mandi
 Dr. Srikanth Sugavanam, Assistant Professor, SCEE, IIT Mandi
 Dr. Prateek Saxena, Visiting Assistant Professor, SE, IIT Mandi
 Dr. Erwin Fuhrer, Visiting Assistant Professor, SCEE, IIT Mandi
 Mr. Bhumanyu Goyal, Student Academic Affairs Secretary, IIT Mandi (Special Invitee)
 Mr. Anirudh Singh, Student General Secretary, IIT Mandi (Special Invitee)
 Mr. Adesh Singh, Student Research Affairs Secretary, IIT Mandi (Special Invitee)
 Shri Vivek Tiwari, Assistant Registrar (Academics), IIT Mandi also attended the meeting.

Following Senate members/invitees could not attend the meeting due to prior commitments:

Prof. N. Sathyamurthy, Former Director, IISER Mohali & Hon. Prof., JNCASR, Bengaluru

Prof. Sunil R. Kale, Professor, Department of Mechanical Engineering, IIT Delhi
Prof. Ramesh Oruganti, Adjunct Professor, SCEE, IIT Mandi
Prof. Rajan Kapur, Adjunct Professor, SCEE, IIT Mandi
Prof. Subrata Ray, Distinguished Visiting Professor, SE, IIT Mandi
Prof. Yvonne Dittrich, Adjunct Professor, SCEE, IIT Mandi
Prof. Ajit Padmakar Annachattre, Visiting Professor, SE, IIT Mandi
Prof. Ing. Balthasar Novak, Adjunct Professor, SE, IIT Mandi
Prof. Sumant Nigam, Visiting Distinguished Professor, SE, IIT Mandi
Dr. Puran Singh, Associate Professor, SHSS, IIT Mandi

The Chairman Senate extended a warm welcome to all the Senate members and Invitees attending the 32nd Senate meeting of the Institute.

Thereafter, following agenda items were taken up.

Item No. 32.1: To confirm the minutes of the 31st Senate meeting held on 10th June, 2021.

The minutes of the 31st Senate meeting held on 10th June, 2021 were circulated to members of the Senate on 12th July, 2021 (through email) for comments. No comments were received on the minutes. Therefore, minutes of the 31st Senate meeting held on 10th June, 2021 were confirmed, as circulated.

Item No. 32.2: To receive a report on the actions taken for the decisions taken in the 31st Senate meeting held on 10th June, 2021.

The Senate noted the actions on the decisions taken in its 31st meeting held on 10th June, 2021.

Item No. 32.3: To consider minimum performance in M.Tech./M.S. (by Research)/Ph.D/I-Ph.D etc. programmes for continuation of Assistantship/Fellowship/Scholarship.

The Senate deliberated on the proposal and gave few suggestions. The revised comprehensive proposal be presented for consideration in subsequent meeting of the Senate.

Item No. 32.4: To consider modification in the degree requirement for Integrated Ph.D (Physics) programme.

The PFG Chair for Integrated-Ph.D. (Physics) programme, presented the proposal regarding modification in the degree requirement for Integrated Ph.D (Physics) programme.

The Senate considered the I-PhD documents approved in the 10th Senate meeting held on 29th June 2016, and resolved the following:

- i) The students enrolled in the I-PhD (Physics) program, who joined upto 2019 need to complete the course work comprising total 89 credits with a minimum CGPA of 7.0 along with the thesis work to fulfill the requirements for the I-PhD program. For the 2020 batch onwards, the Program Faculty Group of I-PhD shall revisit the minimum CGPA requirement and submit revised proposal / comprehensive norms to the Senate. This

will supersede any previous clause regarding the credit and CGPA requirement for the program.

- ii) The I-PhD students would be awarded a single transcript and two separate degrees i.e. (a) Master of Science in Physics, (b) Doctor of Philosophy.

The Senate also approved the format of the degree, as placed at **Annexure–A; Page No. 11 to 12.**

Item No. 32.5: To consider the proposal for calculation of Cumulative Grade Point Average (CGPA).

Dr. Srikant Srinivasan, Associate Dean (Courses) presented the proposal for calculation of Cumulative Grade Point Average (CGPA). After detailed deliberation, the Senate resolved the following:

- i) The final CGPA, calculated upon the completion of all credit requirements towards the fulfillment of a degree, shall include all credits earned against a letter grade, including those credits that are in excess of the minimum requirements.
- ii) The provision shall be applicable to all programs (UG 2018 batch, PG 2020 batch and IPhD 2015 batch onwards), excluding M.S. (by Research) and Ph.D.
- iii) The final CGPA calculation shall not include any 'F' grade once all the earned credit requirements are completed, (including the minimum credit requirement per basket such as IC/ DC/ DE/ FE/ ODE etc), in continuation of the existing provision.
- iv) The Semester GPA calculation shall include 'F' grade, in continuation of the existing provision.
- v) The intermediate CGPA calculation (i.e. CGPA calculated during the course of the program before completion) shall also include 'F' grade, except for those cases where the course has been successfully cleared in a subsequent attempt or has replaced by an equivalent course that has been successfully completed.

The Senate further resolved that a student should not be permitted to register for any additional semesters after the completion of the minimum requirements towards graduation.

Item No. 32.6: To consider the proposal of Double Major B.Tech. degree.

On the recommendation of the Board of Academics, the Senate considered the proposal of Double Major B.Tech. degree presented by Dr. Gaurav Bhutani.

After detailed deliberation, the Senate resolved to approve the proposal, as placed at **Annexure – B; Page No. 13 to 18.**

Item No. 32.7: To consider modification of the minimum requirements of HSS course credits in B.Tech. and Integrated Dual Degree (IDD) programmes.

Dr. Tushar Jain presented the proposal regarding modification of the minimum requirements of HSS course credits in B.Tech. and Integrated Dual Degree (IDD) programmes.

- i) Reduce the 18 compulsory HSS course credits to 13 HSS course credits, with the rest of the 5 HSS course credits converted to 5 free elective credits.
- ii) Remove the HSS basket requirement to allow the student to take the required number of compulsory HSS course credits from any HSS baskets or HSS electives.

The Senate deliberated the first item and suggested a comparison of the percentage-wise HSS course credits requirements with other IITs, following which, this item may be reconsidered in the next Senate meeting.

The Senate resolved to approve the second subitem. Now the students can take the 18 HSS compulsory credits from any of the HSS course baskets or HSS electives. The provision would be applicable to all B.Tech./ IDD students from the 2018 batch onwards.

Item No. 32.8: To consider proposal on resolving the issue of registration of IC142 as a 4 credit course by B.Tech. (2018-22) batch.

Dr. Shubhajit Roy Chowdhury, Chairperson of the Committee presented the proposal on resolving the issue of registration of IC142 as a 4 credit course – instead of a 3-credit course – by B.Tech. (2018-22) batch. After brief discussion, the Senate resolved the following:

“The students of the B.Tech. (2018-22) batch be given a waiver of 1 credit in the basket of free electives, which means they would be required to complete 21 credits instead of 22 credits of free electives for completion of degree.”

Item No. 32.9: To consider modification in the IC Engineering basket for students of B.Tech. in Engineering Physics.

Dr. Pradeep Kumar, Programme Coordinator for B.Tech. in Engineering Physics presented the proposal regarding modification in the IC Engineering basket for students of B.Tech. in Engineering Physics. As per the Senate approved guidelines, a student is required to take atleast one course from each of the IC baskets (Science I, Science II and Engineering). Currently, Engineering Physics (EP) students have to compulsorily take ‘Measurement and Instrumentation’ course from the Engineering basket.

After a brief discussion, the Senate resolved to remove the compulsory requirement of ‘Measurement and Instrumentation’ course. Thus, an EP student would be free to take any course from the Engineering basket.

Item No. 32.10: To consider the proposal for modification in Branch Change rules for UG programme.

Dr. Arpan Gupta, Associate Professor, School of Engineering presented a proposal regarding modifications in the Branch Change rules for UG programmes. After detailed deliberation, the Senate resolved the following:

- i) To be considered for a branch change, a student needs to submit the application before the end of the second semester of the programme, with choices in order of preference, of the branch or branches desired to be changed to.
- ii) Branch change applications will be considered strictly in order of merit as established by the CGPA of first-year courses (excluding HSS elective) to the extent of the applicant's choices in the order of the preference. If a seat opens up at any later stage in the process, it be offered to the applicant with the highest CGPA by going back up the list.
- iii) In granting the change of branch of a student, the strength of a branch / class shall not exceed the sanctioned strength by more than 25% and shall not fall below the existing strength by more than 20%. (Any fraction will be rounded off to the nearest whole number).
- iv) The student should have no backlog and should not have been found guilty of any severe academic or disciplinary misconduct.
- v) During the branch change process, if any tie of CGPA scores, the affected students will be treated equally and will be jointly given the branch change subject to condition (iii) above.
- vi) The above provision would be applicable for students admitted in 2021.

Item No. 32.11: To review the request of a B.Tech. 2020 batch student for Branch Change.

Dr. Rajeev Kumar, Chairperson of the Branch Change Committee presented the request of a student to review the application of branch change. The student was earlier denied branch change due to being the 2nd ranking student in the original branch. However, the 1st ranking student had not applied for branch change.

It was noted by the Senate that although the written rules of branch change are clear on this matter, there is a precedence when a top-ranking student of the branch did not apply for the branch change, the 2nd ranking student (*the top ranker of the branch among the applicants*) was allowed the branch change.

After detailed deliberation, the Senate resolved to allow the appeal of the student for Branch Change.

Item No. 32.12: To consider the proposal to start a new programme, M.Tech. in Electric Transportation.

Dr. Narsa Reddy Tummuru, Programme Coordinator for M.Tech (PED) presented the proposal to start a new programme, M.Tech. in Electric Transportation.

After detailed deliberations, the Senate approved the proposal with minor modification, placed as **Annexure – C; Page No. 19 to 24.**

Item No. 32.13: To consider award of Ph.D., I-Ph.D.(Physics), M.S. (by Research), M.Tech., M.Sc., M.A. and B.Tech degree.

The 9th Convocation of the Institute will be organized in online mode. The Senate considered the students, who have fulfilled all the requirements for award of the degree during 9th Convocation as detailed below:

Programme	No. of students
Ph.D.	35
I-Ph.D.	01
M.S. (by Research)	13
M.Sc. in Chemistry	35
M.Sc. in Applied Mathematics	36
M.Sc. in Physics	28
M.Tech in Mechanical Engineering with Specialization in Energy Systems	19
M.Tech in Energy Engineering with Specialization in Materials	17
M.Tech in Structural Engineering	25
M.Tech in VLSI	27 + 1 (2018 batch)
M.Tech in Power Electronics and Drives	15
M.Tech in Communication and Signal Processing	16
M.Tech in Biotechnology	16
M.A. in Development Studies	11
B.Tech in Civil Engineering	18
B.Tech in Computer Science and Engineering	58 + 1 (2016 batch) + 1 (2015 batch)
B.Tech in Electrical Engineering	43 + 1 (2015 batch)
B.Tech in Mechanical Engineering	24
Total	441

The complete list of students qualified for various degrees are placed as **Annexure-D; Page No. 25 to 42.** The Senate approved award of degree to these students and congratulated them on successful completion of the degree programme.

Further, the Senate authorized the Chairman, Senate to approve the conferment of degree on those students who complete all requirements before ten days of commencement of the 9th Convocation.

The Senate also decided to hold a suitable function at the Institute to host the graduands for a re-union. This function may be organized as and when the pandemic situation improves considering the aspirations of the graduands.

Item No. 32.14: To consider the award of Medals and Prizes to the winners among the graduands, which are to be awarded during the 9th Convocation of the Institute.

The Chairperson of the Awards and Prizes Committee presented the award of Medals and Prizes to the following winners among the graduands:

Sl.No.	Roll No.	Name	Medal/Prize
1.	B17138	Rishi Sharma	President of India Gold Medal
2.	B17138	Rishi Sharma	Institute Silver Medal: B.Tech. Computer Science & Engineering
3.	B17011	Divanshu Gupta	Institute Silver Medal: B.Tech. Electrical Engineering
4.	B17142	Shreya Prakash Lanjewar	Institute Silver Medal: B.Tech. Mechanical Engineering
5.	B17022	Sanjeev Singh Yadav	Institute Silver Medal: B.Tech. Civil Engineering
6.	B17036	Arnav Prasad	Director's Gold Medal
7.	B17092	Manvi Gupta	Rani Gonsalves Memorial Medal
8.	V19006	Khushboo Varshney	Institute Silver Medal: M.Sc. (Chemistry)
9.	V19050	Vinit	Institute Silver Medal: M.Sc. (Physics)
10.	V19097	Priya	Institute Silver Medal: M.Sc. (Applied Mathematics)
11.	T19038	Shubham Dutt Attri	Institute Silver Medal: M.Tech. in Mechanical Engineering with Specialization in Energy System
12.	T19027	Ajay Kumar	Institute Silver Medal: M.Tech. in Structural Engineering
13.	T19142	Kumari Suravi	Institute Silver Medal: M.Tech. in VLSI
14.	T19202	Giredhar Muthiah	Outstanding Academic Achievement Award: M.Tech. in Biotechnology
15.	T19165	Tirthashree	Outstanding Academic Achievement Award: M.Tech. in Communication and Signal Processing
16.	T19133	Pranav Kumar Jha	Outstanding Academic Achievement Award: M.Tech. Power Electronics and Drives
17.	T19054	Anupam Nigam	Outstanding Academic Achievement Award: M.Tech. Energy Engineering with Specialization in Materials
18.	A19011	Yash Agarwal	Outstanding Academic Achievement Award: M.A. in Development Studies

The Senate approved the list and congratulated all the students mentioned above in various streams for achieving the awards and prizes.

Item No. 32.15: Any other agenda item with the permission of the Chairman, Senate.

- a) Prof. Chayan K Nandi, Associate Dean (Research) presented the change in Degree formats for various academic programmes and format of the Scroll. After brief discussion, the Senate resolved to approve the formats, enclosed as **Annexure – E; Page No. 43 to 45.**
- b) During the discussions, Academic Secretary requested to reconsider the relaxed attendance criteria due to COVID-19 pandemic. After discussions, the Senate resolved to continue the relaxed attendance criteria for online teaching, as decided earlier.

Item No. 32.16: To report decisions/action taken by the Chairman, Senate.

The Senate noted the decisions taken by the Chairman, Senate on behalf of the Senate, as given in the agenda.

Item No. 32.17: New courses approved by the BoA in the 41st meeting held on 13th August, 2021.

The Senate noted the new courses approved by the BoA in the 41st meeting held on 13th August, 2021, as given in the agenda.

Item No. 32.18: Issues to be discussed by the Senate without Student Members being present.

None.

The meeting concluded with a vote of thanks to the Chair and to the Members.


Chairman, Senate

15/10/21


Registrar & Secretary-Senate

H

भारतीय प्रौद्योगिकी संस्थान मण्डी

के अभिषद् द्वारा

भौतिकी में विज्ञान स्नातकोत्तर

(एकीकृत विज्ञान स्नातकोत्तर एवं डॉक्टर ऑफ़ फ़िलॉसफ़ी कार्यक्रम के अंतर्गत)

की उपाधि

(नाम)

को

तेईस अक्टूबर दो हज़ार इक्कीस को प्रदान की गयी।



The Senate of the

Indian Institute of Technology Mandi

hereby confers the degree of

Master of Science

(under the Integrated Master of Science and Doctor of Philosophy Programme)

in

Physics

on

(NAME OF THE CANDIDATE)

on

Twenty Third of October, Two Thousand Twenty Oneनिदेशक एवं अध्यक्ष, अभिषद्
Director & Chairperson, Senateकुलसचिव
Registrar

H

भारतीय प्रौद्योगिकी संस्थान मण्डी

के अभिषद् द्वारा

डॉक्टर ऑफ़ फ़िलॉसफ़ी

(एकीकृत विज्ञान स्नातकोत्तर एवं डॉक्टर ऑफ़ फ़िलॉसफ़ी कार्यक्रम के अंतर्गत)

की उपाधि

(नाम)

को

तेईस अक्टूबर दो हज़ार इक्कीस को प्रदान की गयी।

शोध प्रबन्ध: शोध का शीर्षक



The Senate of the

Indian Institute of Technology Mandi

hereby confers the degree of

Doctor of Philosophy

(under the Integrated Master of Science and Doctor of Philosophy Programme)

on

(NAME OF THE CANDIDATE)

on

Twenty Third of October, Two Thousand Twenty One

PhD Thesis: Title of the thesis will be placed here

निदेशक एवं अध्यक्ष, अभिषद्
Director & Chairperson, Senate

कुलसचिव
Registrar

Double Major proposal

23 September 2021

Abstract

A double major at IIT Mandi is proposed. Under this option, the student will be able to major in a secondary branch, along with a BTech (or dual degree -- BTech+MTech) in their primary branch (which the student got during selection at IIT Mandi / after branch change). For this the student will be required to complete additional coursework, which will include core and elective courses, in the secondary discipline. An additional one year, typically, will be permitted for the student to complete these additional requirements. A degree certificate stating B.Tech. (or Btech+MTech) in <ABC> with second Major in <XYZ> shall be awarded. This is practised at three other IITs as of date, including IIT Kanpur, IIT Gandhinagar and IIT Hyderabad. The double major program can be termed as a 5-year program just as usual BTech is termed as a 4-year program.

Rationale

- Common modules of curriculum for all IIT Mandi engineering students are:
 - IC compulsory (54)
 - ISTP (4)
 - HSS core (13)
 - HSS electives (5)
 - Free electives (22)
- Fair amount of fundamental and common subjects amongst the engineering curriculum (98 credits) - this excludes the IC baskets of 9 credits.
- Disciplines are distinguished by B.Tech. project (8 credits), Discipline core (33) and Discipline electives (12). Thus, a total of 53 credits.
- Some additional work can make a student eligible for major requirements of two disciplines.

Note:

- A double major is not a dual degree (BTech + MTech).
- A double major is not a double degree (two BTechs). This is because the requirements of a second BTech degree (53 credits) would also include a second B.Tech. project, and is much more than that of the proposed second major (36-40 credits).

Benefits:

- Students with a second major in "X" can sit for intern/placement in "X" profiles too.
- Alleviates the pressing need of individual students to change their branch to the generally "most preferred" branch. This will reduce the stress on the students significantly.
- Double major will impart multidisciplinary research, increasing the scope for higher education in interdisciplinary fields.

Application

1. Eligibility criteria: CGPA \geq 7.0, not more than one F grade. If someone is struggling with the parent branch, a double major will be an added pressure.
2. Application period:
 - a. At the end of 4th and 6th semester for four-year BTech programs. Applications will be considered subject to the availability of seats in the program.
 - b. At the end of 6th and 8th semester for five-year BTech+MTech dual degree programs. Applications will be considered subject to the availability of seats in the program.
3. In case the number of applicants exceeds the number of available vacancies, the process of selection into the second major shall be determined by a faculty committee constituted by the Dean academics for this purpose.
4. The Dean (Academics) shall decide a cap on the maximum number of students who can avail this option for any particular (second) discipline, based on the advice tendered by the respective Schools/PFG Chairs.
5. Student applications must be recommended by the Faculty Advisor.
6. The PFG chair of the second major will have to approve the student's request for entry and the application can be denied in case the seats are full, the student has any F grade in any core/elective course of the second major or some other valid reason.

Courses/Baskets

1. A basket of courses that contribute towards the second major is identified by the PFG of each (second) discipline, that may comprise some combination of discipline core and discipline elective courses from the second discipline. The PFG of the (second) discipline may also list an additional set of prerequisite courses in some cases. A minimum number of core credits may be decided for all second majors.
2. Between 36 and 40 credits from this basket need to be completed by the student.
3. For the purpose of completion of the 36-40 credits required for the second major, a maximum of 12 FE credits may be used from the parent program. The remaining FE credits from the parent program should be applied towards courses that do not count towards the second major basket requirement.

4. Students may start accumulating course credits in the form of additional courses (even before they officially enrol into a Double Major program) and convert them to be counted in favour of Double Major requirements at the time of enrolling into this program. This will help them learn the disciplines gradually over the five years and also reduce load on the administration while offering courses to the students without clashes.
5. Courses that are a part of the common core (including HSS)/Discipline Core/Discipline Elective for a student's parent discipline cannot count towards their second Major requirement.
6. If a core/foundation course of second discipline Y is a part of parent program X's discipline core/elective:
 - a. Eg:- DSE student wants to second major in CSE.
 - b. "CS202 - Data Structures & Algorithm" is a discipline core for both CSE and DSE.
 - c. Solution: Compensation of such credits can be done through:
 - i. Possible replacements (from a pool of courses), suggested by PFG of the second discipline
 - ii. Courses that count as DE for the second discipline Y

Pass/Fail rules

The enrollment into a second major shall not influence the Pass/Fail credit requirements of the parent discipline. However, it may be noted that none of the courses that count towards the second major may be taken under the Pass/Fail category

Completing the program

Only one CGPA will be reported on all official documents, calculated upon the performance of the student in all courses credited, including the requirement of BTech and second major. The overall grade report, in addition to the primary discipline courses, will also display the discipline of the second Major and courses done to complete the second Major along with the grades awarded.

Voluntary opting-out from the program is not allowed.

Termination of the program

1. After enrolling into a double major program, if a student gets an "F" grade in two or more than two courses, his/her enrollment to the double major program will be terminated.

2. The second Major part of the program will be automatically discontinued at the end of the tenth semester for BTechs and 12th semester for BTech+MTech Dual degree students if the student is not able to complete the requirements of double major. Special requests can be considered by the Dean Academics on the recommendation of the PFG chair of the Second major discipline.
3. In the case of termination, the courses which were credited for completion of the second major basket can be counted towards the Free Electives (if required).

Felicitations and Awards

The double major program is a 5-year UG program. Hence, the following is proposed:

Foundation Day

A program-wise award for outstanding academic excellence will be given at the 4th year for the students seeking Double Major in addition to a 4-year BTech degree, based on their parent program.

Convocation

Four-year BTech students enrolled in the Double major program admitted into the institute in year x compete with 4-year BTech students admitted in year $x + 1$ for the following medals:

- President of India Gold Medal
- Institute Silver Medals
- Rani Gonsalves Memorial Medal
- Balasundaram Endowment Prize in German
- Director's Gold medal

CnP rules

BTech students doing double major will be allowed to sit for placements in the 5th year, not 4th. BTech + MTech dual degree students will be allowed to sit in the placements in the 6th year, not 5th. CnP will have the final say in any case.

Implementation:

The following types of programs can be taken as second major:

- All engineering programs (CE, ME, CSE etc.)
- Science programs (Maths, Physics, Chemistry etc.)
- Engineering science (EP)

All participating PFGs will be requested to develop a template of courses for second major in their discipline.

Important notes:

1. The B.Tech. (Honours) program will only be applicable to the parent Major discipline, and not the second Major discipline. Furthermore, no waiver of Free Elective credits shall be provided to the student, in order to remain consistent with the pre-existing B.Tech. (Honours) requirement.
2. A student cannot undertake a second Major and minor in the same discipline.
3. Internship rules (including the time of internship) shall be the same as that for the regular B.Tech. program.
4. Timely completion of the course and credit requirements will solely be the students' responsibility.
5. For students doing Double Major with BTech Honours, the R.29.4 of BTech Ordinances and Regulations would apply only to 172-174 credits done from the parent discipline and not on the 36-40 credits counting towards the second major, i.e. it's the GPA of Parent programme courses which needs to be 8.5 or more and **not the overall CGPA**.
6. [Future Review] A proposal for having a separate Director's Gold Medal for 4-year and 5-year (Double Major and Dual Degree) UG students, once we have good enough strength in 5-year UG programmes
7. [Future Review] A proposal to consider the end of 4th semester for application of the Double Major programme for Dual degree students, once we have dual degree programmes other than Bio Engineering.

References

For IIT Kanpur (since 2009):

- Common info: <https://www.iitk.ac.in/doaa/data/Double-Major.pdf>
- Course template: <https://www.iitk.ac.in/doaa/data/Course-Template-B.Tech-BS.pdf>
- Award rules: <https://iitk.ac.in/sspc/sspc-convocation-awards>

For IIT Hyderabad (since 2014):

- Common info: Page 27, point 4.3.4 <https://ai.iith.ac.in/files/20200306-Academics-Handbook.pdf>
- Course template: <https://www.iith.ac.in/academics/assets/files/pdf/20200227-Courses-of-Study-Bachelors.pdf>
- <https://www.cse.iith.ac.in/assets/pdf/CSE-Minor-DoubleMajor-Curriculum-Aug2016.pdf>

For IIT Gandhinagar:

- <https://iitgn.ac.in/admissions/dmbtech>

Comparison matrix

	IIT K	IIT Hyd	IIT Gn	IIT Mandi proposed
Disciplines for 2nd major	All engineering programs, science programs (PCM, Eco)	All engineering programs; Maths, Physics	All engineering programs only	All engineering programs; all science programs
Application	At the end of 4th or 7th sem	Anytime after 3rd sem	Anytime after 3rd sem	Anytime after the end of 4th semester
Seats/Cap	Not mentioned	At dept discretion (10% for CSE)	10 seats or 20%, whichever is higher	To be discussed
Merit/CGPA requirement at time of application	Min 7.0 CGPA	No CGPA and no backlog	Min 6.5 CGPA and no fail grade (F or E grade)	Min 7.0 CGPA and not more than one F grade
Credits allowed to be used from parent dept graduation requirements *, for the second major requirements (or credit waiver)	A maximum of 36 IIT K FE credits may be used (out of 54) == 66% of FE credits == 12 IIT Mandi credits	Not mentioned	Exactly 4 IIT Gn FE credits must be used (out of 16) == 25% of FE credits == 3 IIT Mandi credits	A maximum of 12 FE credits may be used (out of 22) ; == ~50% of FE credits
Credits for 2nd major	~100 IITK credits == 40 IIT Mandi credits	~24 IITH credits == 36 IIT Mandi credits	~54 IITGn credits == 50 IIT Mandi credits	36-40 credits

Proposal

for

Master of Technology in
Electric Transportation



Indian Institute of Technology Mandi,
Himachal Pradesh, India

Name of the Degree Program:

Master of Technology in **Electric Transportation**

Abbreviation

Master of Technology is abbreviated as M.Tech.

Categories of Admission:

Candidates will be admitted to the M.Tech. Program of the Institute under one of the following categories:

- i) Regular full-time students with Half-teaching Research Assistantship (HTRA) assistantship
- ii) Regular full-time students without HTRA assistantship
- iii) Full time sponsored students by the Industries, established Institutes/R&D Organizations/National laboratories without HTRA assistantship.

Duration:

The duration of this program is two years. Each year consists of two semesters, summer and winter terms. However, Half-teaching Research Assistantship (HTRA) duration will be governed as per Institute norms.

Credits to be earned:

The students have to earn minimum of 70 -72 credits for the degree of Master of Technology in this specialization. For more details on credit distribution please refer to ordinance and regulations for M.Tech./M.Sc. of IIT Mandi.

Eligibility:

a) Candidates who have qualified for the award of Bachelor's degree in Engineering / Technology with minimum first class or 60% aggregate marks (or Equivalent CGPA) in all the four years from a recognized University or Institute in **Electrical Engineering (EE), Electrical & Electronics Engineering (EEE), Instrumentation and Control, Electronics & Communication, Mechanical Engineering, Automobile, Production, Aeronautical Engineering** and who have qualified and have a valid score in Graduate Aptitude Test in Engineering (GATE) in the **EE/ME** disciplines are eligible to apply for admission to the this program.

b) For all B.Techs from IITs graduated with a CGPA of 8.0 or above, the requirement of GATE qualification is waived off.

c) A student sponsored by a recognized R&D organization, academic institution, government organization or industry with minimum first class or 60% aggregate marks (or Equivalent CGPA) in their Bachelor's degree in the aforementioned disciplines are eligible to apply for this program on a full-time basis. The Institute does not provide any assistantship to such students.

d) A candidate with Associate Membership of Professional Bodies equivalent to B.Tech in the aforementioned disciplines with minimum first class or 60% aggregate marks (or Equivalent CGPA), as approved by the Senate and having valid GATE score in EE/ME stream shall also be eligible to apply for admission to this program with assistantship, subject to regulations approved by the Senate.

For more details on eligibility criteria please refer to ordinance and regulations for M.Tech./M.Sc. of IIT Mandi.

Number of Seats:

The number of seats shall be as approved by the Senate.

Assistantship (Fellowship/Scholarship):

The award of assistantship shall be in accordance with prevailing norms of the Institute.

Award of Degree:

Award of this M. Tech. degree shall be in accordance with the regulation of the Senate in relation to the requirements of the given program.

Campus Stay:

Students admitted to this program are required to stay in campus and to participate and complete all requirements of the program.

Exception:

Any exception to above clauses will require approval of the Senate or by the Chairman, Senate.

Note: For detailed information, please refer to ordinance and regulations for M.Tech./M.Sc. of IIT Mandi.

Motivation and objectives:

India, along with several other rapidly growing economies, has recognized the imminent need for electrification of transport systems. The benefit derived from this transition will two-fold: first, it will help the country to reduce the dependence on fossil fuel that is primarily imported and has significant budgetary implications; second, with a penetration of clean fuel and renewables in the electricity generation sector, this transition will be able to contribute to mitigation of greenhouse emissions. To this end, the Government (GoI) of India has already put schemes, e.g., FAME, in action, and is actively looking for collaboration with the relevant industries and academia. While the industry is expected to focus on the production and distribution of electric vehicles, the responsibility of training the manpower for this cause is assigned to the academia.

The M.Tech in Electric transportation at IIT Mandi has been designed in alignment with the objectives of the initiative taken by the GoI and to cater to the growing demand of skilled personnel in the EV industry---both the new EV entrepreneurs and the existing ones.

Objectives of the program:

- Equipping the students with both the conceptual and practical knowledge pertaining to the electric transport industry.
- Exposing the students to cutting-edge research on electric transportation through various course projects, systems design (winter/summer short project), and dissertation.
- Enhancing their employability in the EV industry by engaging them in solving problems that originated in the industry in their year-long dissertation.

Course Structure

Overall Curriculum Structure:

Sr. No.	Curriculum Structure Details	Credits
1.	Discipline Core Courses (DC)	27
2.	Discipline Electives (DE)	06
3.	Open Electives from outside discipline (OE)	06
4.	Technical Communication(TC)	01
5.	Post Graduate Project (PGP-I and PGP-II)	15+15=30
	Total No. of Credits	70

Suggested Course Sequence:

FIRST SEMESTER (1stSem)

Title of the course	L-T-P-C	Remarks
Power Electronic Applications in Electric Transportation	3-0-0-3	DC
Electrical Machine and Drives in Electric Transportation	3-0-0-3	DC
Laboratory course on Power Electronics and Electrical Drives	0-0-3-2	DC
Vehicle Design and Dynamics	3-0-0-3	DC
Modeling, Simulation and Control of HEV	3-0-0-3	DC
Laboratory course on Vehicle Design and Control	0-0-3-2	DC
Technical Communication	1-0-0-1	TC

Summer/Winter Break

Title of the course	L-T-P-C	Remarks
Systems Design: EVs	0-0-3-2	DC

SECOND SEMESTER (2ndSem)

Title of the course	L-T-P-C	Remarks
Embedded Systems and IoT for E-Transportation	3-0-0-3	DC
Laboratory course on Embedded Systems and IoT for E-Transportation	0-0-2-1	DC
Energy Storage Technologies	3-0-0-3	DC
Laboratory course on Energy Storage Technologies	0-0-3-2	DC
Discipline Elective- I	6	DE
Discipline Elective II		DE
Open Elective-I	6	OE
Open Elective - II		OE

THIRD SEMESTER (3rd Sem)

Title of the course	L-T-P-C	Remarks
PGP - I	0-0-30-15	
Total	15	

FOURTH SEMESTER (4thSem)

Title of the course	L-T-P-C	Remarks
PGP - II	0-0-30-15	
Total	15	

• Open Electives

Open electives are to be taken from outside the discipline of program and should be at least of 6 credits in total [As per the IIT Mandi M Tech ordinance]

List of Discipline Electives:

- Impact of E-vehicle on Power Grids
- Special Electrical machine
- Wide band gap devices for power electronics applications
- Nonlinear Analysis and Control of Power Electronic Converters
- Smart Grids
- Nonlinear Stability and Control
- Solar Photovoltaic Energy Systems
- Power quality problems and mitigation techniques in Microgrids
- Computer Aided Design of Power Electronic systems and Electrical Drives
- Finite Element Method
- Computational fluid dynamics
- Mechanical Vibration
- Design of Energy System
- Electric Vehicles: Economics, Policy and Social Embedding

A few more electives will be added as DEs.

ANNEXURE-D

35 Ph.D., 1 I-Ph.D., 13 M.S. (by Research), 35 M.Sc. (Chemistry), 36 M.Sc. (Applied Mathematics), 28 M.Sc. (Physics), 136 M.Tech (including 135 from 2019, 01 from 2018), 11 M.A. (Development Studies) and 146 B.Tech (including 143 from 2017, 01 from 2016 and 2 from 2015 batch) which includes 91 B.Tech with Minor students, who fulfilled all the requirement for the award of the degree are as under:

a) Doctor of Philosophy (Ph.D.)

The following 35 Ph.D. scholars have completed all the requirements for the award of the degree of "Doctor of Philosophy" including submission of the final approved thesis.

Sl. No	Name & Roll No.	Date of Joining/ Date of Completion	Guide	Thesis Title	Viva- Voce Board	Thesis Examiners
1	Shubhanjali Pathak (D13004)	DoJ: 29-07-2013 DoC: 03-03-2021 (7 years, 7 months)	Dr. Prasanth P Jose	Competition between Vitrification and Crystallization in Lennard-Jones Binary Mixture: A Molecular Dynamic Simulation Study	Dr. Syed Abbas (Chair) Dr. Prasanth P Jose (Guide) Prof. Chandan Dasgupta (Thesis Examiner) Dr. Bindu Radhamany (Subject Expert) Dr. Dileep A D (Special Nominee of Chairman, Senate)	Prof. Chandan Dasgupta (IISc Bangalore) Dr. Patrick Charbonneau (Duke University, NC, USA)
2	Fauzul Mobeen (D14001)	DoJ: 01-08-2014 DoC: 08-07-2021 (7 years)	Dr. Tulika P Srivastava	Comparative Human Gut Microbiome Analysis of Healthy Individuals Stratified Based on the Traditional Medicinal Systems	Dr. Suman Kalyan Pal (Chair) Dr. Tulika P Srivastava (Guide) Dr. Yogesh S Shouche (Thesis Examiner) Dr. Supratim Sengupta (Subject Expert) Dr. Shubhajit Roy Chowdhury (Special Nominee of Chairman, Senate)	Dr. Yogesh S Shouche (NCCS Pune) Prof. Han Chae (Pusan National University, Korea)
3	Krati Gupta (D14004)	DoJ: 01-08-2014 DoC: 02-12-2020 (6 years, 4 months)	Dr. Anil Kumar Sao (Guide) Dr. Arnav Bhavsar (Co-Guide)	Classification of Staining Patterns on HEP-2 Specimen Images	Dr. Samar Agnihotri (Chair) Dr. Anil Kumar Sao (Guide) Dr. Arnav Bhavsar (Co-guide) Dr. Neelam Sinha (Thesis Examiner) Dr. Deepti Bathula (Subject Expert) Dr. Chayan K Nandi (Special Nominee of Chairman, Senate)	Dr. Neelam Sinha (IIT Bangalore) Prof. Metin N Gurcan (Centre for Biomedical Informatics Wake Forest School of Medicine, NC, USA)
4	Duni Chand (D14017)	DoJ: 18-08-2014 DoC: 26-03-2021 (6 years, 7 months)	Dr. Prasanth P Jose	Role of Attractive Interactions in the Dynamics of a Supercooled Binary Mixture: A Molecular Dynamics Simulation Study	Dr. Suman Kalyan Pal (Chair) Dr. Prasanth P Jose (Guide) Prof. Pradip Kumar Ghorai (Thesis Examiner) Dr. Bindu Radhamany (Subject Expert) Dr. Srikant Srinivasan (Special Nominee of Chairman, Senate)	Dr. Pradip Kumar Ghorai (IISER Kolkata) Dr. Dwaipayan Chakrabarti (University of Birmingham, Edgbaston, UK)
5	Mohd Sultan Alam (D14026)	DoJ: 19-01-2015 DoC: 30-05-2021 (6 years 4 months)	Dr. Satyajit A Thakor	On Regions in the Entropy Space and Network Code Construction	Dr. Samar Agnihotri (Chair) Dr. Satyajit A Thakor (Guide) Prof. Manav R Bhatnagar (Thesis Examiner) Dr. Arun Kumar Singh (Subject Expert)	Prof. Manav R. Bhatnagar (IIT Delhi) Prof. Randall Dougherty (Center for Communications)

					Dr. Atul Dhar (Special Nominee of Chairman, Senate)	Research, Canada)
6	Jyoti Nigam (D14027)	DoJ: 19-01-2015 DoC: 12-06-2021 (6 years, 5 months)	Dr. Renu M Rameshan	Analyzing Social Group Dynamics in Egocentric Videos	Dr. Samar Agnihotri (Chair) Dr. Renu M Rameshan (Guide) Prof. C. Krishna Mohan (Thesis Examiner) Prof. Chetan Arora (Subject Expert) Dr. Atul Dhar (Special Nominee of Chairman, Senate)	Prof. C Krishna Mohan (IIT Hyderabad) Prof. Anup Basu (AITF, University of Alberta, Canada)
7	Ankita Mathur (D15012)	DoJ: 27-07-2015 DoC: 01-04-2021 (5 years, 8 months)	Dr. Aditi Halder	Investigations of Transition Metal Oxide-Based Materials for Energy Conversion and Storage Applications	Dr. Rajeev Kumar (Chair) Dr. Aditi Halder (Guide) Prof. Sudakar Chandran (Thesis Examiner) Dr. Ramendra Sundar Dey (Subject Expert) Dr. Dileep A D (Special Nominee of Chairman, Senate)	Prof. Sudakar Chandran (IIT Madras) Prof. Ganapati Ramanath (Rensselaer Polytechnic Institute, Troy, NY, USA)
8	Sudeb Majee (D15028)	DoJ: 27-07-2015 DoC: 15-01-2021 (5 years, 6 months)	Dr. Rajendra Kumar Ray	Development and Analysis of a Class of Telegraph-Diffusion Models: Application to Image Restoration	Dr. Syed Abbas (Chair) Dr. Rajendra K Ray (Guide) Prof. A.K. Nandakumaran (Thesis Examiner) Dr. Anil Kumar Sao (Subject Expert) Dr. Atul Dhar (Special Nominee of Chairman, Senate)	Prof. A. K. Nandakumaran (IISc, Bangalore) Dr. Seongjai Kim (Mississippi State University, USA)
9	Aamir Mushtaq (D15031)	DoJ: 27-07-2015 DoC: 23-02-2021 (5 years, 7 months)	Dr. Suman Kalyan Pal	Third Order Optical Nonlinearity and Ultrafast Carrier Dynamics in Two Dimensional Materials and their Heterostructures in Femtosecond Regime	Dr. Syed Abbas (Chair) Dr. Suman Kalyan Pal (Guide) Prof. Subrata Sinha (Thesis Examiner) Dr. Sunil Kumar (Subject Expert) Dr. Rajeev Kumar (Special Nominee of Chairman, Senate)	Prof. Subrata Sinha (ISERC, Visva Bharati University) Dr. Qinghua Xu (National University of Singapore)
10	Birender Singh (D15036)	DoJ: 05-08-2015 DoC: 12-05-2021 (5 years 9 months)	Dr. Pradeep Kumar	Phonons, Quasiparticle Excitations and Their Coupling in Iridium Based Double Perovskites	Dr. Suman Kalyan Pal (Chair) Dr. Pradeep Kumar (Guide) Prof. Surjeet Singh (Thesis Examiner) Dr. Hari Varma (Subject Expert)	Prof. Surjeet Singh (IISER Pune) Dr. Choi Kwang Yong (Sungkyunkwan University, Korea)
11	Shruti Kaushik (D15043)	DoJ: 24-11-2015 DoC: 18-12-2020 (5 years, 1 month)	Dr. Varun Dutt	Machine Learning Methods for Clinical and Healthcare Applications using Electronic Health Records	Dr. Samar Agnihotri (Chair) Dr. Varun Dutt (Guide) Dr. Aurobinda Routray (Thesis Examiner) Dr. Partha Pratim Roy (Subject Expert) Dr. Prosenjit Mondal (Special Nominee of Chairman, Senate)	Dr. Aurobinda Routray (IIT Kharagpur) Dr. Paramjit Gill (The University of British Columbia, Vancouver, Canada)
12	Abhinav Choudhury (D15049)	DoJ: 01-02-2016 DoC: 31-01-2021 (5 years)	Dr. Varun Dutt	Understanding Network Structure, Diffusion Process, Opinion Leaders, and Sentiments in Social Networks: A Case Study in Healthcare	Dr. Samar Agnihotri (Chair) Dr. Varun Dutt (Guide) Dr. M. Narasimha Murthy (Thesis Examiner) Dr. Rohit Y. Sharma (Subject Expert) Dr. Kaustav Mukherjee (Special Nominee of Chairman, Senate)	Prof. M. Narasimha Murthy (IISc Bangalore) Prof. Naren Ramakrishnan (Virginia Polytechnic Institute and State University, Blacksburg, US)
13	Gaurav	DoJ: 01-02-2016	Dr. Shubhajit	Anodal High Definition	Dr. Samar Agnihotri (Chair)	Prof. Rohit Manchanda

	Sharma (D15050)	DoC: 31-08-2021 (5 years, 6 months)	Roy Chowdhury	Transcranial Direct Current Stimulation for Neurorehabilitation of Chronic Stress and Depression	Dr. Shubhajit Roy Chowdhury (Guide) Prof. Rohit Manchanda (Thesis Examiner) Prof. M. Manjunatha (Subject Expert) Dr. Prosenjit Mondal (Special Nominee of Chairman, Senate)	(IIT Bombay) Dr. Mathias Baumert (University of Adelaide, Australia)
14	Yashika Arora (D15051)	DoJ: 01-02-2016 DoC: 26-03-2021 (5 years, 1 month)	Dr. Shubhajit Roy Chowdhury	Neurovascular Coupling and Cerebrovascular Reactivity Analysis through Near-Infrared Spectroscopy	Dr. Samar Agnihotri (Chair) Dr. Shubhajit Roy Chowdhury (Guide) Prof. Neeraj Sharma (Thesis Examiner) Dr. Tapan Gandhi (Subject Expert) Dr. Ajay Soni (Special Nominee of Chairman, Senate)	Prof. Neeraj Sharma (IIT BHU), Varanasi Dr. Keith St Lawrence (University of Western Ontario, Canada)
15	Mona Subramaniam (D15052)	DoJ: 01-02-2016 DoC: 17-07-2021 (4 years, 5 months)	Dr. Tushar Jain (Guide) Prof. Joseph J Yame (Co-Guide)	Fault Diagnosis and Fault Tolerant Control for Energy Efficiency in a Multi-Zone Building	Dr. Samar Agnihotri (Chair) Dr. Tushar Jain (Guide) Prof. Joseph Yame (Co-Guide) Dr. Shubhendu Bhasin (Thesis Examiner) Dr. Puduru Viswanadha (Subject Expert) Dr. Syed Abbas (Special Nominee of Chairman, Senate)	Dr. Shubhendu Bhasin (IIT Delhi) Dr. Jing Jiang (University of Western Ontario)
16	Monika Sharma (D15053)	DoJ: 01-02-2016 DoC: 08-07-2021 (5 years, 5 months)	Dr. Samar Agnihotri (Guide) Dr. Bharat Singh Rajpurhoit Co-Guide)	Modelling and Control of Voltage Source Converter Based Shunt Active Power Filter for Power Quality Improvement in Emerging Electric Power Systems	Dr. Anil K Sao (Chair) Dr. Samar Agnihotri (Guide) Dr. Bharat S Rajpurohit (Co-Guide) Dr. Ranjana Sodhi (Thesis Examiner) Prof. Ravindra Arora (Subject Expert)	Dr. Ranjana Sodhi (IIT Ropar) Dr. Balanthi Mogru Abdul Rahiman Beig (The Petroleum Institute, UAE)
17	Ashish Kumar (D16016)	DoJ: 01-08-2016 DoC: 13-09-2021 (5 years, 1 month)	Dr. Venkata Krishnan	Perovskite Oxide Based Photocatalysts for Energy and Environment Oriented Applications	Dr. Suman Kalyan Pal (Chair) Dr. Venkata Krishnan (Guide) Prof. P Jeevanandam (Thesis Examiner) Dr. Pradeep C Parameswaran (Subject Expert) Dr. Viswanath Balakrishnan (Special Nominee of Chairman, Senate)	Prof. P Jeevanandam (IIT Roorkee) Prof. Paolo Fornasiero (University of Trieste, Italy)
18	Vipin Kumar (D16024)	DoJ: 03-08-2016 DoC: 02-03-2021 (4 years, 6 months)	Dr. Muslim Malik	Study of Dynamic Equations on Time Scales with Applications in Control Theory	Dr. Suman Kalyan Pal (Chair) Dr. Muslim Malik (Guide) Dr. Shruti Dubey (Thesis Examiner) Prof. Amiya K. Pani (Subject Expert) Dr. Arpan Gupta (Special Nominee of Chairman, Senate)	Dr. Shruti Dubey (IIT Madras) Prof. Chee Peng Lim (Deakin University, Australia)
19	Vikas Kumar (D16025)	DoJ: 03-08-2016 DoC: 11-08-2021 (5 years)	Dr. Nitu Kumari	Study of Chaos and Pattern Formation Analysis in Ecological Systems	Dr. Pradeep C Parameswaran (Chair) Dr. Nitu Kumari (Guide) Dr. Jaydev Dabas (Thesis Examiner) Dr. Partha Shartahi Dutta (Subject Expert) Dr. Renu M Rameshan (Special Nominee of Chairman, Senate)	Dr. Jaydev Dabas (IIT Roorkee) Dr. Carlo Cafaro (SUNY Polytechnic Institute, Albany, USA)
20	Avantika Singh (D16027)	DoJ: 03-08-2016 DoC: 18-06-2021 (4 years, 10 months)	Dr. Aditya Nigam	Application of Deep Learning in Biometrics: Classification, Cancellation and Indexing	Dr. Samar Agnihotri (Chair) Dr. Aditya Nigam (Guide) Prof. Sumatra Dutta (Thesis Examiner)	Prof. Sumatra Dutta Roy (IIT Delhi)

					Prof. Pabitra Mitra (Subject Expert) Dr. Syed Abbas (Special Nominee of Chairman, Senate)	Dr. Yasushi Makihara (Osaka University, Japan)
21	Soniya (D16050)	DoJ: 01-02-2017 DoC: 28-12-2020 (3 years, 10 months)	Dr. Syed Abbas	Almost Automorphic Solutions of Deterministic and Stochastic Dynamic Equations on Time Scales	Dr. Prasanth P Jose (Chair) Dr. Syed Abbas (Guide) Prof. N. Sukavanam (Thesis Examiner) Dr. Rajendra K Ray (Subject Expert) Dr. Varun Dutt (Special Nominee of Chairman, Senate)	Prof. N. Sukavanam (IIT Roorkee) Prof. Gnana Bhaskar Tenali (Florida Institute of Technology, USA)
22	Gaurav Arora (D16053)	DoJ: 01-02-2017 DoC: 20-09-2021 (4 years 7 months)	Dr. Himanshu Pathak	Thermo-mechanical Properties of Ploymer CNT Composites: Experimental and Multi-Scale Modelling Approach	Dr. Viswanath Balakrishnan (Chair) Dr. Himanshu Pathak (Guide) Prof. Apurbba Kumar Sharma (Thesis Examiner) Dr. Rajeev Kumar (Subject Expert) Dr. Aditi Halder (Special Nominee of Chairman, Senate)	Prof. Apurbba Kumar Sharma (IIT Roorkee) Prof. Tinh Quoc Bui (Tokyo Institute of Technology, Japan)
23	Manoj Kumar (D16058)	DoJ: 01-02-2017 DoC: 12-05-2021 (4 years 3 months)	Dr. Sunny Zafar	Manufacturing and Characterizations of Natural Fiber-Reinforced Polymer Composites Through Microwave-Assisted Compression Molding	Dr. Viswanath Balakrishnan (Chair) Dr. Sunny Zafar (Guide) Prof. J. Ramkumar (Thesis Examiner) Dr. C. K. Nirala (Subject Expert) Dr. Syed Abbas (Special Nominee of Chairman, Senate)	Prof. J Ramkumar (IIT Kanpur) Dr. Kapil Gupta (University of Johannesburg, South Africa)
24	Prem Singh (D16060)	DoJ: 01-02-2017 DoC: 02-08-2021 (4 years, 6 months)	Dr. Amit Jaiswal	Engineering Plasmonic Nanorattles for Catalytic and Photothermal Therapy Applications	Dr. Suman Kalyan Pal (Chair) Dr. Amit Jaiswal (Guide) Dr. Pranab Goswami (Thesis Examiner) Dr. Paramita Das (Subject Expert) Dr. Rajesh Ghosh (Special Nominee of Chairman, Senate)	Dr. Pranab Goswami (IIT Guwahati) Prof. Ganpati Ramanath (Rensselaer Polytechnic Institute, USA)
25	Ravada Bhaskara Rao (D16067)	DoJ: 01-02-2017 DoC: 15-01-2021 (3 years, 11 months)	Dr. Narsa Reddy Tummuru	Design of Converter Configurations and Control Structures for Hybrid Energy Storage Interfaced Renewable Microgrid	Dr. Samar Agnihotri (Chair) Dr. Narsa Reddy Tummuru (Guide) Prof. K. Shanti Swarup (Thesis Examiner) Dr. Ramachandra Sekhar (Subject Expert) Dr. Ajay Soni (Special Nominee of Chairman, Senate)	Dr. K. Shanti Swarup (IIT Madras) Dr. Jose Luis Rueda (Delft University of Technology, Delft, Netherlands)
26	Abhinav Choubey (D16069)	DoJ: 01-02-2017 DoC: 29-07-2021 (4 years, 5 months)	Dr. Prosenjit Mondal	Excess Insulin as a Driver for Insulin Resistance, NAFLD and Type 2 Diabetes: Pathophysiological Mechanisms and Therapeutic Opportunities	Dr. Suman Kalyan Pal (Chair) Dr. Prosenjit Mondal (Guide) Dr. Partha Roy (Thesis Examiner) Dr. Partha Chakrabarti (Subject Expert) Dr. Mohammad Talha (Special Nominee of Chairman, Senate)	Dr. Partha Roy (IIT Roorkee) Prof. G William Wong (Johns Hopkins University, USA)
27	P Vineeth Daniel (D16075)	DoJ: 01-02-2017 DoC: 13-09-2021 (4 years, 7 months)	Dr. Prosenjit Mondal	Novel Insights of Pb ²⁺ Exposure, and Dietary Carbohydrate Stress in the Causation of Pathologies Allied with Type 2 Diabetes Mellitus	Dr. Suman Kalyan Pal (Chair) Dr. Prosenjit Mondal (Guide) Dr. Partha Roy (Thesis Examiner) Dr. Ullas Kothur Seetharam (Subject Expert) Dr. Arnab Bhavsar (Special Nominee of	Dr. Partha Roy (IIT Roorkee) Dr. Guang William Wong (Johns Hopkins University, USA)

					Chairman, Senate)	
28	Vishvendra Pratap Singh (D17019)	DoJ: 21-08-2017 DoC: 18-02-2021 (3 years 6 months)	Dr. Rahul Vaish	A Study on Candle Soot for Water Remediations	Dr. Vishal Singh Chauhan (Chair) Dr. Rahul Vaish (Guide) Dr. Deepak Kumar (Thesis Examiner) Dr. Vishwajeet Mehandia (Subject Expert) Dr. Satinder Sharma (Special Nominee of Chairman, Senate)	Dr. Deepak Kumar (IIT Delhi) Dr. R Vasant Kumar (University of Cambridge, UK)
29	Gurpreet Singh (D17048)	DoJ: 01-02-2018 DoC: 12-08-2021 (3 years, 6 months)	Dr. Rahul Vaish	Photocatalysis and Piezocatalysis Induced Water-Cleaning using Ferroelectric Lithium Niobate-based Ceramics/Glass-Ceramics	Dr. Viswanath Balakrishnan (Chair) Dr. Rahul Vaish (Guide) Dr. Satyendra Singh (Thesis Examiner) Dr. Prem Felix Siril (Subject Expert)	Dr. Satyendra Singh (JNU, New Delhi) Dr. Nonhlangabezo Mabuba (University of Johannesburg, South Africa)
30	Saurav Sharma (D17052)	DoJ: 01-02-2018 DoC: 23-07-2021 (3 years, 5 months)	Dr. Rajeev Kumar (Guide) Dr. Mohammad Talha (Co-Guide)	Isogeometric Analysis of Flexoelectricity in Functionally Graded Structures	Dr. Viswanath Balakrishnan (Chair) Dr. Rajeev Kumar (Guide) Dr. Mohammad Talha (Co-Guide) Prof. S. Gopalakrishnan (Thesis Examiner) Prof. S.C. Jain (Subject Expert)	Prof. S. Gopalakrishnan (IISc, Bangalore) Dr. Chris Bowen (University of Bath, UK)
31	Venkateswara n C (ERPD1401)	DoJ: 14-08-2014 DoC: 06-04-2021 (6 years 7 months)	Dr. Rahul Vaish (Guide) Dr. Vishal Singh Chauhan (Co-guide)	Processing Low Thermal Expansion Glass-Ceramic from Lithium Aluminosilicate (LAS) Glass	Dr. Viswanath Balakrishnan (Chair) Dr. Rahul Vaish (Guide) Dr. Vishal Singh Chauhan (Co-Guide) Dr. S.C. Sharma (External, Co-Guide) Prof. Ashish Garg (Thesis Examiner) Dr. Sunil Kumar (Subject Expert) Dr. Kunal Ghosh (Special Nominee of Chairman, Senate)	Prof. Ashish Garg (IIT Kanpur) Dr. Ashutosh Goel (The State University of New Jersey Piscataway, NJ)
32	Archana Sharma (D14005)	DoJ: 01-08-2014 DoC: 08-07-2021 (6 years, 11 months)	Dr. Bharat Singh Rajpurohit (Guide) Dr. Samar Agnihotri (Co-Guide)	Investigation of Power Quality in Power Distribution System	Dr. Anil Kumar Sao (Chair) Dr. Bharat S Rajpurohit (Guide) Dr. Samar Agnihotri (Co-guide) Prof. Ashwani Kumar (Thesis Examiner) Prof. Ravindra Arora (Subject Expert)	Prof. Ashwani Kumar (NIT Kurukshetra) Dr. Jose Luis Rueda (Delft University of Technology, Netherlands)
33	Zahid Maqbool (D14038)	DoJ: 13-02-2015 DoC: 18-02-2021 (6 years)	Dr. Varun Dutt	An Experimental and Cognitive Approach to Cybersecurity for Building a Secure Cyberspace	Dr. Samar Agnihotri (Chair) Dr. Varun Dutt (Guide) Dr. Uma Shanker Tiwary (Thesis Examiner) Dr. Xavier Bellekens (Subject Expert) Dr. Mohammad Talha (Special Nominee of Chairman, Senate)	Dr. Uma Shanker Tiwary (IIIT Allahabad) Dr. Xavier Bellekens (University of Strathclyde Glasgow, UK)
34	Gaurav Tripathi (D15008)	DoJ: 27-07-2015 DoC: 24-07-2021 (6 years)	Dr. Atul Dhar	Performance, Emissions and Combustion Characterisation of Methane Diesel Dual Fuel Compression Ignition Engine	Dr. Viswanath Balakrishnan (Chair) Dr. Atul Dhar (Guide) Prof. Sudarshan Kumar (Thesis Examiner) Dr. Rakesh K Maurya (Subject Expert) Dr. Syed Abbas (Special Nominee of Chairman, Senate)	Prof. Sudarshan Kumar (IIT Bombay) Prof. Sung-wook Park (Hanyang University, South Korea)
35	Tarun Kumar (D15061)	DoJ: 16-02-2016 DoC: 08-07-2021	Dr. Rajeev Kumar (Guide)	Torsional Vibrations Control of Turbo-Generator Rotor Using	Dr. Viswanath Balakrishnan (Chair) Dr. Rajeev Kumar (Guide)	Prof. Indra Vir Singh (IIT Roorkee)

		(5 years, 5 months)	Prof. S.C.Jain (Co-Guide)	Smart Materials Under Various Electrical Faults	Prof. S.C.Jain (Co-Guide) Prof. Indra Vir Singh (Thesis Examiner) Dr. Mohammad Talha (Subject Expert)	Prof. Ing. Michael Sinapius (Technische Universitat Braunschweig, Germany)
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b) Integrated Ph.d in Physics (I-Ph.D)

The following one scholar has completed all the requirements for the award of the degree of "Integrated Ph.D. in Physics' including submission of the final approved thesis.

Sl. No	Name & Roll No.	Date of Joining/ Date of Completion	Guide	Thesis Title	Viva- Voce Board	Thesis Examiners
1	Saravanan R (DI1505)	DoJ: 17-08-2015 DoC: 27-07-2021 (5 years, 11 months)	Dr. Aniruddha Chakraborty	Analytical Solutions of Quantum & Statistical Multi-State Models in the Time-Domain	Dr. Suman K Pal (Chair) Dr. Aniruddha Chakraborty (Guide) Prof. Biman Bagchi (Thesis Examiner) Dr. Chayan K Nandi (Subject Expert)	Prof. Biman Bagchi (IISc Bangalore) Dr. Peter Hanggi (Universitat Augsburg, Germany))

c) Master of Science (MS.(by Research))

The following 13 M.S. scholars have completed all the requirements for the award of the degree of Master of Science (M.S. (by Research)) including submission of the final approved thesis.

Sl. No	Name & Roll No.	Date of Joining/ Date of Completion	Thesis Title	Guide	Academic Progress Committee	External Examiners
1	Merlin Sundar (S15011)	DoJ: 01-02-2016 DoC:15-04-2021 (5 years 2 months)	Benchmarking Distributed Stream Processing Frameworks for Classical Machine Learning Applications	Prof. Timothy A Gonsalves (Guide) Dr. Sriram Kailasam (Co- Guide)	Dr. Samar Agnihotri (Chair) Prof. T. A. Gonsalves (Guide) Dr. Sriram Kailasam (Co-Guide) Dr. Astrid Kiehn Dr. Dericks P Shukla	Dr. Venkata Ramana Badarla (IIT Tirupati) Dr. V. Mahendran (IIT Tirupati)
2	Anirudh Singh (S16011)	DoJ: 01-02-2017 DoC:12-05-2021 (4 years 3 months)	Computational Modelling and Parametric Study of Solar Assisted Gasification	Dr. Atul Dhar (Guide) Dr. Satvasheel Powar (Co- Guide)	Dr. P Anil Kishan (Chair) Dr. Atul Dhar (Guide) Dr. Satvasheel Powar (Co-Guide) Dr. Srikant Srinivasan Dr. Pradeep Kumar Dr. Gaurav Bhutani	Dr. Himanshu Tyagi (IIT Ropar) Prof. Sudarshan Kumar (IIT Bombay)
3	Naman Agrawal (S17001)	DoJ: 03-08-2017 DoC:13-04-2021 (3 years 8 months)	LES Modeling of Multiphase Turbulent Flows Using an Adaptive-Mesh Finite Element Method	Dr. Gaurav Bhutani	Dr. P Anil Kishan (Chair) Dr. Gaurav Bhutani (Guide) Dr. Atul Dhar Dr. Pradeep Kumar	Prof. Sanjay Mittal (IIT Kanpur) Dr. GauravTomar (IISc, Bangalore)

Sl. No	Name & Roll No.	Date of Joining/ Date of Completion	Thesis Title	Guide	Academic Progress Committee	External Examiners
4	Hitesh Kumar (S17002)	DoJ: 03-08-2017 DoC:28-12-2020 (3 years 4 months)	Seismic Performance of Fixed Base and Base Isolated Liquid Storage Tanks Considering Soil-Structure Interaction	Dr. Sandip Kumar Saha	Dr. Kaustav Sarkar (Chair) Dr. Sandip Kumar Saha (Guide) Dr. Maheshreddy Gade Dr. Subhamoy Sen Dr. C.S. Yadav	Prof. Subrata Chakraborty (IEST Shibpur) Prof. Deepankar Choudhury (IIT Bombay)
5	Soma Ghosh (S17008)	DoJ: 01-02-2018 DoC:20-09-2021 (3 years 7 months)	Disease Classification from Potato Leaf Images: An Empirical Study on Images Captured in Unconstrained Environments	Dr. Dileep A D (Guide) Dr. Renu M Rameshan (Co-Guide)	Dr. Samar Agnihotri (Chair) Dr. Dileep A D (Guide) Dr. Renu M Rameshan (Co-Guide) Dr. Aditya Nigam Dr. Shyam K Masakpalli	Prof. Shirish K Shevade (IISc Bangalore) Prof. C.V. Jawahar (IIIT Hyderabad)
6	Deepak Mori (S17010)	DoJ: 01-02-2018 DoC:15-04-2021 (3 years 2 months)	Investigating the Bio-Geo-Chemical Parameters Affecting Biocementation for Soil Improvement	Dr. Kala Venkata Uday	Dr. Rajeev Kumar (Chair) Dr. Kala Venkata Uday (Guide) Dr. Deepak Swami Prof. Ajit P. Annachhatre Dr. Shyam K Masakpalli	Dr. Arnepalli Dali Naidu (IIT Madras) Dr. Neelima Satyam (IIT Indore)
7	Deepak Kumar Singh (S17012)	DoJ: 01-02-2018 DoC:12-08-2021 (3 years 6 months)	Numerical Solution of Bivariate Population Balance Equation Using an Open-Source Finite Element CFD Framework	Dr. Gaurav Bhutani	Dr. P Anil Kishan (Chair) Dr. Gaurav Bhutani (Guide) Dr. Atul Dhar Dr. Pradeep Kumar Dr. Rajendra Ray	Prof. Sashikumaar Ganesan (IISc, Bangalore) Dr. Jitendra Kumar (IIT Kharagpur)
8	Anurag (S18010)	DoJ: 01-08-2018 DoC:17-07-2021 (3 years)	Analysis of Temperature Extremes over India	Dr. Deepak Swami	Dr. Dericks P Shukla (Chair) Dr. Deepak Swami (Guide) Dr. Sayantan Sarkar Dr. Atul Dhar Dr. Muslim Malik	Dr. Munish Chandel (IIT Bombay) Dr. Vimal Kumar Mishra (IIT Gandhinagar)
9	Neeraj Kumar Singh (S18013)	DoJ: 01-08-2018 DoC:27-07-2021 (3 years)	Continuum Modelling of Snow Avalanches using an Adaptive-Mesh Open-Source Finite Element Framework	Dr. Gaurav Bhutani	Dr. P Anil Kishan (Chair) Dr. Gaurav Bhutani (Guide) Dr. Mousumi Mukherjee Dr. Pradeep Kumar Dr. Parmod Kumar	Prof. R.P Chhabra (IIT Ropar) Prof. K. Muralidhar (IIT Kanpur)
10	Ankush (S18019)	DoJ: 01-02-2019 DoC:06-04-2021 (2 years 2 months)	Low-Cost Sub-Surface Landslide Monitoring and Associated Predictive Analytics	Dr. Varun Dutt	Dr. Samar Agnihotri (Chair) Dr. Varun Dutt (Guide) Dr. Amav Bhavsar Dr. Mousumi Mukherjee	Dr. Chandan Ghosh (IIT Jammu) Dr. Partha Pratim Roy (IIT Roorkee)
11	Siddhant Kumar (S18024)	DoJ: 01-02-2019 DoC:23-02-2021 (2 years)	Short-Circuit Protection for DC Microgrids and Power Converters	Dr. Bharat Singh Rajpurohit	Dr. Samar Agnihotri (Chair) Dr. Bharat Singh Rajpurohit (Guide) Dr. Anil K Sao Dr. Tushar Jain Dr. Jaspreet Kaur Randhawa	Dr. B. Kalyan Kumar (IIT Madras) Dr. Amit Kumar Jain (IIT Delhi)

Sl. No	Name & Roll No.	Date of Joining/ Date of Completion	Thesis Title	Guide	Academic Progress Committee	External Examiners
12	Dikshita Nath (S20008)	DoJ: 01-02-2017 in Ph.D.) Converted to M.S. (29-09-2020) DoC:28-07-2021 (4 years 5 months)	Eggshell Derived Antibacterial Cement-Based Composites	Dr. Rahul Vaish (Guide) Dr. Rajeev Kumar (Co-Guide)	Dr. Vishal Singh Chauhan (Chair) Dr. Rahul Vaish (Guide) Dr. Rajeev Kumar (Co-guide) Dr. Jaspreet Kaur Randhawa Dr. Aditi Halder	Dr. Mahesh Kumar (IIT Jodhpur) Dr. Satyendra Singh (JNU, New Delhi)
13	Rahul Dogra (PTS1801)	DoJ: 26-07-2018 DoC:27-07-2021 (3 years)	Design, Control and Protection of VSC Based DC Microgrid	Dr. Bharat Singh Rajpurohit (Guide) Dr. Narsa Reddy Tummuru (Co-Guide)	Dr. Samar Agnihotri (Chair) Dr. Bharat S Rajpurohit (Guide) Dr. Narsa Reddy Tummuru (Co-Guide) Dr. Kunal Ghosh Dr. Rajeev Kumar	Dr. B. Kalyan Kumar (IIT Madras) Dr. Ranjana Sodhi (IIT Ropar)

d) Master of Science in Chemistry (M.Sc. (Chemistry))

The following 35 students have completed all the requirements for the award of the degree of Master of Science (M.Sc. (Chemistry)). Their names and Roll Nos. are as given below:

Sl. No.	Roll No.	Student Name	Sl. No.	Roll No.	Student Name
1	V19001	Deepanshi	19	V19020	Ankit
2	V19002	Akshansh Kaushik	20	V19021	Rohit Yadav
3	V19003	Gaurav Kumar	21	V19022	Varsha Verma
4	V19004	Swati Jain	22	V19023	Akhilesh Sharma
5	V19005	Tanisha Singhal	23	V19024	Hardev Kumar
6	V19006	Khushboo Varshney	24	V19025	Sumit Yadav
7	V19007	Shivangi Singh Chauhan	25	V19026	Aditya Jaiswal
8	V19008	Nikita Kunwar	26	V19027	Anurag Yadav
9	V19009	Sapna	27	V19028	Ritu
10	V19010	Vyom Prakash Tyagi	28	V19029	Kirti
11	V19011	Tiwari Shivani Nagendra	29	V19030	Richa
12	V19012	Priyanka Jain	30	V19031	Jagmohan
13	V19013	Pawar Rupali Bharatsingh	31	V19032	G Chanchal Kumar Nayak
14	V19014	Prachi Dwivedi	32	V19033	Honourius Mebansharai Dohling
15	V19016	Hari Prakash Shukla	33	V19034	Martha Perme

Sl. No.	Roll No.	Student Name	Sl. No.	Roll No.	Student Name
16	V19017	Aakashdeep	34	V19094	Narender Kumar
17	V19018	Yash Singla	35	V19095	Harsh Kumar
18	V19019	Palak Majithia			

e) Master of Science in Applied Mathematics (M.Sc. (Applied Mathematics))

The following 36 students have completed all the requirements for the award of the degree of Master of Science (M.Sc. (Applied Mathematics)). Their names and Roll Nos. are as given below:

Sl. No.	Roll No.	Student Name	Sl. No.	Roll No.	Student Name
1	V19055	Ajay Kumar Marodiya	19	V19076	Rakshit Kumar Tyagi
2	V19056	Aniruddh Ghosle	20	V19077	Rovit Kumar
3	V19057	Anju	21	V19078	Sagar
4	V19058	Anshika Dubey	22	V19079	Sakshi Jain
5	V19059	Aryan Bhambu	23	V19080	Satya Pal Jakhar
6	V19060	Ashu Kumar	24	V19081	Saurabh Mishra
7	V19061	Ashutosh	25	V19082	Shivendu Prasad
8	V19062	Bhukya Ram Kumar	26	V19083	Subhash Kumar Sonkariya
9	V19064	Himalaya Prakash	27	V19084	Tanay Kumar Gupta
10	V19065	Jahanvi Rajput	28	V19085	Tushar Gupta
11	V19066	Jaiprakash	29	V19086	Vidisha Singh
12	V19068	Manisha	30	V19087	Vikas Mehriya
13	V19069	Meenu Rani	31	V19088	Vikash Bharia
14	V19070	Murari Lal	32	V19089	Vivek Kumar
15	V19071	Nidhi	33	V19096	Kumuda Sharma
16	V19073	Palak Aggarwal	34	V19097	Priya
17	V19074	Parteek Kumar	35	V19098	Jagseer Singh
18	V19075	Pranchal Jain	36	V19099	Indrajit Nath

f) Master of Science in Physics (M.Sc. (Physics))

The following 28 students have completed all the requirements for the award of the degree of Master of Science (M.Sc. (Physics)). Their names and Roll Nos. are as given below:

Sl. No.	Roll No.	Student Name	Sl. No.	Roll No.	Student Name
1	V19035	Kundan Verma	15	V19051	Gulshan Sharma
2	V19036	Apoorav Singh Deo	16	V19052	Monika Singh
3	V19037	Sushank Mishra	17	V19053	Avinesh Kumar
4	V19038	Kashik Chauhan	18	V19054	Shyam Sundar Meena
5	V19039	Shagun Kumar	19	V19090	Karun Gadge
6	V19040	Sonali Kumawat	20	V19091	Akansha Verma
7	V19041	Rakesh Somarwal	21	V19092	Prithivraj G
8	V19042	Jayant Kumar Gupta	22	V19093	Brijesh Gupta
9	V19045	Mahaveer	23	V19100	Apoorv Dashora
10	V19046	Rajendra Kumar Raigar	24	V19101	Rupal Gupta
11	V19047	Sumit Kumar	25	V19102	Abhishek Pandey
12	V19048	Vinod Kumar Solet	26	V19103	Kanika Rani
13	V19049	Alka Kumari	27	V19104	Vikas Yadav
14	V19050	Vinit	28	V19105	Pratibha Yadav

g) Master of Technology in Mechanical Engineering with specialization in Energy Systems (MES)

The following 19 students have completed all the requirements for the award of the degree of Master of Technology in MES. Their names and Roll Nos. are as given below:

Sl. No.	Roll No.	Student Name	Sl. No.	Roll No.	Student Name
1	T19032	Siddharth Singh Lalotra	11	T19046	Shivendra Chaudhary
2	T19034	Ankita Pundeer	12	T19047	Saket Sahu
3	T19035	Alankrit Srivastava	13	T19048	Rohit Rana
4	T19038	Shubham Dutt Attri	14	T19049	Jaydeep Singh
5	T19039	Utkarsh Deep Tiwari	15	T19050	Abhishek Singh
6	T19040	Yash Shekvani	16	T19052	Shubham Desai
7	T19042	Karan Chilwal	17	T19053	Ravi Pippal
8	T19043	Arpit Pathak	18	T19073	Pushpendra Kumar
9	T19044	Shyam Kishor Sharma	19	T19074	Ketan Arora
10	T19045	Mohit Kumar Sahu			

h) Master of Technology in Energy Engineering with specialization in Materials (EEM)

The following 17 students have completed all the requirements for the award of the degree of Master of Technology in EEM. Their names and Roll Nos. are as given below:

Sl. No.	Roll No.	Student Name	Sl. No.	Roll No.	Student Name
1	T19054	Anupam Nigam	10	T19065	Swapnil Pandurang Karale
2	T19055	Vaibhav Chaudhary	11	T19066	Shivendra Singh Yadav
3	T19057	Debanshu Shrivastava	12	T19067	Ankit Jaiswal
4	T19058	Vishal Sharma	13	T19068	Navodita Charan
5	T19059	Jyoti Sharma	14	T19070	Narendra Kumar Verma
6	T19061	Lokesh	15	T19071	Anuj
7	T19062	Kamal Chauhan	16	T19072	Aabiroo Amin Bhat
8	T19063	Jagat Pal	17	T19076	Aniket Pati
9	T19064	Mukesh Maurya			

i) Master of Technology in Structural Engineering (SE)

The following 25 students have completed all the requirements for the award of the degree of Master of Technology in Structural Engineering. Their names and Roll Nos. are as given below:

Sl. No.	Roll No.	Student Name	Sl. No.	Roll No.	Student Name
1	T19001	Harshit Agarwal	14	T19016	Parvez Barkat Khan
2	T19002	Shivam Parashar	15	T19017	Divya Yadav
3	T19003	Aman Thakur	16	T19018	Akhil Verma
4	T19004	Nivedita	17	T19019	Gagan Patel
5	T19005	Suneet Kumar	18	T19020	Jai Chhagan Dorle
6	T19006	Rohit Rawat	19	T19021	Baddipalli Shivalinga
7	T19007	Vemireddy Gandhi Reddy	20	T19023	Dharani Raj S V
8	T19010	Puneeta Dutta	21	T19024	Bhavana Arya
9	T19011	Sahil Walia	22	T19025	Arun Kumar
10	T19012	Arjun Pratap Chauhan	23	T19027	Ajay Kumar
11	T19013	Ashwani Kumar Sharma	24	T19028	Navneet
12	T19014	Ayush Kumar Tiwari	25	T19029	Sneha
13	T19015	Huzaifa Saifuddin Electricwala			

j) Master of Technology in VLSI:

The following 28 students have completed all the requirements for the award of the degree of Master of Technology in VLSI. Their names and Roll Nos. are as given below:

Sl. No.	Roll No.	Student Name	Sl. No.	Roll No.	Student Name
1	T19121	Amit	15	T19145	Tejas Kumar Hoizal
2	T19122	Osho Gera	16	T19149	Dibyendu Maji
3	T19123	Pawan Bhakuni	17	T19150	Sarang P C
4	T19125	Rishabh Soni	18	T19151	Shubham Saxena
5	T19126	Shivam	19	T19152	Vineet Gupta
6	T19128	Saurabh Trivedi	20	T19157	Vipin Kumar
7	T19129	Rajat Kumar	21	T19158	Ajay Chauhan
8	T19134	Vikas Thakur	22	T19169	Sachin Tamta
9	T19135	Vikas Chowdhary	23	T19171	Sumit Kumar Mishra
10	T19136	Prakash Kumar Saw	24	T19172	Divyanshu
11	T19140	Girija Shankar Dhawal	25	T19173	Gowtham P K
12	T19142	Kumari Suravi	26	T19175	Pilli Hem Chaitanya Reddy
13	T19143	Shubham Srivastava	27	T19176	Devrishi Malik
14	T19144	Shashank Mourya	28	T18008	Adrash

k) Master of Technology in Power Electronics and Drives (PED)

The following 15 students have completed all the requirements for the award of the degree of Master of Technology in PED. Their names and Roll Nos. are as given below:

Sl. No.	Roll No.	Student Name	Sl. No.	Roll No.	Student Name
1	T19102	Vijay Kumar	9	T19147	Kumar Vaibhav Tejan
2	T19116	Abhishek Singhal	10	T19155	Md Khalid Raza Khan
3	T19117	Ashutosh Rai	11	T19161	Amit Kumar
4	T19118	Akriti Garg	12	T19163	Arvind Godara
5	T19119	Nitin Chauhan	13	T19164	Pravin Pilania
6	T19120	Ekansh Kapoor	14	T19166	Ranjini Sinha

Sl. No.	Roll No.	Student Name	Sl. No.	Roll No.	Student Name
7	T19132	Jasvant Singh	15	T19177	Atul Pandey
8	T19133	Pranav Kumar Jha			

l) Master of Technology in Communications and Signal Processing (CSP)

The following 16 students have completed all the requirements for the award of the degree of Master of Technology in CSP. Their names and Roll Nos. are as given below:

Sl. No.	Roll No.	Student Name	Sl. No.	Roll No.	Student Name
1	T19101	Ravi Kumar (with Specialization in Machine Learning)	9	T19153	Tanya Tiwari (with Specialization in Machine Learning)
2	T19103	Shantanu Srivastava (with Specialization in Communication)	10	T19154	Manoj Sharma (with Specialization in Communication)
3	T19105	Deepak Kumar Yadav (with Specialization in Communication)	11	T19156	Divya Sharma (with Specialization in Machine Learning)
4	T19107	Omna Jain (with Specialization in Communication)	12	T19159	Medapalli Surya Vamsi
5	T19115	Anurag Mohan Pathak (with Specialization in Communication)	13	T19162	Chandresh Kumar (with Specialization in Machine Learning)
6	T19130	Anil Kumar Keshri (with Specialization in Communication)	14	T19165	Tirthashree (with Specialization in Machine Learning)
7	T19137	Ankit Katiyar (with Specialization in Machine Learning)	15	T19168	Vaibhav Tripathi (with Specialization in Machine Learning)
8	T19138	Manvendra Singh Hada (with Specialization in Machine Learning)	16	T19170	Naveen Lather (with Specialization in Communication)

m) Master of Technology in Biotechnology:

The following 16 students have completed all the requirements for the award of the degree of Master of Technology in Biotechnology. Their names and Roll Nos. are as given below:

Sl. No.	Roll No.	Student Name	Sl. No.	Roll No.	Student Name
1	T19201	Neha Agyal	9	T19210	Saheli Sarkar (with Specialization in Medical and Nano-Biotechnology)
2	T19202	M Giredhar (with Specialization in Medical and Nano-Biotechnology)	10	T19211	Purba Mukherjee (with Specialization in Medical and Nano-Biotechnology)
3	T19203	Anik Biswas	11	T19212	Patil Nitin Keshav
4	T19204	Konari Jeevita	12	T19213	Aastha

Sl. No.	Roll No.	Student Name	Sl. No.	Roll No.	Student Name
					(with Specialization in Medical and Nano-Biotechnology)
5	T19205	Kashmira Dey (with Specialization in Medical and Nano-Biotechnology)	13	T19214	Ashutosh Sahoo
6	T19206	Shriya Srivastava	14	T19215	Mira Koul
7	T19207	Sumit Kumar Show (with Specialization in Medical and Nano-Biotechnology)	15	T19216	Neha Singh
8	T19208	Rakshita Saxena (with Specialization in Medical and Nano-Biotechnology)	16	T19217	Aparna Goswami

n) Master of Arts in Development Studies:

The following 11 students have completed all the requirements for the award of the degree of Master of Arts in Development Studies. Their names and Roll Nos. are as given below:

Sl. No.	Roll No.	Student Name	Sl. No.	Roll No.	Student Name
1	A19001	Akshay Thakur	7	A19010	Muhammed Rashid
2	A19003	Akanksha Singh	8	A19011	Yash Agarwal
3	A19005	Bijoya Sarkar	9	A19012	Kalagamudram Sai Thejaswini
4	A19006	Sahil B Gaikwad	10	A19014	Yashpal Luniwal
5	A19007	Thirukkovela Srichandra	11	A19015	Gaikwad Jaideep Dhanaji
6	A19008	Princi Gupta			

(o) Bachelor of Technology (B.Tech.) in Civil Engineering

The following 18 students have completed all the requirements for the award of Bachelor of Technology in Civil Engineering. Their Names and Roll Number are as given below:

Sl. No.	Roll No.	Student Name
1	B17002	Akash Garva (With Minor in Management)
2	B17005	Aman Kumar
3	B17006	Amit Chauhan (With Minor in Management)
4	B17008	Anuradha Meena (With Minor in Management)

5	B17010	Aryan Singh <i>(With Minor in Management)</i>
6	B17013	Jatin Garg <i>(With Minor in Management)</i>
7	B17014	Jatin Nimawat <i>(With Minor in Management)</i>
8	B17015	Madipelly Anurag
9	B17016	Mandadi Pavan Kumar
10	B17017	Mohit Prajapati
11	B17018	Munesh Kumar Meena
12	B17021	Raj Kumar <i>(With Minor in Management)</i>
13	B17022	Sanjeev Singh Yadav <i>(With Minor in Applied Physics) & (With Minor in Management)</i>
14	B17023	Saurabh Singh
15	B17024	Shikhar Kumar <i>(With Minor in Management)</i>
16	B17026	Shivam Kumar Bairwa
17	B17027	Sunil Kumar Dangi <i>(With Minor in Management)</i>
18	B17030	Vikas Verma

p) Bachelor of Technology (B.Tech.) in Computer Science and Engineering

The following 60 students have completed all the requirements for the award of Bachelor of Technology in Computer Science and Engineering. Their Names and Roll Number are as given below:

Sl. No.	Roll No.	Student Name	Sl. No.	Roll No.	Student Name
1	B17001	Aditya Mantri <i>(With Minor in Management)</i>	31	B17056	Sambhav Dusad <i>(With Minor in Management)</i>
2	B17007	Ananya Shukla <i>(With Minor in Management)</i>	32	B17057	Saransh Sharma <i>(With Minor in Management)</i>
3	B17009	Arpit Singh Bhadauria <i>(With Minor in Management)</i>	33	B17058	Satyam Shukla <i>(With Minor in Management)</i>
4	B17028	Tanmay Rustagi <i>(With Minor in Management)</i>	34	B17059	Saurabh Bansal <i>(With Minor in Management)</i>
5	B17029	Utkarsh Jain	35	B17060	Saurbh
6	B17031	Aashima <i>(With Minor in Management)</i>	36	B17061	Sharad Shukla <i>(With Minor in Management)</i>
7	B17032	Akash Dakoor	37	B17062	Shreyansh Kulshreshtha

Sl. No.	Roll No.	Student Name	Sl. No.	Roll No.	Student Name
8	B17033	Akhil Rajput (With Minor in Management)	38	B17063	Siddharth Gupta (With Minor in Management)
9	B17034	Aman Saxena (With Minor in Management)	39	B17064	Suraj Kumar (With Minor in Management)
10	B17035	Ankit Jiganwal (With Minor in Management)	40	B17066	Vaibhav Saini (With Minor in Management)
11	B17036	Arnav Prasad	41	B17068	Vinay Kumar
12	B17037	Atyant Yadav (With Minor in Management)	42	B17069	Vipul Sharma (With Minor in Management)
13	B17038	Balam Nivedit Reddy (With Minor in Management)	43	B17070	Yash Khanna
14	B17039	Deepak Kumar (With Minor in Management)	44	B17071	Aaditya Arora
15	B17040	Devesh Soni	45	B17072	Abhishek Bhardwaj
16	B17041	Dheeraj (With Minor in Management)	46	B17076	Aniket Sahu (With Minor in Management)
17	B17042	Dinbandhu Kumar Singh	47	B17078	Anvay Vipul Shah
18	B17043	Dipesh Kumar Gupta	48	B17087	Kriti Mehta (With Minor in Management)
19	B17044	Hitesh Kanodia (With Minor in Management)	49	B17092	Manvi Gupta
20	B17045	Jaideep Bhargava	50	B17096	Namrata Malkani (With Minor in Management)
21	B17046	Jhalak Choudhary (With Minor in Management)	51	B17100	Rohit Agarwal (With Minor in Management)
22	B17047	Kanika Gupta (With Minor in Management)	52	B17101	Sachin S Ranjalkar
23	B17048	Khushi Gupta (With Minor in Management)	53	B17104	Swapnil Rustagi
24	B17049	Navya Varakantham (With Minor in Management)	54	B17106	Tushar Tyagi (With Minor in Management)
25	B17050	Neeraj Kumar Sharma (With Minor in Management)	55	B17110	Varun Singh (With Minor in Management)
26	B17051	Prajwal Jha (With Minor in Management)	56	B17120	Deepshikha Rana (With Minor in Management)
27	B17052	Priya Singh	57	B17134	Prajeet Darda
28	B17053	Purushottam Sinha (With Minor in Management)	58	B17138	Rishi Sharma
29	B17054	Roshan Sharma (With Minor in Management)	59	B15119	Nisha Kumari
30	B17055	Sachit Yadav (With Minor in Management)	60	B16013	Anubhav Chaudhary

q) Bachelor of Technology (B.Tech.) in Electrical Engineering

The following 44 students have completed all the requirements for the award of Bachelor of Technology in Electrical Engineering. Their Names and Roll Numbers are as given below:

Sl. No.	Roll No.	Student Name	Sl. No.	Roll No.	Student Name
1	B17003	Akshat Malviya	23	B17091	Manpreet Singh (With Minor in Management)
2	B17004	Akshita Jain (With Minor in Management)	24	B17093	Mayank Mittal
3	B17011	Divanshu Gupta (With Minor in Management)	25	B17094	Muhammed Roshan P K (With Minor in Management)

Sl. No.	Roll No.	Student Name	Sl. No.	Roll No.	Student Name
4	B17012	Himanshu Baghel (<i>With Minor in Management</i>)	26	B17097	Parth Kankarwal
5	B17019	Nikita Yadav (<i>With Minor in Management</i>)	27	B17098	Pawan (<i>With Minor in Management</i>)
6	B17020	Piyush Vastupal Bafna (<i>With Minor in Management</i>)	28	B17099	Rishabh Dharmani (<i>With Minor in Management</i>)
7	B17025	Shishir Kumar Singh	29	B17102	Shaurya Pratap Singh Tomar (<i>With Minor in Management</i>)
8	B17073	Aishwarya Bhargav (<i>With Minor in Management</i>)	30	B17103	Sohan Sahariya
9	B17074	Akash Deep Batham	31	B17105	Thabsheer Muhammed M K
10	B17075	Amol Agrawal (<i>With Minor in Management</i>)	32	B17107	Ujjawal Shivhare
11	B17077	Anurag (<i>With Minor in Management</i>)	33	B17108	Vaibhav Sharma (<i>With Minor in Management</i>)
12	B17079	Arun Kumar Bairwa (<i>With Minor in Management</i>)	34	B17114	Aman Verma (<i>With Minor in Management</i>)
13	B17080	Desharaj Meena	35	B17116	Anwesh Das (<i>With Minor in Management</i>)
14	B17081	Dheeraj Ram	36	B17118	Arush Saxena (<i>With Minor in Management</i>)
15	B17082	Dhruv (<i>With Minor in Management</i>)	37	B17125	Manas Deep Vishwakarma (<i>With Minor in Management</i>)
16	B17083	Divya Gupta (<i>With Minor in Management</i>)	38	B17126	Manish Kumar Sharma (<i>With Minor in Management</i>)
17	B17084	Divyanshu Kumawat (<i>With Minor in Management</i>)	39	B17131	Naveen Kumar (<i>With Minor in Management</i>)
18	B17085	Gaurav Nirmal (<i>With Minor in Management</i>)	40	B17139	Rohit Kumar Bhamu (<i>With Minor in Management</i>)
19	B17086	Hardik Aggarwal (<i>With Minor in Management</i>)	41	B17141	Shashi Kumar Fagna (<i>With Minor in Management</i>)
20	B17088	Lakshmi Naga Khyathi Chittineni (<i>With Minor in Management</i>)	42	B17145	Swarna Bisane (<i>With Minor in Management</i>)
21	B17089	Mahale Komal Baburao (<i>With Minor in Management</i>)	43	B17148	Vaishali (<i>With Minor in Management</i>)
22	B17090	Mahima Choudhary (<i>With Minor in Management</i>)	44	B15221	Lokesh Gehlot

r) Bachelor of Technology (B.Tech.) in Mechanical Engineering

The following 24 students have completed all the requirements for the award of Bachelor of Technology in Mechanical Engineering. Their Names and Roll Number are as given below:

Sl. No.	Roll No.	Student Name	Sl. No.	Roll No.	Student Name
1	B17111	Aditya Nautiyal	13	B17132	Nitin Mittal (<i>With Minor in Management</i>)
2	B17112	Ajay	14	B17133	Pradeep Kumar Nag (<i>With Minor in Intelligent Systems</i>)
3	B17113	Aman Raj	15	B17135	Purushottam Goel

Sl. No.	Roll No.	Student Name	Sl. No.	Roll No.	Student Name
4	B17115	Ankit Sejwar (<i>With Minor in Management</i>)	16	B17136	Rajan Kumar
5	B17117	Arjun Sahdev	17	B17137	Rajesh
6	B17119	Ashu Chandelia	18	B17140	Sachin
7	B17121	Gautam Asopa (<i>With Minor in Intelligent Systems</i>) & (<i>With Minor in Management</i>)	19	B17142	Shreya Prakash Lanjewar
8	B17122	Hritik Dev (<i>With Minor in Intelligent Systems</i>)	20	B17143	Shubham Meena
9	B17127	Man Mohan Meena	21	B17144	Shubham Shah (<i>With Minor in Management</i>)
10	B17128	Mayank Agrwal	22	B17147	Toshendra Rustagi (<i>With Minor in Management</i>)
11	B17129	Mohit Kumar	23	B17149	Yash Paliwal (<i>With Minor in Management</i>)
12	B17130	Nabeel Khan	24	B17150	Yuvraj Dholia

क्रम संख्या/Serial No. BXXXXXX

As per suggestion of Senate, following changes have done:

1. Chairman replaced with Chairperson
2. Place removed
3. Date format

क्रमांक संख्या/Roll No. BXXXXXX

H

भारतीय प्रौद्योगिकी संस्थान मण्डी

के अभिषद् द्वारा

संगणक विज्ञान एवं अभियांत्रिकी में प्रौद्योगिकी स्नातक

की उपाधि

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तेईस अक्टूबर दो हजार इक्कीस को प्रदान की गयी।



The Senate of the

Indian Institute of Technology Mandi

hereby confers the degree of

Bachelor of Technology

in *Computer Science and Engineering*

on

(Name)

on

Twenty Third of October, Two Thousand Twenty One

निदेशक एवं अध्यक्ष, अभिषद्
Director & Chairperson, Senate

कुलसचिव
Registrar



भारतीय प्रौद्योगिकी संस्थान मण्डी
के अभिषद् द्वारा
प्रयुक्त गणित में विज्ञान स्नातकोत्तर
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तेईस अक्टूबर दो हजार इक्कीस को प्रदान की गयी।



The Senate of the
Indian Institute of Technology Mandi
hereby confers the degree of
Master of Science
in
Applied Mathematics
on
A B C
on
Twenty Third of October, Two Thousand Twenty One

निदेशक एवं अध्यक्ष, अभिषद्
Director & Chairperson, Senate

कुलसचिव
Registrar



भारतीय प्रौद्योगिकी संस्थान मण्डी

के अभिषद् द्वारा

डॉक्टर ऑफ़ फ़िलॉसफ़ी

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तेईस अक्टूबर दो हज़ार इक्कीस को प्रदान की गयी।

शोध प्रबन्ध: शोध का शीर्षक



The Senate of the

Indian Institute of Technology Mandi

hereby confers the degree of

Doctor of Philosophy

on

(A B C)

on

Twenty Third of October, Two Thousand Twenty One

PhD Thesis: Title of the thesis will be placed here

निदेशक एवं अध्यक्ष, अभिषद्
Director & Chairperson, Senate

कुलसचिव
Registrar