

पैंतीसवीं सिनेट बैठक का कार्यवृत्त

**MINUTES OF THE 35<sup>th</sup> SENATE MEETING OF  
IIT MANDI**

**2<sup>nd</sup> JUNE, 2022**



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**



**35<sup>th</sup> SENATE MEETING OF IIT MANDI**

**THURSDAY, 2<sup>nd</sup> JUNE, 2022**

Item No.	Agenda items	Page No.
	<b>PART – A</b>	
35.1	To confirm the minutes of the 34 <sup>th</sup> Senate meeting held on 15 <sup>th</sup> March, 2022.	3
35.2	To receive a report on the actions taken for the decisions taken in the 34 <sup>th</sup> Senate meeting held on 15 <sup>th</sup> March, 2022.	3
35.3	To consider a policy across the Institute regarding Academic Dishonesty Policy.	3-4
35.4	To consider the proposal for modification in Minor in German.	4
35.5	To consider the recommendations of the committee for Academic Organization / Structure of the Schools.	4
35.6	To consider a proposal to establish a Center on Indian Knowledge System and Mental Health (CIKSMH).	4
35.7	To consider a proposal to start a new MBA programme from Academic Year 2022-23.	4
35.8	To consider the revision in fee waiver policy for UG Female students.	4
35.9	To consider a proposal for modification in Fee Structure for AY 2022-23.	4-5
35.10	To consider the revision in the Regulations of the MS/PhD programme regarding course selection approval by Supervisor/Guide.	5
35.11	To consider the revision in the Regulations for the MS/PhD programme regarding ERP/Part-Time scholars and amendment in allotment of caretaker faculty-in-charge/co-guide in the absence of guide.	5
35.12	To consider the modified proposal regarding Exit options for IDD (Bioengineering) students after 4 <sup>th</sup> year.	5
35.13	To consider the proposal for Second Major in Bioengineering programme.	5-6
35.14	To consider revision in the curriculum for M.Tech. in VLSI programme.	6
35.15	To consider the minor modification in FTE programme.	6
35.16	To consider a proposal for Entrepreneurship Practicum.	6
35.17	Any other agenda item with the permission of the Chairman, Senate.	6
35.18	To report decisions/action taken by the Chairman, Senate.	7
	<b>PART – B</b>	
35.19	Issues to be discussed by the Senate without Student Members being present.	7

**INDIAN INSTITUTE OF TECHNOLOGY MANDI**

**Minutes of the 35<sup>th</sup> Senate Meeting of IIT Mandi held on 2<sup>nd</sup> June, 2022 at 9:30 AM in Conference Room, C.V. Raman Guest House, IIT Mandi, Kamand.**

The following were present:

**In the Chair**

Prof. Laxmidhar Behera, Director, IIT Mandi

**Members:**

Prof. Siddhartha Mukhopadhyay, Dept. of Electrical Engineering, IIT Kharagpur  
Prof. Binay Kumar Pattnaik, Dept. of HSS, IIT Kanpur  
Prof. Subrata Ghosh, Professor, SBS, IIT Mandi  
Prof. Prem Felix Siril, Professor, SBS, IIT Mandi  
Prof. Chayan Kanti Nandi, Professor, SBS and Dean (Resource Gen. and Alumni Relations), IIT Mandi  
Prof. Pradeep C. Parameswaran, Professor, SBS, IIT Mandi  
Prof. Rajeev Kumar, Professor, SE and Dean (I&S), IIT Mandi  
Prof. Rahul Vaish, Professor, SE and 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. Atul Dhar, Chairperson, SE, IIT Mandi  
Dr. Shyamasree Dasgupta, Chairperson, SHSS, IIT Mandi  
Dr. C.S. Yadav, Co-ordinator, AMRC, IIT Mandi  
Dr. Prosenjit Mondal, Co-ordinator, Bio-X Centre, IIT Mandi  
Dr. Deepak Swami, Associate Professor, SE, IIT Mandi  
Dr. Viswanath Balakrishnan, Associate Professor, SE, IIT Mandi  
Dr. Satyajit Thakor, Associate Professor, SCEE, IIT Mandi  
Dr. Arti Kashyap, Associate Professor, SBS, IIT Mandi  
Dr. Shyam Kumar Masakpalli, Associate Professor, SBS, IIT Mandi  
Dr. Surya Prakash Upadhyay, Assistant Professor, SHSS, IIT Mandi  
Dr. Rajeshwari Dutt, Associate Professor, SHSS, IIT Mandi  
Mr. Rajesh Sinha, Chief Scientist & Head - Smart Machines Research Program, TCS  
Dr. P. Anil Kishan, Associate Dean (Courses), IIT Mandi  
Dr. Rajanish Giri, Associate Dean (Research), IIT Mandi  
Dr. Tushar Jain, Head, CCE, IIT Mandi  
Mr. Vivek Tiwari, Assistant Registrar (Academics), IIT Mandi  
Kamal Kumar Bajre, Registrar & Secretary, Senate, IIT Mandi

**Invitees:**

Dr. Varun Dutt, Associate Professor, SCEE, IIT Mandi  
Dr. Arnav Bhavsar, Associate Professor, SCEE, IIT Mandi  
Dr. Sandip Kumar Saha, Assistant Professor, SE, IIT Mandi  
Dr. Shubhajit Roy Chowdhury, Associate Professor, SCEE, IIT Mandi  
Dr. Srinivasu Bodapati, Assistant Professor, SCEE, IIT Mandi  
Dr. Puran Singh, Associate Professor, SHSS, IIT Mandi  
Dr. Neha Kaushik, Assistant Professor, SHSS, IIT Mandi  
Mr. Bhumanyu Goyal, Student Academic Affairs Secretary, IIT Mandi (Special Invitee)

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

Prof. Sandeep Verma, Dept. of Chemistry, IIT Kanpur & Secretary (SERB)  
 Prof. Suman Kalyan Pal, Professor and Chairperson SBS, IIT Mandi  
 Prof. Satinder Sharma, Professor, SCEE, Dean (Faculty) & Co-ordinator C4DFED, IIT Mandi  
 Prof. Bharat Singh Rajpurohit, Professor, SCEE, IIT Mandi  
 Dr. Hitesh Shrimali, Associate Professor, SCEE, IIT Mandi  
 Mr. Hemachandra Bhat, General Manager and Practice Head, Robotics Platforms, Wipro  
 Mr. Naresh Singh Bhandari, Deputy Librarian, IIT Mandi  
 Mr. Adesh Singh, Student Research Affairs Secretary, IIT Mandi (Special Invitee)  
 Mr. Anirudh Singh, Student General Secretary, IIT Mandi (Special Invitee)

The Chairman Senate extended a warm welcome to all the new Senate members and Invitees attending the 35<sup>th</sup> Senate meeting of the Institute. He further appreciated and placed on records the services rendered by the outgoing members of the Senate.

Thereafter, following agenda items were taken up.

**Item No. 35.1: To confirm the minutes of the 34<sup>th</sup> Senate meeting held on 15<sup>th</sup> March, 2022.**

The minutes of the 34<sup>th</sup> Senate meeting held on 15<sup>th</sup> March, 2022 were circulated to members of the Senate on 31<sup>st</sup> March, 2022 (through email) for comments.

One comment was received on the Item No. 34.7 of the minutes of 34<sup>th</sup> Senate meeting. Considering the comment received with respect to minimum educational qualification for admission in MS (by Res.), the Senate approved the same as candidates with a bachelor degree in Engineering/Technology or Master degree in appropriate sciences and social sciences. For fellowship, they should fulfill the requirements of the sponsoring agency/authority.

The minutes of 34<sup>th</sup> Senate meeting held on 15<sup>th</sup> March, 2022 were confirmed with above addendum.

**Item No. 35.2: To receive a report on the actions taken for the decisions taken in the 34<sup>th</sup> Senate meeting held on 15<sup>th</sup> March, 2022.**

The Senate noted the actions on the decisions taken in its 34<sup>th</sup> meeting held on 15<sup>th</sup> March, 2022.

**Item No. 35.3: To consider a policy across the Institute regarding Academic Dishonesty Policy.**

On the recommendation of the Board of Academics, the Senate considered the proposal regarding Academic Ethics Policy/Plagiarism etc. presented by Dr. P Anil Kishan. The Senate noted that the current policy is inclined towards courses and the examination. Therefore, it was decided to have detailed guidelines for prohibiting plagiarism. Associate Dean (Research) was asked to propose the same in next Senate meeting.

After detailed deliberation, the Senate resolved to approve the proposal and name it as Academic Ethics policy, as placed at **Annexure A; Page No. 8 to 16.**

**Item No. 35.4: To consider the proposal for modification in Minor in German.**

On the recommendation of the Board of Academics, the Senate considered the proposal regarding modification in Minor in German presented by Dr. Rajeshwari Dutt, Course Coordinator, SHSS.

After detailed deliberation, the Senate resolved to approve the proposal, as placed at **Annexure B; Page No. 17 to 20.**

**Item No. 35.5: To consider the recommendations of the Committee for Academic Organization / Structure of the Schools.**

Prof. Rahul Vaish, Dean (Academics) presented a proposal / recommendations of the Committee for Academic Organization / Structure of the Schools.

After detailed discussion, the Senate resolved to recommend the proposal as placed at **Annexure C; Page No. 21** to the Board for approval.

**Item No. 35.6: To consider a proposal to establish a Center on Indian Knowledge System and Mental Health (CIKSMH).**

Dr. Varun Dutt and Dr. Arnav Bhavsar, presented a proposal to establish a Center on Indian Knowledge System and Mental Health (CIKSMH) at IIT Mandi.

After discussion, the Senate resolved to recommend the proposal as placed at **Annexure D; Page No. 22 to 25** to the Board for approval.

**Item No. 35.7: To consider a proposal to start a new MBA programme from Academic Year 2022-23.**

Dr. Manoj Thakur, Chair of the Committee, presented a proposal to start a new MBA programme from AY 2022-23.

After detailed discussion, the Senate resolved to recommend the proposal as placed at **Annexure E; Page No. 26 to 31** to the Board for approval.

**Item No. 35.8: To consider the revision in fee waiver policy for UG Female students.**

Prof. Rahul Vaish, Dean (Academics), presented a proposal regarding revision in fee waiver policy for UG Female students.

After discussion, the Senate resolved to recommend the proposal as placed at **Annexure F; Page No. 32** to the FC/Board for approval.

**Item No. 35.9: To consider a proposal for modification in Fee Structure for AY 2022-23.**

Dr. Sandip Kumar Saha, Committee Chair, presented a proposal for modification in Fee Structure for AY 2022-23.

After discussion, the Senate resolved to recommend the proposal as placed at **Annexure G; Page No. 33 to 41** to the FC/Board for approval.

**Item No. 35.10: To consider the revision in the Regulations of the MS/PhD programme regarding course selection approval by Supervisor/Guide.**

On the recommendation of the Board of Academics, the Senate considered the proposal revision in the Regulations of the MS/PhD programme regarding course selection approval by Supervisor/Guide presented by Dr. Atul Dhar, Chairperson, SE. After brief discussion, the following was approved by the Senate:

- The student will select the relevant courses in consultation with the thesis supervisor.

The same should also be applicable to the MS students.

**Item No. 35.11: To consider the revision in the Regulations for the MS/PhD programme regarding ERP/Part-Time scholars and amendment in allotment of caretaker faculty-in-charge/ co-guide in the absence of guide.**

Prof. Prem Felix Siril, Chair of the designated Committee presented the following proposals:

1. Proposal regarding revision in the Regulation for the MS/PhD programme regarding ERP/Part-Time scholars.
2. Amendment in allotment of faculty-in-charge (caretaker)/co-guide in the absence of guide from the Institute for longer duration (> 3 months).

After detailed deliberation, the Senate resolved to approve the proposal, as placed at **Annexure H; Page No. 42 to 43**.

**Item No. 35.12: To consider the modified proposal regarding Exit options for IDD (Bioengineering) students after 4<sup>th</sup> year.**

On the recommendation of the Board of Academics, the Senate considered the proposal regarding modification in Exit Options for IDD (Bioengineering) students after 4<sup>th</sup> year, presented by Dr. Shubhajit Roy Chowdhury, Programme Coordinator for B.Tech-M.Tech (Dual Degree (Bioengineering)).

After detailed deliberation, the Senate resolved to approve the proposal, as placed at **Annexure I; Page No. 44**.

**Item No. 35.13: To consider the proposal for Second Major in Bioengineering programme.**

On the recommendation of the Board of Academics, the Senate considered the proposal for Second Major in Bioengineering programme presented by Dr. Shubhajit Roy Chowdhury, Programme Coordinator for B.Tech-M.Tech (Dual Degree (Bioengineering)) programme.

After detailed deliberation, the Senate resolved to approve the proposal, as placed at **Annexure J; Page No. 45.**

**Item No. 35.14: To consider revision in the curriculum for M.Tech. in VLSI programme.**

On the recommendation of the Board of Academics, the Senate considered the proposal for revision in the curriculum for M.Tech. in VLSI programme presented by Dr. Srinivasu Bodapati, Course Coordinator for M.Tech. in VLSI programme.

After detailed deliberation, the Senate resolved to approve the proposal, as placed at **Annexure K; Page No. 46 to 48.**

**Item No. 35.15: To consider the minor modification in FTE programme.**

On the recommendation of the Board of Academics, the Senate considered the proposal for minor modification in FTE programme presented by Dr. Atul Dhar.

After detailed deliberation, the Senate resolved to approve the proposal, as placed at **Annexure L; Page No. 49 to 50.**

**Item No. 35.16: To consider a proposal for Entrepreneurship Practicum.**

Dr. Puran Singh, Associate Professor presented a proposal for Entrepreneurship Practicum. After detailed discussion following was resolved:

1. To run the course on an experimental basis. Accordingly, a maximum of 15 teams will be allowed to take the course in the coming semester, and only 2 financial grants of INR 50,000 each will be made by the Institute to teams selected for stage 2. Based on the feedback and the outcome of the program, further changes may be made in future, with the approval of the Chairman, Senate.
2. Dr. Varun Dutt, Project Director, iHub and HCI foundation, on behalf of the foundation, offered to extend three financial grants (*for 2022 call*) of INR 50,000 each for stage 3 teams aligned with the Human-computer interaction area.
3. A maximum of 15 teams will be allowed to take stage 1 of the course for 2 credits, and maximum 5 teams will be financially supported in stage 2 for additional 9 credits. Rest of the teams may also enroll for 9 credits practicum *without any Institute financial support.*
4. A program fee of INR 9000 per team shall be paid to the incubator.

Detailed proposal placed at **Annexure M; Page No. 51 to 55.**

**Item No. 35.17: Any other agenda item with the permission of the Chairman, Senate.**

None.

**Item No. 35.18: 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. 35.19: 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.

*Ubelere*  
*21/6/22*  
**Chairman, Senate**

*Ubelere*  
*21/06/22*  
**Registrar & Secretary-Senate**



## Academic Ethics Guidelines

### What is not Academic Dishonesty?

- A student submitting the work done alone or in the knowledge of Course Instructor.
- Submitting a single group project wherever permitted.
- Students discussing the methodology of solution.
- Students discussing the course material for understanding.

### Academic Dishonesty and Suggested Penalties

Offense	Punishment
<b>Cheating</b> <ul style="list-style-type: none"><li>● Carrying <i>cheat sheets</i> or <i>chits</i> during exams. The student may or may not use the sheets during the exams. But possessing the chits will be treated as cheating [Severe].</li><li>● Keeping books/chits etc. in toilets [Severe].</li><li>● Possessing the electronic items/gadgets (smart phones, smart watches, tablets, similar items) during the exam. Calculators, wherever permitted, can be carried for the exam.</li><li>● Using the electronic items/gadgets (smart phones, smart watches, tablets, similar items) during the exam. [Severe].</li><li>● Exchanging the answer books or question papers with some of the answers on it [Severe].</li><li>● Sharing answers, soliciting answers, peeking into the answer sheets of others.</li></ul>	<b>Cheating</b> <ul style="list-style-type: none"><li>● Expel from the examination hall</li><li>● Award 0 (zero marks) for the exam component.</li><li>● No makeup Exam.</li><li>● "F" grade for all serious offences.</li><li>● Disciplinary action to be taken for severe issues, in addition to the punishments / penalties.</li></ul>

<p><b>Plagiarism</b></p> <ul style="list-style-type: none"> <li>● Submitting a portion or portions or all the work done by someone else's works, without proper citation or quotation marks.</li> <li>● Rephrasing/paraphrasing the original source, without proper citation.</li> <li>● Presenting existing idea/ source as own idea. [severe]</li> </ul>	<p><b>Plagiarism</b></p> <ul style="list-style-type: none"> <li>● Rewriting the journal article.</li> <li>● Redoing the assignment, without support from others.</li> <li>● The plagiarism discussed is mainly related to exams and college projects.</li> <li>● Dean Academics will handle the situation, related to submissions to the journals</li> <li>● Students are sensitized regarding the Plagiarism, using the document provided.</li> </ul>
<p><b>Information Falsification or Fabrication</b></p> <ul style="list-style-type: none"> <li>● Falsification of data. [severe]</li> <li>● Date fabrication. [severe]</li> </ul>	<p><b>Information Falsification or Fabrication</b></p> <ul style="list-style-type: none"> <li>● Students are warned and scholarship may be temporarily stopped for a period of time</li> <li>● Student need to attend workshop on "Academic.</li> <li>● These issues will be handled by Dean Academics separately.</li> </ul>
<p><b>Facilitation of Academic Dishonesty</b> <b>(Applicable to TAs also)</b></p> <ul style="list-style-type: none"> <li>● Providing the materials or others to the students without permission.</li> <li>● Providing the question papers or others to the students without permission. [severe]</li> </ul>	<p><b>Facilitation of Academic Dishonesty</b> <b>(Applicable to TAs also)</b></p> <ul style="list-style-type: none"> <li>● TAs are warned and their scholarship may be suspended for a 6 months of time.</li> <li>● The students (both student and TA) may be suspended for next semester, or the student is not allowed to register for the next semester.</li> <li>● If the TA is the main culprit, s/he may be given more punishment.</li> </ul>
<p><b>On-line Cheating</b></p> <ul style="list-style-type: none"> <li>● Creating instant <u>Whatsapp</u> or other groups and sharing the answers or solutions. [Severe]</li> <li>● Participating in Whatsapp or other groups while being aware that the group is used for dishonest academic</li> </ul>	<p><b>On-line Cheating</b></p> <ul style="list-style-type: none"> <li>● Award 0 marks for the whole group or class.</li> <li>● Fail the student. Disciplinary actions, including suspension may be taken.</li> <li>● Makeup Exam is not offered.</li> </ul>

<p>purposes [Severe].</p> <ul style="list-style-type: none"> <li>● Impersonation. [Severe]</li> <li>● Online screen sharing</li> <li>● Exchange answers with others. [Severe]</li> <li>● At the beginning, exchange <u>pdfs</u> to verify the sets. [severe]</li> <li>● Keeping phones, books <u>etc.</u> out of camera region. [severe]</li> </ul>	
<p><b>Others</b></p> <ul style="list-style-type: none"> <li>● Faking identities to get third party assistance. [severe]</li> <li>● Impersonation (both online and offline). [severe]</li> </ul>	<p><b>Others</b></p> <ul style="list-style-type: none"> <li>● Disciplinary action will be taken</li> <li>● Exam component is cancelled</li> <li>● Suspension / stopping scholarship for a period of time</li> </ul>
<p><b>Severe Issues</b></p> <ul style="list-style-type: none"> <li>● Student impeding the investigation on academic dishonesty</li> <li>● More than one incidents</li> <li>● Forging signatures of a faculty/staff member</li> <li>● Tampering or modifying the evaluated answer sheets.</li> <li>● Leakage of Question Papers</li> <li>● Data Fabrication</li> </ul>	<p><b>Severe Issues</b></p> <ul style="list-style-type: none"> <li>● Redoing/re-attending the course, in subsequent year. All the assignments, tests, quizzes <u>etc.</u> need to be submitted afresh.</li> <li>● For TAs, scholarship may be suspended for a period of time.</li> <li>● The student may be suspended for next semester, or the student is not allowed to register for the next semester.</li> <li>● Mandatory attendance in academic honesty workshop at the beginning of semester.</li> <li>● Academic and/or disciplinary probation</li> <li>● An intimation regarding the student's academic dishonesty will be sent to the parents.</li> <li>● "F" grade in all registered courses</li> <li>● Student is not allowed to fill the teacher and course feedback.</li> <li>● Barring from contesting in elections, applying for internships, placements etc.</li> </ul>

### **Some More Comments:**

- Instructor needs to prove the offense.
- A workshop on the Academics need to organized at the beginning of the semester.
- The items mentioned are some general issues. List can be exhaustive. Faculty / committee will take the relevant action upon the incident.
- All the serious issues to be should be authorized or to be penalized by the concern committee appointed by Dean Academics.
- Serious issues should attract disciplinary actions, in addition to the above mentioned academic penalties.
- Issues related to Plagiarism related to external submissions, Data fabrication etc. should be handled by the Dean Academics through a different committee, specific to the case.
- All serious issues attract more than one punishment.
- Institute needs to sensitize the students about plagiarism, ethics, academic honesty etc., during the orientation programs. This document should be made available on the intranet.

# **PLAGIARISM**

## **WHAT IS PLAGIARISM**

Stealing someone else's ideas and words and passing it on as your own.

## **WHY IS PLAGIARISM WRONG?**

- Plagiarism defeats the purpose of writing assignments. When you plagiarise you are using someone else's ideas and words. These actions do not help you build any skills (other than that of copy-pasting). Thus in committing plagiarism the person you are really cheating is yourself.
- Plagiarism is like lying. When you pass someone else's work as your own you are engaging in unethical behavior. This can also destroy the mutual respect which exists between a professor and a student.
- The basis of academia is trust. When we read an academic piece we trust that the author has represented facts to the best of his ability. Plagiarism undercuts this very foundation of trust.
- Plagiarism defeats the purpose of scholarship, i.e., your ability to learn and grow

Source: University of Oklahoma, Academic Integrity website

## **TYPES OF PLAGIARISM**

One of the most common types of publication misconduct is plagiarism—when one author deliberately uses another's work without permission, credit, or acknowledgment. Plagiarism takes different forms, from literal copying to paraphrasing some else's work and can include:

- Data
- Words and Phrases
- Ideas and Concepts

Source: [ethics.elsevier.com](http://ethics.elsevier.com)

Action	What is it?	Is it unethical?	What should you do?
<b>Literal Copying</b>	Reproducing a work word for word, in whole or in part, without permission and acknowledgment of the original source.	<b>Yes.</b>  Literal copying is only acceptable if you reference the source and put quotation marks around the copied text.	<ul style="list-style-type: none"> <li>• Keep track of sources you used while researching and where you used it in your paper.</li> <li>• Make sure you fully acknowledge and properly cite the original source in your paper.</li> <li>• Use quotation marks around word-for-word text and reference properly</li> </ul>
<b>Substantial copying</b>	This can include research materials, processes, tables, or equipment	<b>Yes.</b>  "Substantial" can be de-fined as both quantity and quality of what was copied. If your work captures the essence of another's work, it should be cited.	<ul style="list-style-type: none"> <li>• Ask yourself if your work has benefited from the skill and judgment of the original author?</li> <li>• The degree to which you answer "yes" will indicate whether substantial copying has taken place.</li> <li>• If so, be sure to cite the original source.</li> </ul>

<p><b>Paraphrasing</b></p>	<p>Reproducing someone else's ideas while not copying word for word, without permission and acknowledgment of the original source.</p>	<p><b>Yes.</b></p> <p>Paraphrasing is only acceptable if you properly reference the source and make sure that you do not change the meaning intended by the source.</p>	<ul style="list-style-type: none"> <li>· Make sure that you understand what the original author means.</li> <li>· Never copy and paste words that you do not fully understand.</li> <li>· Think about how the essential ideas of the source relate to your own work, until you can deliver the information to others without referring to the source.</li> <li>· Compare your paraphrasing with the source, to make sure you retain the intended meaning, even if you change the words.</li> </ul>
<p><b>Text-recycling</b></p>	<p>Reproducing portions of an author's own work in a paper, and resubmitting it for publication as an entirely new paper.</p>	<p><b>Yes.</b></p> <p>See our separate factsheet on duplicate submission.</p>	<ul style="list-style-type: none"> <li>· Put anything in quotes that is taken directly from a previously published paper, even if you are reusing something in your own words.</li> <li>· Make sure to reference the source accordingly</li> </ul>

Source: [https://www.elsevier.com/\\_data/assets/pdf\\_file/0008/653885/Ethics-in-research-and-publication-brochure.pdf](https://www.elsevier.com/_data/assets/pdf_file/0008/653885/Ethics-in-research-and-publication-brochure.pdf)

**PLAGIARISM-SOURCES NOT CITED**

- The author submits an assignment copied word for word from a source different from his or her own

- The author uses some of his or her own words in his or her submission, but substantial parts are taken without modification from a single source
- The author tries to pass off a work as his or her own that has been stitched together from various sources with a few words being altered here and there to try to disguise the original phrasing.
- The author tries to cover his or her lifting of the essential content of a source by minimally altering key words and phrases.
- The author meticulously changes all phrases and words from one source into his or her own but neglects to cite the source.

[https://www.slideshare.net/aewinger/plagiarism-types?qid=0b5e4ab0-2a5e-4dab-a163-43b7b0bf7429&v=default&b=&from\\_search=1](https://www.slideshare.net/aewinger/plagiarism-types?qid=0b5e4ab0-2a5e-4dab-a163-43b7b0bf7429&v=default&b=&from_search=1)

### **SOURCES CITED (BUT STILL PLAGIARIZED)**

- The author notes a source but does not include a specific in-text citation that leads to a reference citation that denotes the exact bibliographic information from the text. Therefore, the link between the in-text citation reference and reference page reference is broken.
- The author scrambles information so that inaccurate information regarding the sources is noted. This makes the source impossible to find and accuracy cannot be determined.
- The writer inserts a direct quote but tries to pass it off as a paraphrase because he or she did not put the direct quote in quotation marks but DID supply an in-text citation.
- The writer accurately cites all paraphrases and gives credit where it is due, but the author neglected the requirement of submitting original work. Remember that all paraphrases should be based on excerpts from expert sources, not the entire source. Paraphrases, after being accurately cited, should also be accompanied by the writer's personal analysis of the paraphrase.
- In this situation of plagiarism, large sections of the author's work are original but interspersed within the original are sections of un-cited paraphrases. In this way, the paraphrased material is passed off as the writer's own.

[https://www.slideshare.net/aewinger/plagiarism-types?qid=0b5e4ab0-2a5e-4dab-a163-43b7b0bf7429&v=default&b=&from\\_search=1](https://www.slideshare.net/aewinger/plagiarism-types?qid=0b5e4ab0-2a5e-4dab-a163-43b7b0bf7429&v=default&b=&from_search=1)

### **HOW TO PREVENT PLAGIARISM**

**Take good notes.** Whenever you are reading a book or article for an assignment keep notes of the citation information and put in quotation mark any direct quotes

**Take time to think.** When you are writing your report, think about the topic and your findings, results and analysis. When you understand what you are doing you will be able to express yourself in your own words.



**Begin writing.** Remember writing is an art. You need to be able to write multiple drafts. With each iteration your work will get better. Remember that grammatical error and spelling mistakes are easy to fix. As instructors we don't mind if your English is a little weak, but plagiarism under any circumstances is unacceptable

Follow proper citation methods.

## **CITATION**

*Crediting* the work of others (including your advisor's or your own previous work) by citation is important for at least three reasons:

- It places your own work in context, and
- It acknowledges the findings of others on which you have built your research
- It maintains the credibility and accuracy of the scientific literature

Examples:

- Previously we (Attwood and Florence, 2002) reported that the...
- The work of Illumand Davis (1988) drew attention to ....
- According to Ilumand Davis (1988)....

**“Plagiarism”** Presented by: Alexander T Florence, Elsevier

## **DATA**

Data, statistics, illustrations also need to be cited. If something is common knowledge it need not be cited. But any time specific data is used which is not part of common knowledge it needs to be cited.

### **Minor in German Language (earlier version)**

The minor stream in German Language is intended to encourage B. Tech. students to acquire adequate skills in reading comprehension, writing and oral expression conforming to the B 2 level of the Common European Frame of Reference (CEF)\*. The program seeks to equip students for intercultural understanding; also, it offers sufficient value-addition to professional prospects in terms of international language competence; besides, it facilitates student exchange with TU-9 partner universities of the IIT Mandi.

Students are expected to take three of the following courses in order to qualify for a minor.

1. HS 352 German II
2. HS362 German III
3. HS 372 German IV
4. HS 373 Readings from German History
5. HS 363 Post-War Germany: A Literary Perspective

\* **B 2.** Can understand the main ideas of complex texts on both concrete and abstract topics, including technical discussions in his/her field of specialization. Can interact with a degree of fluency and spontaneity that makes regular interaction with native speakers quite possible without strain for either party. Can produce clear, detailed text on a wide range of subject and explain a viewpoint on a topical issue giving the advantages and disadvantages of various options.

#### **Proposal:**

**To Include HS 'HS539 - Post-War Germany' in the German Minor basket.**

The course seeks to develop an understanding of German history through reading, discussing and analysing various texts, newspaper articles, stories, novels as well as movies. This allows students to test their language skills, if they are already learning German, since a few posters or movies are in German language.

#### **NEW PROPOSED BASKET OF COURSES FOR GERMAN MINOR**

1. HS 352 German II
2. HS362 German III
3. HS 372 German IV
4. HS 373 Readings from German History
5. HS 363 Post-War Germany: A Literary Perspective
6. HS 539 Post War Germany: Politics, Society and Culture

<b>Course Number</b>	: HS-539
<b>Course Name</b>	: Post-War Germany: Politics, Society, and Culture
<b>Credits</b>	: 3-0-0-3
<b>Prerequisites</b>	: None
<b>Intended for</b>	: Ph.D./Masters/B.Tech. (3 <sup>rd</sup> and 4 <sup>th</sup> year)
<b>Distribution</b>	: HSS Free Elective
<b>Semester</b>	: Odd/Even

### 1. Preamble:

The course will introduce the students to a brief social and cultural history of Germany during the second half of the twentieth century. The students will gain an insight into the political and economic situation prevalent at the time, beginning with the post-war period, which saw Germany being divided into the FRG and GDR, and ending with the reunification of the two in 1990. A brief overview of the history of the European Union is also given to facilitate an understanding of present-day Europe so that the students have a broad understanding of culture and diversity as a whole. In addition, students will examine contemporary issues that impact Europe like the current migrant crisis in Germany, the debate around Brexit, rise of Eurosceptic parties in addition to the far-right ones.

### 2. Course Modules:

#### **Module I: (2 hours)**

This module provides the students with a background on the events leading up to the Second World War, briefly outlining topics like the First World War, Weimar Republic, and National Socialism among others.

#### **Module II: Allied Occupation of Germany (4 hours)**

- Zero hour/*Stunde Null*
- Denazification
- Four occupation zones

#### **Module III: Germany-US relations (2 hours)**

- Bizone/Trizone
- Berlin Blockade
- European Recovery Program/Marshall Plan

#### **Module IV: GDR and FRG (12 hours)**

- Formation of GDR and FRG
- Comparison of political and economic systems. Basic Law
- Democratisation of education
- NATO and Warsaw Pact
- Adenauer era
- Brandt's Ostpolitik

- Module V: Anti Government Protests (2 hours)**
- East German uprising
  - Students' movement
  - Green movement (anti-nuclear movement, environmentalism)

- Module VI: Migrants in Germany (4 hours)**
- Gastarbeiter/'Guest Worker'
  - Debate over Multiculturalism
  - Current migrant crisis
  - Emergence of far-right parties like AfD

- Module VII: The reunification of Germany (2 hours)**
- Fall of the Berlin Wall
  - Reunification
  - Problems in the process of internal integration

**Module VIII: Post-War German Cinema/Literature (6 hours)**

The students will engage with selected works of German literature/cinema, which will offer them a historical as well as a cultural perspective of the German society as it existed during the postwar period. It will include dealing with themes like *Heimat* ('homeland'), *Vergangenheitsbewältigung* ('coming to terms with the past'), and *Wende* ('turn').

**Module IX: European Union as it exists today (8 hours)**

- European Integration (ECSC, EEC)
- Expansion of the EU (1993 – today)
- Germany's role within the EU
- Euroscepticism
- Brexit

**3. Textbooks:**

- Judt, Tony: *Postwar. A History of Europe since 1945*, New York, Penguin Press, 2005
- Staab, Andreas: *The European Union Explained: Institutions, Actors, Global Impact*, Bloomington, Indiana University Press, 2008

**4. Reference:**

- Braunthal, G, *Right-Wing Extremism in Contemporary Germany*, Palgrave Macmillan UK, 2009
- Childs, David, *The Fall of the GDR: Germany's Road To Unity*, Longman, 2001
- Dennis, Mike, *The Rise and Fall of the German Democratic Republic 1945-1990*, London: Routledge, 2000
- Dinan, Desmond: *Europe Recast: A History of European Union*, Boulder, Lynne Rienner Publishers, 2014
- Fulbrook, Mary, *A History of Germany 1918-2014: The Divided Nation*, Wiley-Blackwell 2014
- Gilbert, Mark: *European Integration: A concise History*, Rowman & Littlefield, 2012

- Göktürk, Deniz, David Gramling and Anton Kaes (eds.), *Germany in Transit: Nation and Migration, 1955-2005*, California: University of California Press, 2007
- Hofmann, Arne, *The Emergence of Détente in Europe: Brandt, Kennedy and the Formation of Ostpolitik*, London, New York: Routledge: 2007.
- Jones, Erik, Anand Menon and Stephen Weatherill (eds.): *The Oxford Handbook of the European Union*, Oxford, Oxford University Press, 2012
- Kitchen, Martin: *A History of Modern Germany 1800-2000*, Malden, Blackwell, 2006
- Maier, C.S. and G. Bischof (eds.) *The Marshall Plan and Germany: West German Development within the Framework of the European Recovery Programme*, Oxford: Berg, 1991.
- McCormick, John: *Understanding the European Union*, New York, Palgrave, 2008
- Müller, Jan-Werner (ed.): *German ideologies since 1945; studies in the political thought and culture of the Bonn republic*, New York 2003
- Pulzer, Peter: *German Politics 1945-1995*, New York, Oxford University Press, 1996
- Smith, Helmut Walser (ed.): *The Oxford Handbook of Modern German History*, Oxford, 2011
- Vorländer, Hans, Maik Herold, Steven Schäler, *PEGIDA and New Right-Wing Populism in Germany*, Palgrave Macmillan, 2018.
- Warleigh-Lack, Alex: *European Union: The Basics*, London, Routledge, 2008
- Wilhelm, Cornelia (ed), *Migration, Memory and Diversity: From 1945 to the Present*, New York: Berghahn Books, 2016.

#### 5. Similarity Content Declaration with Existing Courses

S.N.	Course Code	Similarity Content	Approx. % of Content
	<b>HS363: Post-war Germany: A Literary Perspective</b>	The course examines the trajectory of German history from the 'Stunde Null' or 'Zero Hour' in 1945 to the Fall of the Wall in 1989 through its literary reflexes. It focuses on advanced reading comprehension by a thorough study of select short stories and poems besides short excerpts from novels that dwell on major defining moments in post-war Germany.	<b>5%</b>

#### 6. Justification for new course proposal if cumulative similarity content is > 30%:

NA

**Proposal to regarding Academic Organization/Structure of the Schools:**

After detailed discussion, the Senate resolved to recommend the following Academic Organization/Structure of the Schools to the BoG for its consideration and approval:

1. School of Basic Sciences bifurcated into four separate Schools:
  - a. School of Biosciences and Bioengineering
  - b. School of Chemical Sciences
  - c. School of Mathematical and Statistical Sciences
  - d. School of Physical Sciences
2. School of Engineering bifurcated into two Schools:
  - a. School of Mechanical and Materials Engineering
  - b. School of Civil and Environmental Engineering
3. The School of Computing and Electrical Engineering, School of Humanities and Social Sciences may remain unchanged for the time being.

## **Indian Knowledge System and Mental Health Applications Centre (IKSMHA Centre)**

### **Introduction**

According to a study by Charlson et al. (2016)<sup>1</sup>, it is estimated that estimate that in 2025, 38.1 million years of healthy life will be lost to mental illness in India. This statistics is a 23% increase. Also, the same study estimated that the mental ill-health burden will become even heavier in India, where it is projected to increase by 25% by 2025. To address the sharp increase in mental health problems, the Indian Institute of Technology Mandi (IIT Mandi) conducted a Workshop on Indian Knowledge System and Mental Health (IKSMH) between 25<sup>th</sup> and 27<sup>th</sup> March 2022. The workshop was widely attended by renowned researchers in the Indian Knowledge System (IKS) and Mental Health (MH) from India and abroad. Also, 20+ faculty and staff from IIT Mandi participated in this Workshop. As a part of the deliberations that took place in the Workshop, the following IKS topics emerged: Mind, brain, and consciousness with applications from consciousness studies, yoga, meditation, Ayurveda, traditional Indian medicine research, and other Indian performing arts (like dance, music, and Indian languages, etc.).

Consequent to the IKSMH Workshop, it is proposed to establish an **Indian Knowledge System and Mental Health Applications Centre** (referred to as “IKSMHA Centre”) at IIT Mandi. The IKSMHA Centre will focus on research on topics concerning IKS, which has several benefits for the human body, mental health, and wellbeing. In fact, IKS has deep roots grounded in Indian history, philosophy, society, arts, languages, science and technology, and life sciences. IKS may incorporate the study of mind, brain, and consciousness and include applications from several areas like consciousness studies, yoga, meditation, Ayurveda, traditional Indian medicine research, and other Indian performing arts.

### **Objectives**

The Centre’s main objectives are:

1. To be a world leader and serve Indian society via research and translation activities concerning IKS and mental health (MH). It plans to do so by banking on state-of-the-art scientific methods in answering questions related to the effectiveness of IKS on the human body, mental health, and wellbeing.
2. To serve as the nodal Centre for the IIT Mandi community, including IIT Mandi students, staff, and faculty, on IKS benefits for mental health.
3. To actively engage in skill development and impart education on IKS and mental health (MH) topics to the general public. This skill development program would involve teaching and workshop programs and undergraduate or postgraduate students grounded in IKS.

---

<sup>1</sup> Charlson, F. J., Baxter, A. J., Cheng, H. G., Shidhaye, R., & Whiteford, H. A. (2016). The burden of mental, neurological, and substance use disorders in China and India: a systematic analysis of community representative epidemiological studies. *The Lancet*, 388(10042), 376-389.

4. To serve the society with IKS-related research interventions, knowledge, and tools via a retreat centre, which would be open to both national and international visitors.
5. To translate research into possible product prototypes for mental health diagnostics, therapy, and general wellbeing.
6. To generate monetary resources via teaching, skill development, clinical research, retreat centre, and leasing the bleeding-edge lab equipment and other facilities to eventually become self-sustaining over time.

As shown in Figure 1, the IKSMH Centre is intended to be designed under the main theme of mind, brain, and consciousness.

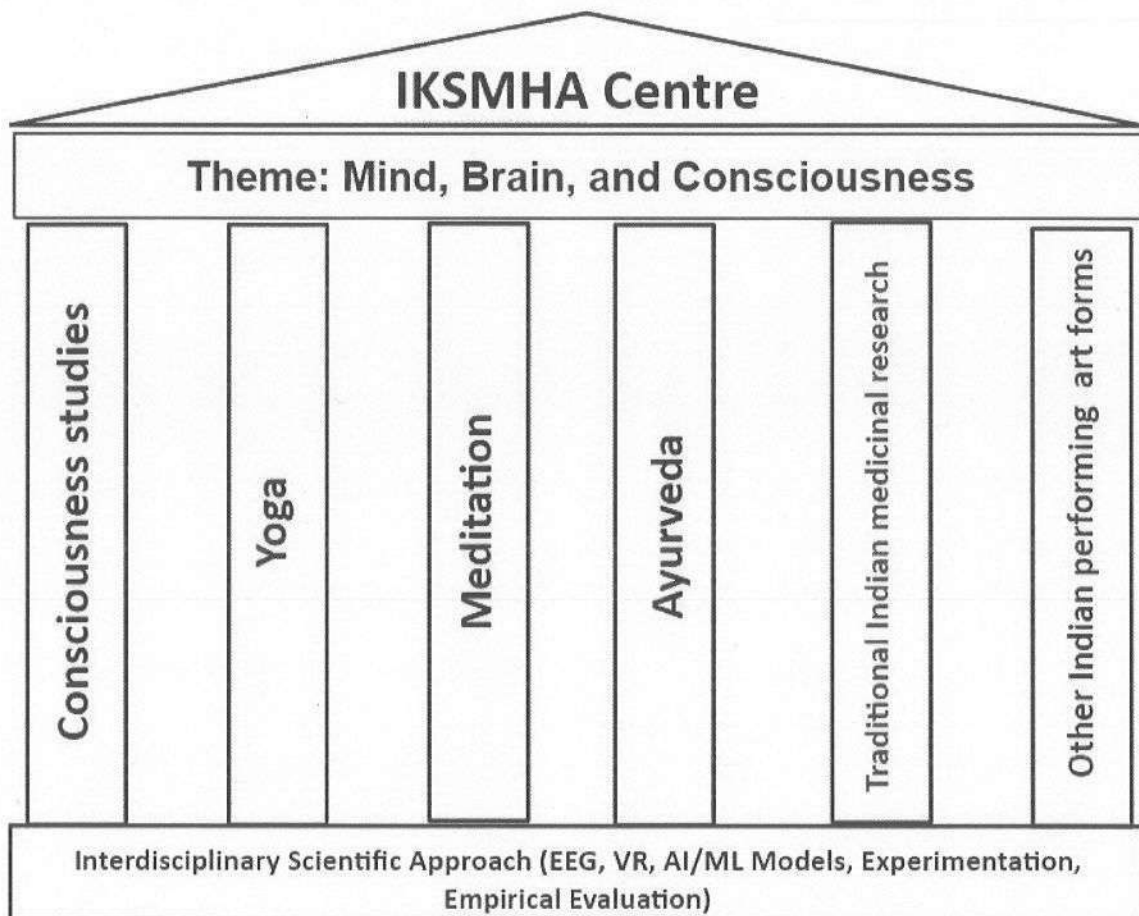


Figure 1. The conceptualization of IKSMHA is grounded in mind, brain, and consciousness via applications from consciousness studies, yoga, meditation, Ayurveda, traditional Indian medicinal research, and other Indian performing arts (Music, dance, traditional Indian languages, etc.).

The research and teaching under the Centre would include the following IKS areas: Consciousness studies, yoga, meditation, Ayurveda, traditional Indian medicine research, and other Indian performing arts. The Centre's research would be grounded in the interdisciplinary scientific methods and it would involve a number of methodologies from cognitive science, neuroscience, computer science, sports science, chemistry, biology, and experiment design.



## **Uniqueness**

The proposed Centre will be unique on account of the following:

1. It will be the first of its kind Centre focused on the rural Himachali communities in India.
2. It will be the first of its kind Centre at an IIT in India.
3. It will be the first of its kind Centre that brings topics concerning IKS and MH under a common umbrella.
4. It will be the first of its kind Centre that offers a socio-techno retreat for outreach.
5. It will be the first of its kind Centre that offers an interdisciplinary mix of faculty and programs.

## **Research and Labs**

The Centre would establish research labs like EEG/MEG lab, Neurostimulation lab, Eye-tracking lab, AR/VR and Motion lab, Psychology, data collection, and AI/ML lab, Dance and Music lab, Biosensors lab, Cellular, Molecular, and Analytical lab, IKS Retreat Centre, and teaching labs. The Centre would also cater to a number of degree programs at the undergraduate and postgraduate levels. These programs include B. Tech. in Computer Science (with specializations in Cognitive Science/IKS/MH/neuroscience/AI and ML). Furthermore, some of the postgraduate programs include MH-focused M.Tech. programs in Cognitive Science/IKS/MH/neuroscience/AI and ML. Finally, the Centre would also include a Ph.D. program in IKS and MH areas. The teaching programs would be supported via a number of teaching labs.

## **Deliverables**

The IKSMHA Centre plans to have several deliverables/outcomes that are going to be beneficial to society. Some of the outcomes are detailed below:

1. High-quality research that evaluates the efficacy of IKS and MH among both the healthy and unhealthy populations.
2. Skill development activities produce next-generation IKS and MH researchers, which include undergraduate students, postgraduate students, doctoral, postdoctoral, and faculty.
3. State-of-the-art facility for research in areas in IKS and MH in India, which can be leased by other researchers and labs in India and abroad for research.
4. State-of-the-art IKS Retreat Centre, which provides a bouquet of IKS interventions for improving mental health and wellbeing. This Centre could be utilized by both national and international visitors, who would like to experience IKS and Indian art in the pristine Himalayan environment.

## **Collaborations**

Some of the Institutes in India and abroad who have expressed interest in collaborating with IKSMHA Centre include:

1. S-VYASA, India
2. INMAS, DRDO, India
3. California Institute of Technology, USA
4. University of Groningen, The Netherlands
5. Patanjali Research Foundation, India

6. National Institute of Mental Health and Neuro Sciences, India
7. All India Institute of Medical Sciences, New Delhi, India
8. Wellness Space, India
9. IIT Kharagpur, India
10. IIT (BHU), India
11. Creative Movement Therapy Association of India, India
12. Maharishi Markandeshwar University, India
13. IIT Kanpur, India
14. SIVAS Health and Research Institute, Secunderabad, India
15. U.S. Department of Veterans Affairs, USA
16. Breathing Minds, India
17. IIT Bombay, India
18. Amity Science, Technology & Innovation Foundation (ASTIF), India
19. Loyola Marymount University, USA
20. IIT Delhi, India
21. Texas A&M University, USA

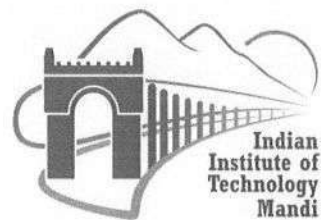
**About the name “IKSMHA”**

The acronym “IKSMHA” (pronounced as ee-k-sh-maa in Hindi), comes from the word “forgiveness,” the act of leaving aside feelings of bitterness, anger, and resentment, towards one and all.

# School of Management

## MBA (DS & AI)

(Master of Business Administration (Data Science and Artificial Intelligence))



Indian Institute of Technology Mandi,

## Preamble

The managerial landscape is rapidly changing due to the advancement in ICT and web enabled business platforms. Leadership in an organization are required to make appropriate decisions which is a judicious combination of the context data available and other subjective aspects. Optimal solution is no more the requirement, rather an appropriate solution is the key for success in the context of an organization. Rational decision making driven by the data has now evolved to incorporate tools and techniques of data sciences, artificial intelligence, machine learning etc. To be an impactful leader in the context of an organization, there is a need to combine softer aspects with purely data driven solutions in order to solve problems efficiently and effectively.

The proposed **MBA (DS & AI)** program is a blend of management of contemporary concepts, softer skills towards developing individuals, and relevant applications of data science tools.

More specifically, the program objectives are

- To provide an exposure to fundamentals of business management with special emphasis on contemporary and emerging topics.
- To help the individuals to develop their personality by adequate exposure to soft skills like communication, creativity, and emotional intelligence etc.
- To provide an in-depth exposure to tools and techniques of data science, artificial intelligence, and machine learning etc. with a strong emphasis on problem solving approach.
- Prepare the graduate of the course to evolve as leaders of an organization who can combine rational and subjective skills in the context of an organization to make appropriate decisions.

Description:

The proposed **MBA (DS & AI)** program is a blend of management of contemporary concepts, softer skills towards developing individuals, and relevant applications of data science tools. **MBA (DS & AI)** is a 2-year long full-time Masters programme, distributed in 4 semesters. The credit requirement is 70. The program aims to provide an in-depth exposure on data science tools and techniques like analytics, artificial intelligence machine learning, deep learning, natural language processing, and neural networks with a strong emphasis on problem solving approach.

The course structure has three major components as detailed below:

### **Discipline Cores (46 credits):**

Discipline Cores are designed to give the students appropriate exposure to different thoughts and theories of 'management' and 'Data science'. These include course in managerial competence such as communication skills, Legal aspects of business, HR management, creative thinking problem solving and decision making, organizational behaviour; as well as data science course such as Neural networks fundamentals for business, Mathematical foundations, disruptive technologies for data science, Introduction to AI and automation etc.

### **Electives (8+4 credits):**

A pool of discipline and free elective courses help students to go deeper into selected areas of application of data science and artificial intelligence in business. While discipline cores are more theme oriented and interdisciplinary in nature, the discipline electives have greater disciplinary grounding. The pool of discipline electives courses is dynamic in nature and more courses may be added in the future depending upon

suitability. Students also have to take 4 credits offered in the institute from outside the pool of discipline electives for the **MBA (DS & AI)** Programme.

**Project and internship (12):**

Students would get exposure to real world problems, research methodology and industry experience through the Qualitative research workshop, social immersion project, Industry internship and two semester long Management project.

**Curriculum:**

The distribution of credits across types of courses is proposed to be the following:

1	Discipline Core	46
2	Discipline Electives	8
3	Free Electives	4
4	Project and Internship	12
Total		70

Sl. No.	Semester I	Break	Semester II	Break	Semester III	Break	Semester IV
1	Communication Skills for Managers	Qualitative Research (2 credits in Workshop mode) Social Immersion (0 credits)	Operations Management	Industry Internship (2 credits)	Legal Aspects of Business		Electives (6 – 10 credits)
2	Financial Statement Analysis		Fundamentals of Data and Analytics		Neural Networks fundamentals for Business		
3	Mathematical Foundations for DS/AI ML		Human Resource Management		Digital Business Strategy, Models and Transformations		
4	Creative Thinking, Problem Solving and Decision Making		Disruptive Technologies for Data Science		Entrepreneurship		
5	Marketing Management		Strategic Management		Electives (2 – 6 credits)		
6	Python Programming		Machine Learning for Business				
7	Decision Analysis		Introduction to AI and Automation				
8	Probability and Statistics for Data Science/AI ML		Financial Management		Management Project I (4 credits)		
9	Managerial Economics		Organizational Behavior				
Credits	18	2	18	2	14-18		Management Project II (6 credits) 12 - 16

Summary	18 credits compulsory		18 credits compulsory		12 credits compulsory		6 credits compulsory
Total Credits earned	18	20	38	40	54-58		70

Following is the tentative list of the elective courses that may be revised time to time.

Discipline Elective Minimum 2 courses each in 3<sup>rd</sup> and 4<sup>th</sup> semester

Sl No	Course Title	Credits
1	AI in Marketing	2
2	Causal Analytics	2
3	AI for Finance	2
4	Fintech	2
5	Blockchain for Business	2
6	Deep Learning for Business Application	2
7	Natural Language Processing for Business	2
8	Intelligent Automation	2
9	Fuzzy logic for business decision making	2
10	Evolutionary computation for business solutions	2

Free Electives One course each in 3<sup>rd</sup> and 4<sup>th</sup> semester

Sl No	Course Title	Credits
1	Product Management	2
2	Design Thinking	2
3	Social Analytics	2
4	Cloud Computing for Business	2
5	Cyber Securities, Ethics and Privacy	2
6	Negotiation Analysis	2
7	Data Strategy	2
8	AI Strategy and Implementation	2
9	Leadership	2

**Minutes of the Meeting of the Core Committee constituted for framing guidelines, admission, and eligibility of mode of selection in the MBA program at IIT Mandi**

**Date:** 18th May 2022

**Venue:** A4 small conference room, South Campus, IIT Mandi, and online via Zoom

## Committee

Dr. Puran Singh, IIT Mandi, Member  
Dr. Saumya Dixit, IIT Mandi, Member  
Dr. Manoj Thakur, IIT Mandi, Member  
Dr. P. Anil Kishan, IIT Mandi, Member  
Prof. Rahul Vaish, IIT Mandi, Special Invitee  
Prof. Anjan Kumar Swain, IIM Kozhikode, Special Invitee  
Dr. Varun Dutt, IIT Mandi, Chair

## Minimum Eligibility Criteria for Admission

### • Application category 1

- GN/OBC (NCL)/EWS Indian national applicants: Minimum 7 CGPA on a 10-points scale or 70% marks in Bachelor's degree of a minimum 4-year duration from any of the Centrally Funded Technical Institutions (CFTIs). Such candidates are exempted from the requirement of CAT. SC/ST/PwD Indian national applicants: Minimum 6.5 CGPA on a 10-points scale or 65% marks in Bachelor's degree of a minimum 4-year duration from any of the Centrally Funded Technical Institutions (CFTIs). Such candidates are exempted from the requirement of the CAT.

and

- All applicants must have studied Mathematics at +2 level (or equivalent).

### • Application category 2

- Indian national applicants: A CAT score obtained any time in past three years (including the current year).
- The eligibility year(s) of the CAT and cutoff score will be decided by the admission committee every year.

and

- Bachelor's degree (of minimum 3-years duration) with
- GN/OBC (NCL)/EWS Indian national applicants: Minimum of 6 CGPA on a 10-points scale or 60% marks.
- SC/ST/PwD Indian national applicants: Minimum of 5.5 CGPA on a 10-points scale or 55% marks.

and

- All applicants must have studied Mathematics at +2 level (or equivalent).

Notes:

- A 5-year integrated Bachelor's and Master's degree would be considered equivalent to a 4-year Bachelor's degree for the Admission process.
- Those appearing for the final degree examination can also apply. The admission in such cases will be subject to their fulfilling the minimum eligibility criteria as stated above at the time of joining the program.
- Foreign applicants/NRIs need to have a GMAT score obtained at any time in past three years (including the current year) and would be treated at par with general category Indian national candidates for other degree requirements. The eligibility year(s) of the GMAT and cutoff score will be decided by the admission committee every year. Foreign applicants/NRIs must have studied Mathematics at +2 level (or equivalent).



**Proposal to consider the revision in scholarship for UG Female students:**

To consider revision of fee waiver policy for UG Girl Students and for the preparation of comprehensive proposal, the following committee was formed by Institute Standing Committee (ISC) in its meeting held on 01<sup>st</sup> September, 2021.

Dr. Rahul Vaish (Dean Academics)  
Dr. Vishal Singh Chauhan (Dean Finance & Accounts)  
Dr, Shyamasree Dasgupta (AsP, SHSS)

A meeting of Committee to review the impact and implementation of the JAB (Joint Admission Board) sub-committee recommendation (as per Annexure A) at IIT Mandi was held on 09<sup>th</sup> May, 2022.

The JAB (Joint Admission Board) sub-committee recommended a review of the policies/schemes once the target of 20% girl student in undergraduate is met. Below is data of the girls admitted in UG degree programmes (year wise) in IIT Mandi that shows IIT Mandi has successfully achieved the target of 20% girls admissions (consistently over a period of 2 successive years) in UG programmes.

Year	Intake	Female Admitted	% of Female admitted Vs Total Intake
2017	150	22	14.67
2018	200	36	18.00
2019	282	53	18.79
2020	329	68	20.67
2021	329	66	20.06

In view of this, the committee also assessed the financial implications of the ongoing and any revised schemes to promote girl students and discussed the need of encouraging girl students to excel in academics with a high CGPA. Since the institute has already achieved and maintained the target of enrolling 20% girl students in the undergraduate programmes, the revised policy/scheme will help achieve the target of on the institute and achieving goals of the scheme, committee proposed revised schemes as follows:

- A scholarship of Rs. 1 lakh per semester will be awarded to all girl students.
- This scholarship will be applicable semester II onward.
- To be eligible for the scholarship, semester II onward, the following criteria are to be fulfilled by the girl students:
  - (i) SGPA of 8.50 or more in the previous semester
  - (ii) Should not have been penalized due to unfair means/indiscipline.

Programme	B.Tech.			
I	Particulars	Existing Fee per semester	Proposed/Modified Particulars	Proposed/Modified Fee per semester
	Tuition Fee	100000	Tuition Fee	100000
	Registration Fee	200	Registration Fee	1000
	Exam Fee	350	Campus Facilities Charges	5000
	Internet & Computer Fee	500		
	Extra-Curricular Activity	1000		
	Medical Fund	300		
	Transportation	400		
	<b>Total</b>	<b>102750</b>	<b>Total</b>	<b>106000</b>
II	<b>One Time Payment (At the time of admission)</b>		<b>One Time Payment (At the time of admission)</b>	
	Admission Fee	200	Admission Fee	5000
	Grade Card	150	Grade Card	1000
	Student Welfare Fund	500	Alumni Fee	2000
	Identity Card	50	Convocation Fees	2000
	Benevolent fund	150		
	Alumni Fee	1500		
	Bhawan fund	200		
	Industrial Tour	1000		
	<b>Total</b>	<b>3750</b>	<b>Total</b>	<b>10000</b>
III	<b>One time deposit (refundable on passing out or leaving the institute)</b>		<b>One time deposit (refundable on passing out or leaving the institute)</b>	
	Institute Caution Deposit	2000	Institute Caution Deposit	5000
	Library Deposit	2000	Library Deposit	2000
	Mess Security	3000	Mess Security	5000
	<b>Total</b>	<b>7000</b>	<b>Total</b>	<b>12000</b>
IV	<b>Medical Cover Charges (per annum)</b>	<b>750</b>	<b>Medical Cover Charges (per annum)</b>	<b>750</b>
V	<b>Hostel Charges</b>			
	Hostel Seat includes (Rent, Electricity, Water & Common Facilities)	6500	Hostel Charges	9600
	Mess Advance	13000	Mess Advance	15000
	<b>Total</b>	<b>19500</b>	<b>Total</b>	<b>24600</b>
	<b>TOTAL</b>	<b>133750</b>	<b>TOTAL</b>	<b>153350</b>
	<b>1st Semester</b>	<b>133750</b>	<b>After modification 1st sem</b>	<b>153350</b>
	<b>2nd semester</b>	<b>122250</b>	<b>After modification 2nd sem</b>	<b>130600</b>
	<b>Total</b>	<b>256000</b>	<b>Total</b>	<b>283950</b>

Programme	B.Tech. Foreign National			
I	Particulars	Existing Fee per semester	Proposed/Modified Particulars	Proposed/Modified Fee per semester
	Tuition Fee	300000	Tuition Fee	300000
	Registration Fee	600	Registration Fee	3000
	Exam Fee	1050	Campus Facilities Charges	15000
	Internet & Computer Fee	1500		
	Extra-Curricular Activity	3000		
	Medical Fund	900		
	Transportation	400		
	<b>Total</b>	<b>307450</b>	<b>Total</b>	<b>318000</b>
II	<b>One Time Payment (At the time of admission)</b>		<b>One Time Payment (At the time of admission)</b>	
	Admission Fee	600	Admission Fee	15000
	Grade Card	450	Grade Card	3000
	Student Welfare Fund	1500	Alumni Fee	6000
	Identity Card	150	Convocation Fees	6000
	Benevolent fund	450		
	Alumni Fee	4500		
	Bhawan fund	600		
	Industrial Tour	3000		
	<b>Total</b>	<b>11250</b>	<b>Total</b>	<b>30000</b>
III	<b>One time deposit (refundable on passing out or leaving the institute)</b>		<b>One time deposit (refundable on passing out or leaving the institute)</b>	
	Institute Caution Deposit	6000	Institute Caution Deposit	15000
	Library Deposit	6000	Library Deposit	6000
	Mess Security	9000	Mess Security	15000
	<b>Total</b>	<b>21000</b>	<b>Total</b>	<b>36000</b>
IV	<b>Medical Cover Charges (per annum)</b>	<b>750</b>	<b>Medical Cover Charges (per annum)</b>	<b>750</b>
V	<b>Hostel Charges</b>			
	Hostel Seat includes (Rent, Electricity, Water & Common Facilities)	19500	<b>Hostel Charges</b>	28800
	<b>Mess Advance</b>	13000	<b>Mess Advance</b>	15000
	<b>Total</b>	<b>32500</b>	<b>Total</b>	<b>43800</b>
	<b>TOTAL</b>	<b>372950</b>	<b>Total</b>	<b>428550</b>
	1st Semester	372950	<b>After modification 1st sem</b>	428550
	2nd semester	339950	<b>After modification 2nd sem</b>	361800
	<b>Total</b>	<b>712900</b>	<b>Total</b>	<b>790350</b>

Programme	M.Sc. /M.A			
I	Particulars	Existing Fee per semester	Proposed/Modified Particulars	Proposed/Modified Fee per semester
	Tuition Fee	5000	Tuition Fee	10000
	Exam Fee	350	Registration Fee	1000
	Registration Fee	200	Campus Facilities Charges	5000
	Internet & Computer Fee	750		
	Extra-Curricular Activity	1000		
	Medical Fund	300		
	Transportation	400		
	<b>Total</b>	<b>8000</b>	<b>Total</b>	<b>16000</b>
II	<b>One Time Payment (At the time of admission)</b>		<b>One Time Payment (At the time of admission)</b>	
	Admission Fee	200	Admission Fee	5000
	Grade Card	150	Grade Card	1000
	Student Welfare Fund	500	Alumni Fee	2000
	Identity Card	50	Convocation Fees	2000
	Benevolent fund	150		
	Alumni Fee	1500		
	Bhawan fund	200		
	<b>Total</b>	<b>2750</b>	<b>Total</b>	<b>10000</b>
III	<b>One time deposit (refundable on passing out or leaving the institute)</b>		<b>One time deposit (refundable on passing out or leaving the institute)</b>	
	Institute Caution Deposit	2000	Institute Caution Deposit	5000
	Library Deposit	2000	Library Deposit	2000
	Mess Security	3000	Mess Security	5000
	<b>Total</b>	<b>7000</b>	<b>Total</b>	<b>12000</b>
IV	<b>Medical Cover Charges (per annum)</b>	<b>750</b>	<b>Medical Cover Charges (per annum)</b>	<b>750</b>
V	<b>Hostel Charges</b>			
	Hostel Seat includes (Rent, Electricity, Water & Common Facilities)	6500	Hostel Charges	9600
	Mess Advance	13000	Mess Advance	15000
	<b>Total</b>	<b>19500</b>	<b>Total</b>	<b>24600</b>
	<b>TOTAL</b>	<b>38000</b>	<b>TOTAL</b>	<b>63350</b>
	1st Semester	38000	After modification 1st sem	63350
	2nd semester	27500	After modification 2nd sem	40600
	<b>Total</b>	<b>65500</b>	<b>Total</b>	<b>103950</b>

Program me	<b>M.Tech.</b>			
<b>I</b>	<b>Particulars</b>	<b>Existing Fee per semester</b>	<b>Proposed/Modified Particulars</b>	<b>Proposed/Modified Fee per semester</b>
	*Tuition Fee	5000	*Tuition Fee	10000
	Exam Fee	350	Registration Fee	1000
	Registration Fee	200	Campus Facilities Charges	5000
	Internet & Computer Fee	750		
	Extra-Curricular Activity	1000		
	Medical Fund	300		
	Transportation	400		
	<b>Total</b>	<b>8000</b>	<b>Total</b>	<b>16000</b>
<b>II</b>	<b>One Time Payment (At the time of admission)</b>		<b>One Time Payment (At the time of admission)</b>	
	Admission Fee	200	Admission Fee	5000
	Grade Card	150	Grade Card	1000
	Student Welfare Fund	500	Alumni Fee	2000
	Identity Card	50	Convocation Fees	2000
	Benevolent fund	150		
	Alumni Fee	1500		
	Bhawan fund	200		
	<b>Total</b>	<b>2750</b>	<b>Total</b>	<b>10000</b>
<b>III</b>	<b>One time deposit (refundable on passing out or leaving the institute)</b>		<b>One time deposit (refundable on passing out or leaving the institute)</b>	
	Institute Caution Deposit	2000	Institute Caution Deposit	5000
	Library Deposit	2000	Library Deposit	2000
	Mess Security	3000	Mess Security	5000
	<b>Total</b>	<b>7000</b>	<b>Total</b>	<b>12000</b>
<b>IV</b>	<b>Medical Cover Charges (per annum)</b>	<b>750</b>	<b>Medical Cover Charges (per annum)</b>	<b>750</b>
<b>V</b>	<b>Hostel Charges</b>			
	Hostel Seat includes (Rent, Electricity, Water & Common Facilities)	6500	<b>Hostel Charges</b>	14400
	<b>Mess Advance</b>	20000	<b>Mess Advance</b>	22800
	<b>Total</b>	<b>26500</b>	<b>Total</b>	<b>37200</b>
	<b>TOTAL</b>	<b>45000</b>	<b>TOTAL</b>	<b>75950</b>
	1st Semester	45000	<b>After modification 1st sem</b>	75950
	2nd semester	34500	<b>After modification 2nd sem</b>	53200
	<b>Total</b>	<b>79500</b>	<b>Total</b>	<b>129150</b>
	*M.Tech. Sponsored recommended to Rs. 30000/-			

Programme	M.S (by Research)			
I	Particulars	Existing Fee per semester	Proposed/Modified Particulars	Proposed/Modified Fee per semester
	*Tuition Fee	5000	*Tuition Fee	10000
	Exam Fee	350	Registration Fee	1000
	Registration Fee	200	# Campus Facilities Charges	5000
	Internet & Computer Fee	750		
	Extra-Curricular Activity	1000		
	Medical Fund	300		
	Transportation	400		
	<b>Total</b>	<b>8000</b>	<b>Total</b>	<b>16000</b>
II	<b>One Time Payment (At the time of admission)</b>		<b>One Time Payment (At the time of admission)</b>	
	Admission Fee	200	Admission Fee	5000
	Grade Card	150	Grade Card	1000
	Student Welfare Fund	500	Alumni Fee	2000
	Identity Card	50	Thesis submission Fees	2500
	Benevolent fund	150	Convocation Fees	2000
	Alumni Fee	1500		
	Bhawan fund	200		
	<b>Total</b>	<b>2750</b>	<b>Total</b>	<b>12500</b>
III	<b>One time deposit (refundable on passing out or leaving the institute)</b>		<b>One time deposit (refundable on passing out or leaving the institute)</b>	
	Institute Caution Deposit	2000	Institute Caution Deposit	5000
	Library Deposit	2000	Library Deposit	2000
	Mess Security	3000	Mess Security	5000
	<b>Total</b>	<b>7000</b>	<b>Total</b>	<b>12000</b>
IV	<b>Medical Cover Charges (per annum)</b>	<b>750</b>	<b>Medical Cover Charges (per annum)</b>	<b>750</b>
V	<b>Hostel Charges</b>			
	Hostel Seat includes (Rent, Electricity, Water & Common Facilities)	6500	<b>Hostel Charges</b>	14400
	<b>Mess Advance</b>	20000	<b>Mess Advance</b>	22800
	<b>Total</b>	<b>26500</b>	<b>Total</b>	<b>37200</b>
	<b>TOTAL</b>	<b>45000</b>	<b>TOTAL</b>	<b>78450</b>
	1st Semester	45000	After modification 1st sem	78450
	2nd semester	34500	After modification 2nd sem	53200
	<b>Total</b>	<b>79500</b>	<b>Total</b>	<b>131650</b>
	*M.S. (by Rsh) PTD/ERP recommended to Rs. 30000/-			
	#For PTD/ERP, while not in campus/no course work, Campus Facility Charges are Rs. 3000/-.			

Programme	PhD			
I	Particulars	Existing Fee per semester	Proposed/Modified Particulars	Proposed/Modified Fee per semester
	*Tuition Fee	5000	*Tuition Fee	10000
	Exam Fee	350	Registration Fee	1000
	Registration Fee	200	#Campus Facilities Charges	5000
	Internet & Computer Fee	750		
	Extra-Curricular Activity	1000		
	Medical Fund	300		
	Transportation	400		
	<b>Total</b>	<b>8000</b>	<b>Total</b>	<b>16000</b>
II	<b>One Time Payment (At the time of admission)</b>		<b>One Time Payment (At the time of admission)</b>	
	Admission Fee	200	Admission Fee	5000
	Grade Card	150	Grade Card	1000
	Student Welfare Fund	500	Alumni Fee	2000
	Identity Card	50	Thesis submission Fees	2500
	Benevolent fund	150	Convocation Fees	2000
	Alumni Fee	1500		
	Bhawan fund	200		
	<b>Total</b>	<b>2750</b>	<b>Total</b>	<b>12500</b>
III	<b>One time deposit (refundable on passing out or leaving the institute)</b>		<b>One time deposit (refundable on passing out or leaving the institute)</b>	
	Institute Caution Deposit	2000	Institute Caution Deposit	5000
	Library Deposit	2000	Library Deposit	2000
	Mess Security	3000	Mess Security	5000
	<b>Total</b>	<b>7000</b>	<b>Total</b>	<b>12000</b>
IV	<b>Medical Cover Charges (per annum)</b>	<b>750</b>	<b>Medical Cover Charges (per annum)</b>	<b>750</b>
V	<b>Hostel Charges</b>			
	Hostel Seat includes (Rent, Electricity, Water & Common Facilities)	6500	<b>Hostel Charges</b>	14400
	<b>Mess Advance</b>	20000	<b>Mess Advance</b>	22800
	<b>Total</b>	<b>26500</b>	<b>Total</b>	<b>37200</b>

	<b>TOTAL</b>	<b>45000</b>	<b>TOTAL</b>	<b>78450</b>
	1st Semester	45000	After modification 1st sem	78450
	2nd semester	34500	After modification 2nd sem	53200
	<b>Total</b>	<b>79500</b>	<b>Total</b>	<b>131650</b>
	*Sponsored/PTD/ERP increased to Rs. 50000/- from Rs. 5000/-.			
	#For PTD/ERP, while not in campus/no course work, Campus Facility Charges are Rs. 3000/-.			



<b>M.Sc./M.A./M.Tech./M.S./PhD Foreign Nationals</b>		
<b>Programme</b>	<b>Particulars</b>	<b>Proposed Amount</b>
<b>I</b>	<b>*Tuition Fee</b>	<b>50000</b>
	Registration Fee	3000
	Campus Facilities Charges	15000
	<b>Total</b>	<b>68000</b>
<b>II</b>	<b>One Time Payment (At the time of admission)</b>	
	Admission Fee	15000
	Grade Card	3000
	Alumni Fee	6000
	#Thesis submission Fees	7500
	Convocation Fees	6000
	<b>Total</b>	<b>37500</b>
<b>III</b>	<b>One time deposit (refundable on passing out or leaving the institute)</b>	
	Institute Caution Deposit	15000
	Library Deposit	6000
	Mess Security	15000
	<b>Total</b>	<b>36000</b>
<b>IV</b>	<b>Medical Cover Charges (per annum)</b>	<b>750</b>
<b>V</b>	<b>Hostel Charges</b>	<b>43200</b>
	<b>Mess Advance</b>	<b>22800</b>
	<b>Total</b>	<b>66000</b>
	<b>TOTAL</b>	<b>208250</b>
	1st Semester	208250
	2nd semester	134000
	<b>Total</b>	<b>342250</b>
	*For M.Sc./MA Tuition Fee is Rs. 30000/- and Hostel Charges is Rs. 28800/- per semester	
	#For M.S. and Ph.D students	

Programme	MBA				
		Proposed Amount			
I	Particulars	1st Semester	2nd Semester	3rd Semester	4th Semester
	Tuition Fee	150000	200000	200000	200000
	Registration Fee	20000	20000	20000	20000
	Campus Facilities Charges	5000	5000	5000	5000
	<b>Total</b>	<b>175000</b>	<b>225000</b>	<b>225000</b>	<b>225000</b>
II	<b>One Time Payment (At the time of admission)</b>				
	Admission Fee	5000	0	0	0
	Grade Card	1000	0	0	0
	Alumni Fee	2000	0	0	0
	Convocation Fee	2000	0	0	0
	Library, e-resources, Computational Facilities, workshops and Industry Interaction	50000	0	0	0
	<b>Total</b>	<b>60000</b>	<b>0</b>	<b>0</b>	<b>0</b>
III	<b>One time deposit (refundable on passing out or leaving the institute)</b>				
	Institute Caution Deposit	5000	0	0	0
	Library Deposit	2000	0	0	0
	Mess Security	5000	0	0	0
	<b>Total</b>	<b>12000</b>	<b>0</b>	<b>0</b>	<b>0</b>
IV	<b>Medical Cover Charges (per annum)</b>	<b>750</b>	<b>0</b>	<b>750</b>	<b>0</b>
V	<b>Hostel Charges</b>	<b>9600</b>	<b>9600</b>	<b>9600</b>	<b>9600</b>
	<b>Mess Advance</b>	<b>15000</b>	<b>15000</b>	<b>15000</b>	<b>15000</b>
	<b>Total</b>	<b>24600</b>	<b>24600</b>	<b>24600</b>	<b>24600</b>
	<b>TOTAL</b>	<b>272350</b>	<b>249600</b>	<b>250350</b>	<b>249600</b>

## Annexure- H

### **The part time programme at the Institute provides opportunities to**

- (1) individuals employed in R & D environments in scientific institutions (including IIT Mandi) or industries and
- (2) faculty members of all Engineering Colleges/Universities recognized by appropriate government agencies.

### **Eligibility**

The required qualification remains the same as for the regular candidates except for the requirement of qualifying in one of the national entrance tests. Further, the candidate should have atleast two years work experience.

### **Additional Requirements**

DC/APC can recommend requirement (if any) of co-guide from the sponsoring organization. A co-guide from the sponsoring organisation is mandatory for ERP candidates and does not mandatory for Part-time candidates.

There is a desirable 16 weeks campus residential semester requirement to complete course work. However, DC can recommend to complete courses (from IIT Mandi) via online mode. In such cases not less than 50% assessment of individual courses should be evaluated in offline mode. The residential requirement may be made flexible as courses are recommended partially in online mode. Hence, the scholars may be allowed to complete the residential semester requirement in **multiple visits** adding up to at least 16 weeks on campus (i.e. equivalent to one semester). However, the minimum period of residency for each visit **should not be less than 2 weeks**.

In case of Part-Time scholars employed at radial distance in the range of **50-60 KM from IIT Mandi** campus, the scholar will be permitted by the Dean (Academics) to complete course work without residential requirement as these scholars can be treated day-scholars.

Candidate admitted to the programme on part-time basis must continue to remain in the same organization and place of work until the research work is completed. If the candidate is transferred or joins a new organization before the submission of the thesis, he/she should get the approval from the new organization for continuation of the programme and IIT Mandi.

**Amendment in allotment of faculty in-charge (caretaker)/co-guide in the absence of guide from the institute for longer duration (> 3 months)**

In case the guide leaves the Institute/ retires from the Institute, the doctoral committee needs to propose co-guide/faculty in-charge (caretaker) (depending on fraction of thesis completed by the candidate).

In case of long leaves (>3 months and < 1 year) of the supervisor, DC needs to propose co-guide/faculty in-charge (caretaker) depending upon the nature of research and progress made by the candidate.

Role of faculty in-charge (caretaker) is to look into administrative matters pertaining to the candidate.

If the leaves are more than a year, there should be an allotment of co-guide, on the recommendation of DC and school chair.

Dean, Academics will appoint (in above mentioned cases) the suitable guide/co-guide/faculty-in-charge (caretaker) in consultation with the school chair.

**Exit option of IDD (Bioengineering) students after 4 years**

Students enrolled in 5 years Integrated Dual Degree programme in Bioengineering can exit after 4 years, provided he/she fulfill all academic requirements as per O & R of Undergraduates.

Below mentioned are suggested Guidelines to complete academic requirements w.r.t planning of exit in various semesters:

1. Students leaving after 4 years will leave with B.Tech in Bioengineering or B.Tech (Hons.) in Bioengineering subject to fulfillment of requirements of Honors degree. For Honours the rules laid down for B.Tech (Hons.) ordinance of IIT Mandi will be applicable.
2. Institute core and Discipline Core course criteria remains as it is for students exiting after 4 years.
3. If a student gives exit option after 5<sup>th</sup> semester, then the 6 credits of M.Tech (core) already done will be renamed as Discipline Electives. He is required to do 6 more credits of Discipline Electives as per B.Tech ordinance. Bioethics and regulatory affairs which is to be taken by the IDD student in the 5<sup>th</sup> semester will be credited to the free elective basket. He may do 4 credits of Discipline Electives or Interactive Socio Technical Practicum in the 6<sup>th</sup> semester. He is also required to complete credit requirements of free electives and 8 credits of Major Technical Project or Discipline Electives in the remaining three semesters, apart from fulfilling the requirements of HSS credits.
4. If a student gives exit option after 6<sup>th</sup> semester, then the 9 credits of M.Tech (core) already done will be renamed as Discipline Electives. Of the 9 credits of Specialization Electives already done, 3 credits will go to Discipline Elective basket and the remaining 6 credits of Specialization electives will go to the free elective basket. Bioethics and regulatory affairs which is to be taken by the IDD student in the 5<sup>th</sup> semester will be credited to the free elective basket. He may do 4 additional credits of Discipline Electives or Interactive Socio Technical Practicum in the 8<sup>th</sup> semester. He is also required to complete credit requirements of free electives and 8 credits of Major Technical Project or Discipline Electives in the remaining two semesters (as per B.Tech ordinance), apart from fulfilling the requirements of HSS credits.
5. If a student gives exit option after 7<sup>th</sup> semester, then the 9 credits of M.Tech (core) already done will be renamed as Discipline Electives. Of the 9 credits of Specialization Electives already done, 9 credits will go to Discipline Elective basket. Bioethics and regulatory affairs which is to be taken by the IDD student in the 5<sup>th</sup> semester will be credited to the free elective basket. He may do 4 additional credits of Discipline Electives or Interactive Socio Technical Practicum in the 8<sup>th</sup> semester. He is also required to complete credit requirements of free electives, apart from fulfilling the requirements of HSS credits. 1 credit of Technical Communication can go to Free Elective or HSS basket. However, since Major Technical Project is not possible in this case, the student is required to substitute it suitably with 8 credits of Discipline Electives. The student is also required to ensure minimum 12 credits are registered in each semester.

**Second major programme in Bioengineering**

1. Students pursuing B.Tech in streams other than Bioengineering can pursue a second major in Bioengineering. All the norms for Double major programme for B.Tech students as approved in the 32nd Senate meeting of IIT Mandi held on September 22, 2021, will be applicable for Double major in Bioengineering.
2. Students need to pursue a set of foundational courses and a set of electives in Bioengineering to earn a second major in Bioengineering. The total number of credits should add up to 40 as approved in the 32nd Senate meeting of IIT Mandi.
3. The following are the foundational courses being identified:
  - BE201 Cell Biology - 4 credits (3-0-2-4)
  - BE202 Biochemistry and Molecular Biology - 3 credits (2-0-2-3)
  - BE203 Enzymology and Bioprocessing - 3 credits (2-0-2-3)
  - BE304 Bioinformatics - 3 credits (2-0-2-3)
  - BE503 Biosensing and Bioinstrumentation - 4 credits (3-0-2-4)This adds up to 17 credits
4. The remaining 23 credits can be taken as electives. The list of electives in the area of Bioengineering can be opted with faculty advisor and PFG (Bioengg) chair's consent.

## Revision in the curriculum of M.Tech VLSI programme

To get a degree in M.Tech [VLSI] from IIT Mandi, a student has to complete 70 credits (minimum). The course structure has discipline core, mostly offered in the first semester of the program. The core practicum courses will be going in parallel to the theory courses. A student can choose any of the discipline electives as per his/her choice of interest. Some general details about the M.Tech in VLSI at IIT Mandi are as follows.

1. There are six discipline core courses with a total of 17 credits.
2. There are three discipline elective courses with a total of 9 credits (minimum).
3. Two electives from outside discipline with a total of 6 credits.
4. A student can choose the elective (discipline and outside electives) courses in any semester.
5. The post graduate project is of one year in duration. Evaluated in two parts (17 credits for each semester) with a total of 34 credits.
6. A technical communication course of 1 credit as institute core.
7. A research study course as a discipline core course, which will be offered in the winter break is of 3 credits.

### Overall credit structure:

Category	Discipline Core	Discipline Elective	Free Elective	Institute Core	Project	Total
Credits	17+3*	9	6	1	34	70

\*Research study (3 credit) course as a discipline core for M.Tech VLSI program, which will be offered in the winter break after first semester.

### List of Core courses for M.Tech in VLSI

(Total credits for discipline core = 17)

S. No	Course Code	Name	L-T-P-C	Semester
1	EE 524	Digital MOS LSI Circuits	3-0-0-3	I
2	EE 519P	CMOS Digital IC Design Practicum	0-0-3-2	I
3	EE 520	Microelectronic Devices and Modelling	3-0-0-3	I
4	EE 512	CMOS Analog IC Design	3-0-2-4	I
5	EE 611	VLSI Technology	3-0-0-3	II
6	EE 611P	VLSI Fabrication Practicum	0-0-3-2	II

**Semester wise Course Schedule for M.Tech (VLSI)**

Total No. of Credits	70
----------------------	----

**FIRST SEMESTER (1<sup>st</sup> Sem)**

Number	Title of the Course	L-T-P-C	Credits
EE 524	Digital MOS LSI Circuits	3-0-0-3	3
EE 519P	CMOS Digital IC Design Practicum	0-0-3-2	2
EE 520	Microelectronic Devices and Modelling	3-0-0-3	3
EE 512	CMOS Analog IC Design	3-0-2-4	4
	Open Elective Outside Discipline – I	3-0-0-3	3
HS 541	Technical Communication	1-0-0-1	1
EE xxx	Research Study*	0-0-6-3	3
Total Credits			19

\*The course will be part of winter vacation and grades to be submitted at the beginning of second semester.

**SECOND SEMESTER (2<sup>nd</sup> Sem)**

Number	Title of the Course	L-T-P-C	Credits
EE 611	VLSI Technology	3-0-0-3	3
EE 611P	VLSI Fabrication Practicum	0-0-3-2	2
	Open Elective Outside Discipline - II	3-0-0-3	3
	Discipline Elective - I	3-0-0-3	3
	Discipline Elective - II	3-0-0-3	3
	Discipline Elective - III	3-0-0-3	3
Total Credits			17

**THIRD SEMESTER (3<sup>rd</sup> Sem)**

Number	Title of the Course	L-T-P-C	Credits
EE 650P	Post Graduate Project-1	0-0-34-17	17
Total Credits			17

**FOURTH SEMESTER (4<sup>th</sup> Sem)**

Number	Title of the Course	L-T-P-C	Credits
EE 651P	Post Graduate Project-2	0-0-34-17	17
Total Credits			17

**List of Discipline Electives:**

1. EE 516 - Biomedical systems (2.5-1.5-0-4)
2. EE 523 - Digital VLSI Architecture (3-0-2-4)
3. EE 526 - Power semiconductor devices (3-0-0-3)
4. EE 529 - Embedded System Design (3-0-2-4)
5. EE 560 - Reconfigurable Computing (3-0-2-4)
6. EE 592 - Selected topics on Formal Verification (3-0-0-3)
7. EE 593 - Selected topics on Low Power VLSI Design (3-0-0-3)



8. RFIC Design
9. CAD for VLSI Design
10. Mathematical optimization
11. EE 507 - Transmission lines and Basic Microwave engineering
12. EE 615 - Nano electronics and Microfabrication (3-0-0-3)
13. EE 619 - Mixed signal VLSI Design (3-0-2-4)
14. EE 621 - Microwave integrated circuits (3-0-0-3)
15. CS 541P - IOT systems and cloud (1-0-3-3)
16. CS 507 – Computer Architecture (4-0-0-4)
17. PH 502 - Photonics (3-0-0-3)
18. ME 509 - Nanomanufacturing (3-0-0-3)
19. PH 504 - Organic opto electronics (3-0-0-3)
20. PH 511 - Mathematical Physics (4-0-0-4)



## **Proposed Change in Course Structure of M.Tech. in Fluid and Thermal Engineering**

## Mathematical Core Course (MC)

- ❖ Existing: Advanced Analytical Techniques for Engineers (ME517)
- ❖ Proposed Change: Mathematical Core (MC) course
  - Advanced Analytical Techniques for Engineers (ME517)
  - Numerical Methods for Engineering Computation (ME504)
  - Any suitable courses with prior permission of FA
  
- ❖ The motivation of this suggestion is to effectively handle the teaching load of the faculty of SE given that we are handling many MTech courses now. Note that this modification will not restrict the offering of ME517 or the students from taking it. If a faculty is available for teaching, ME517 the course will be offered.

## Entrepreneurship Practicum (EP)

### 1. Preamble

The Entrepreneurship Practicum intends to introduce an academic course to provide students with hands-on training and first-hand experience building a startup company. It follows IIT Mandi's unique practice of exposing its students to project-based learning. The past programs, including Design Practicum and Integrated Socio-Technical Practicum, have successfully enabled immersive learning for students. Likewise, students in Entrepreneurship Practicum will undertake a guided experiment with entrepreneurship by building a venture.

IITs have always been the hub of entrepreneurs and job creators, and this program contributes to strengthening the same. Furthermore, the New Education Policy (NEP 2020) and National Innovation and Start-up Policy (NISIP 2019, section: Components of Guiding Framework, point-5) have also a futuristic vision for a radical transformation of job seekers into job creators. Therefore, it is imperative to support and foster the entrepreneurial spirit among the students by exposing them to entrepreneurial training and practice.

### 2. Course Objective

To provide students with hands-on training and first-hand experience building a startup company.

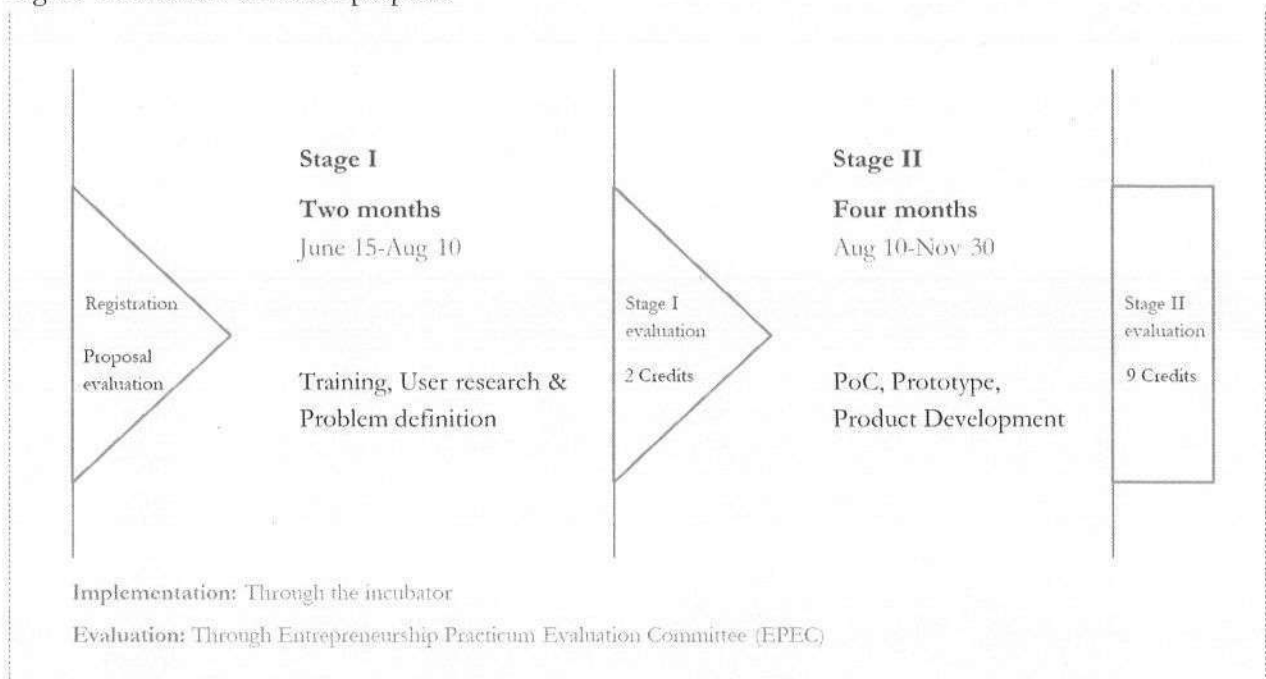
### 3. Eligibility

- 3.1. The course is for B.Tech students only.
- 3.2. The students should have completed four semesters in the B.Tech degree at IIT Mandi.

### 4. Registration

- 4.1. The interested student(s) will indicate interest in the course by pre-registering at the end of the 4th semester.
- 4.2. The student(s) can register individually or in a group of a maximum of four.
- 4.3. The students(s) will submit a startup proposal in a prescribed format.
- 4.4. An Entrepreneurship Practicum Evaluation Committee (EPEC) will evaluate the proposal by following an appropriate process.
- 4.5. The EPEC can relax the cap on team size on justified grounds.

Figure 1: Overview of course proposal



## 5. Structure, Duration and Credits

5.1. **Duration:** The duration of this practicum will be approximately six months, including a regular semester and the preceding vacation period [Jun-Nov and Dec-May].

### 5.2. Structure:

5.2.1. The students will learn the basics of starting a venture during the first two months [Jun-Jul or Dec-Jan] through online/offline lectures/workshops/training sessions amounting to at least 14 hours. In addition, the students are expected to do user research to develop their problem statement during this time.

5.2.2. The students will implement the startup idea in the following four months [Aug-Nov or Feb-May]. The implementation will comprise user research and proof of concept, prototype, or product development. The students may register a legal entity to take their EP project forward. The student(s) may also raise external funding in addition to the program budget. However, if the duration of commitment for such external funding exceeds the course duration, students will need approval from the institute.

### 5.3. Credits:

5.3.1. The course has a total of 11 Pass/Fail credits

- i. The students who exit at the end of the first two months will get two credits. It will be equivalent to the 2-month industrial training that students undergo.
- ii. Students who complete the course will earn 11 credits in total.

## 6. Evaluation

An Entrepreneurship Practicum Evaluation Committee (EPEC) will evaluate the student(s) on two occasions:

- 6.1. At the end of two months, the EPEC will assess the students' understanding of the problem, problem validation, and execution plan.
  - 6.1.1. The EPEC may ask a student(s) to exit due to reasons that may include unsatisfactory performance, lack of business potential, or any other reasons deemed valid by EPEC.
  - 6.1.2. The student(s) can also opt out of the course at this stage at their discretion.
  - 6.1.3. The students that get a Pass grade will earn two credits.
- 6.2. At the end of six months, the EPEC will evaluate the students' through a final presentation.
  - 6.2.1. The students that get a Pass grade will earn additional nine credits.

## 7. Implementation

- 7.1. The course implementation requires entrepreneurship expertise to evaluate proposals, provide training, enable mentoring and monitor the progress. Therefore, IIT Mandi may leverage its incubator(s)' expertise for course implementation. Accordingly, the institute may outsource the execution of EP to the incubator(s) on campus.
- 7.2. However, the institute may extend infrastructural support for the program implementation, including providing classrooms, conference rooms, lab access, faculty access, and other facilities.
- 7.3. Role of incubator
  - 7.3.1. **Constitution of EPEC:** Incubator will constitute an EPEC as per the following composition:
    - i. EP coordinator [Faculty In charge of Incubator]
    - ii. At least one technology or business expert(s) from IIT Mandi or Incubator or outside
    - iii. Any other member(s) invited by the EP Coordinator, if any.
  - 7.3.2. **Student selection and monitoring:** The incubator will convene EPEC meetings and take other actions necessary for student selection, training, monitoring and evaluation.
  - 7.3.3. **Content design and delivery:** The incubator will design and deliver at least 14 hours of classroom lectures and/or training workshops online or offline.
  - 7.3.4. **Fund disbursement:** The incubator will manage and disburse the funding provided by the institute or other funding agencies for this course.

## 8. Financial Implications

- 8.1. The institute will pay the incubator a program fee per team for the operational expenses.
- 8.2. In addition to the above, the institute will provide a financial grant each semester to support student teams selected by EPEC for stage 2.
- 8.3. The institute may determine the number of teams for the financial grant from time to time.
- 8.4. Institute will disburse the total estimated budget (program fee per team and financial grant for a limited number of teams) to the incubator at the beginning of a semester.
- 8.5. The teams can also arrange financial support through other sources.
- 8.6. The teams will utilise the funding provided by the institute for the user research and proof of concept, prototype, or product development.
  - 8.6.1. The incubator will approve the student's budget utilisation plan.
  - 8.6.2. The incubator will decide on the timing and size of the disbursement of funds to the student(s).
- 8.7. The incubator will keep the necessary records for producing a utilisation certificate.

## 9. Modalities

The institute should engage the incubator through an MoU that details both parties' financial and operational responsibilities.

## Annexure

### Related programs at other IITs

1. **IIT Delhi:** At IIT Delhi, students can also opt for a break in coursework for a semester to initiate or work for his / her start-up, upon successful completion of which students would be eligible for 5 DPE units (Design and Practical Experience P/F credits). Students desiring to opt for semester break for start-up are required to plan well in advance and submit a project proposal in consultation with their faculty mentor. [source - [Academic Handbook IITD](#), section: 9.6.2.5]
2. **IIT Kanpur:** IIT Kanpur allows students to take up and pursue their entrepreneurial aspirations as a part of their academic journey while pursuing their degrees. The policy allows undergraduate students in 3rd year and the postgraduate students immediately after completion of the minimum course work to gain academic credit while pursuing entrepreneurial activities. The students can also avail semester leave to pursue their ideas by using facilities both inside and outside the campus. [source - [Student Entrepreneurship Policy, IITK](#)]
3. **IIT Jodhpur:** At IIT Jodhpur, students can take a break from semester and work on their start-up and earn 20 credits as a part of engineering innovation. Students may opt for Entrepreneurship as a part of the curriculum from the beginning of the 8th Semester. A student would be required to complete a minimum of six months for Minor in Entrepreneurship, and would earn 20 credits on successful completion of a minimum of six months of Entrepreneurship. The students would be exempted from the requirement of 10 open elective credits in lieu of credits earned against Entrepreneurship. However, the remaining coursework is required to be completed by taking extra credits in the earlier semesters or can be completed after completion of Entrepreneurship. A student should have earned minimum required credits with at least 6 CGPA at the end of 7th semester to opt for dual-degree M. Tech. Programme. [source - [IITJ's Exclusive Entrepreneurship Programme](#)]
4. **IIT Palakkad:** UG/PG students can earn co-curricular academic credits for pursuing startup-related activities at any Business Incubator (BI) approved by the I&E (Innovation and Entrepreneurial ) council. The exact number of credits awarded will depend on the nature of the activity and as decided by the Senate from time to time. [source - [IIT Palakkad Innovation and Startup Policy](#)]