Application Form for incoming students 2024/25

PERSONAL INFORMATION

Identity

Family name (= surname), e.g. Sánchez Moreno Garcia	Jain
First name (= given name), e.g. Maria Sofia	Sukhvansh
Gender	Male
Date of birth	21/02/2004
Country of birth	India
City of birth	New Delhi
Nationality	India
Nationality 2	

Student contact data

Country	India
Street	P-15, Green Park Extension
Postcode	110016
City	New Delhi
Phone number (e.g. 00491234567)	91 9711168805
E-mail	b22136@students.iitmandi.ac.in

EMERGENCY CONTACTS

Contact

Family name	Jain
First name	Puja
Relationship (e.g. parents, friend...)	Parent
E-mail	puja_dinesh@yahoo.co.in
Phone number 1 (most likely to be reached)	91 9810226130
Which language(s) can your contact speak?	English

YOUR STAY AT TUM AND EDUCATIONAL BACKGROUND AT YOUR HOME UNIVERSITY

Requested stay at TUM and information about your home university

Can you find your country and home university below?	Yes
Country	India
Institution	Indian Institute of Technology Mandi (IIT Mandi)
Exchange program	TUMexchange
In which subject area you wish to study at TUM? See nomination information of your acknowledge email	CIT-Informatics
Specific subject area	CIT-Informatics
Stay opportunity	TUMexchange - Indian Institute of Technology Mandi / In
Academic year	2024/25
Start semester	Fall semester 2024/25
Number of semesters you will stay at TUM?	1
Have you been enrolled at TUM before?*	No

Current study at home university

Home Faculty/School/Department	School of Computing and Electrical Engineering
Name of study course / program	B.Tech Computer Science and Engineering
Level of study at home university at the time of your TUM application	Undergraduate / Bachelor
Level of study at the time of your stay abroad	Undergraduate / Bachelor
Number of all study years prior to your study abroad	2
Date of "Higher Education Entrance Qualification " (HZB)	22/07/2022
Date of your first enrollment	10/2022
Institution of your first enrollment	Indian Institute of Technology, Mandi

Date of de-registration / exmatriculation (if applicable)	

LANGUAGE SKILLS

Native language	Hindi
Native language 2	English
Language of instruction 1 at home university	English
Language of instruction 2 at home university	

Current German Skills

I have sufficient knowledge to follow lectures	No
Language level	Keine Kenntnisse/no knowledge

Current English Skills

I have sufficient knowledge to follow lectures	Yes
Language level	C1

FURTHER INFORMATION

Special needs with impact on your studies (disability, illness, family, child(ren))

Answer:	No
Do you have any academic or social adjustments offered to you through your home institution?	No

Accommodation

Do you want to apply for the Service Package (an accommodation in a student residence of the Munich Student Union)?	Yes
Independent of the "Servicepackage", what is the maximum rent you can afford to pay per month?	300€ - 399€
Health restrictions or other relevant information regarding accommodation issues (not studies): e.g. allergies (not related to food), fear of heights, etc.	

RELEVANT DOCUMENTS TO BE UPLOADED (PDF ONLY)

List of courses you want to attend at TUM (Study plan/Learning agreement etc. -> template)	file_66216d226d75d-incoming_study_plan_nosig.pdf
Courses you attend in your current semester before coming to TUM (if not already mentioned in the transcript of record - next point) template	file_66216e3c23029-current_home_semester_transcript.pdf
Academic transcript of records of your current studies	file_6622369ad6975-transcript_till_semester_3.pdf
Proof of language proficiency (clear reference to CEFR, e.g. B2, necessary)	file_6617aece63a3e-english_language_certificate.pdf
Motivation letter(max. 1 - 2 pages)	file_661addb8016a6-motivation_letter.pdf
CV (max. 1 -2 pages)	file_661ade131d571-cv.pdf
For Master students: Existing certificate with transcript of records of your Bachelor's degree	
Photocopy of identity document	file_6617e2bf31535-passport.pdf
Photo	

DECLARATION OF CONSENT

I certify that the information given in this application and the documents provided are correct and complete to the best of my knowledge and belief. I understand that any discrepancies in these details may result in my enrolment being cancelled.	Yes
I agree to the collection, processing and use of my data. Furthermore, I can revoke my consent at any time without any adverse consequences. Any notice of cancellation I will send to: moveon@tum.de. In the event of cancellation, my data will be anonymized upon receipt of my notice, but at the earliest after the filing deadline.	Yes
I agree that my data will be collected, processed and used by the TUM for the purposes of the application, administration and evaluation of my stay at TUM in the frame of an official exchange program in accordance with the provisions of the Data Protection Act. My data will be stored for at least five years in accordance to applicable regulations. Because students undertake multiple mobilities, the TUM Global Office stores data beyond the five years.	Yes
My personal data will be collected, processed, and used in the context of the aforementioned objectives in accordance with the Bavarian Data Protection Act (BayDSG).	Yes
I hereby confirm that I will comply with the laws of my host country and with the rules and regulations of the hosting institution.	Yes
Accommodation is not guaranteed to participants of ALL mobility programs. I have read the accommodation information on TUM Global Office webpage. However, if TUM Global Office can offer an accomodation, I herewith confirm that my personal data can be forwarded to the accommodation partners.	Yes
I understand that in view of any worldwide e.g. health, political or natural crisis, it's my own decision and on own responsibility whether to come to TUM to study as exchange student. I will keep myself informed about such situations in Germany and the world in particular as TUM can only offer limited support regarding short term arrangements.	Yes

TUM Global & Alumni Office
Technische Universität München

STUDY PROGRAM

For the transfer of academic credit according to ECTS (European Credit Transfer System)

Academic year:2024-25	Field of study: CIT (Informatics)
Name of student: Sukhvansh Jain	
Home institution: Indian Institute of Technology, Mandi	

Proposed study program:

Course code	Course title	Number of ECTS credits
IN2406	Fundamentals of Artificial Intelligence	6
IN2067	Robotics	6
IN2246	Computer Vision I: Variational Methods	8
IN2138	Robot Motion Planning	5
IN2308	Robot Programming and Control for Human Interaction	5
IN2381	Introduction to Quantum Computing	5
IN2097	Advanced Computer Networking	5

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Technische Universität München

Overview of current course plan at home institution

(These courses are not listed in the Transcript of Records.)

Please fill out this form, print and sign it, and it hand it in together with your application.

Last name	Jain	First name(s)	Sukhvansh
TUM department	Informatics (CIT)		
Semester	Four		

Course code	Course title	Number of ECTS credits
CS-671	Deep Learning and Applications	6
CS-309	Information Database and Systems	6
CS-304	Formal Language and Automata Theory	5
IC-201P	Design Practicum	5
HS-255	India Since Independence	5
HS-261	Indian Constitution	5

Mandi, 13th April, 2024

Place, Date

Signature of student

Indian Institute of Technology Mandi
(GRADE REPORT)

ROLL NO. : B22136 PROGRAMME : B.TECH.

NAME : SUKHVANSH JAIN BRANCH : COMPUTER SCIENCE & ENGINEERING

ACADEMIC YEAR/ SEMESTER	SUBJECT CODE	TITLE OF SUBJECT	CREDIT	GRADE OBTAINED	SGPA	CGPA
2022-23 FIRST	IC-131	APPLIED CHEMISTRY FOR ENGINEERS	3	A		
	IC-140	GRAPHICS FOR DESIGN	4	A		
	IC-152	COMPUTING AND DATA SCIENCE	4	A		
	IC-181	INTRODUCTION TO CONSCIOUSNESS AND HOLISTICWELLBEING	3	A	10.00	10.00
	IC-112	CALCULUS	2	A		
	IC-113	COMPLEX VARIABLES AND VECTOR CALCULUS	2	A		
2022-23 SECOND	CS-202	DATA STRUCTURE AND ALGORITHMS	3	A-		
	IC-102P	FOUNDATIONS OF DESIGN PRACTICUM	4	B		
	IC-161	APPLIED ELECTRONICS	3	A		
	IC-161P	APPLIED ELECTRONICS LAB	2	B-	9.05	9.50
	IC-252	PROBABILITY AND STATISTICS	4	A		
	IC-114	LINEAR ALGEBRA	2	A		
	IC-115	ORDINARY DIFFERENTIAL EQUATIONS & INTEGRAL TRANSFORMS	2	A-		
2023-24 FIRST	CS-208	MATHEMATICAL FOUNDATIONS OF COMPUTER SCIENCE	4	A		
	CS-212	DESIGN OF ALGORITHMS	4	B		
	CS-213	REVERSE ENGINEERING	1	A		
	CS-214	COMPUTER ORGANIZATION	4	A-	8.71	9.19
	DS-404	INFORMATION SECURITY AND PRIVACY	3	B-		
	HS-202	PRINCIPLES OF ECONOMICS	3	B		
	IC-222P	PHYSICS PRACTICUM	2	B		
	IC-272	DATA SCIENCE III	3	A		
	TOTAL CREDITS EARNED & FINAL CGPA		**62**			**9.19**

NOTE:

(i) Programme requirement not yet completed.

(ii) Please see overleaf for details of Grading System and SGPA/CGPA calculations.

Date: **10th April, 2024**

Prepared By: Vishal Pan

Checked By:

Deputy Registrar (Academics)

INDIAN INSTITUTE OF TECHNOLOGY MANDI (H.P.)-175075

Grading System (Grade Points) for B.Tech Programme at IIT Mandi:

At the end of the semester, a student is awarded a letter grade in each of his/her courses by the concerned Instructor-in-charge taking into account his/her performance in various examinations, quizzes, assignments, laboratory work (if any) etc., besides regularity of attendance in classes.

Grading system:

Letter Grades	O	A	B	C	D	E	F
Grade Points	10	9	8	7	6	4	0

O = Outstanding, A = Very Good, B = Good, C = Average, D = Below Average, E = Pass, F = Fail.
Pass/Fail Course: Letter Grade 'P' = Pass, 'F' = Fail. This grade is not counted towards SGPA/CGPA calculation.

Note:

- The credits for the course depend on the academic load, which, in turn, is determined by the number of contact hours (lectures and tutorials), laboratory hours (if applicable) & additional hours that a student is expected to devote per week.
- For theory classes and tutorials: 1 credit is awarded for 1 lecture hour/week (14 lecture hours per semester).
- For Lab Courses, Practicals & Practicums: The following system is followed.

Hours per week	1-2	3-4	5-6	7-8
Credits	1	2	3	4

Semester/Cumulative Grade Point Average (SGPA/CGPA):

SGPA (*Semester Grade Point Average)* / CGPA (*Cumulative Grade Point Average)* is a weighted average of the grade points earned by a student in the credited courses (on a 10-Point Scale) and is computed by using the following formula:

$$\text{SGPA or CGPA} = \sum_{i=1}^{n} Ci.Gi / \sum_{i=1}^{n} Ci$$

where n is the number of courses credited in semester (in SGPA) or the number of courses credited from the first semester to the latest semester (in CGPA). C_i & G_i denote the credits associated and grade-points obtained respectively in a course i.

For SGPA, $\sum C_i$ represents the number of credits registered in that semester. For CGPA, $\sum C_i$ represents the total earned credits i.e. number of credits earned by passing the courses.

Minimum graduating CGPA for B.Tech Programme: 5.0

No Class or Division is awarded for B.Tech Programme.

- The medium of instruction and assessment in this Institute is **English**.
- The individual course evaluation grades assigned by this Institute conform to a 10 point scale. CGPA is a weighted average of the grade points earned by the student based on a cumulative evaluation of performance in all the relevant/credited courses. The CGPA is based on a 10 point scale with ten being the maximum and zero being the minimum. It is certified that the Grade points awarded by IIT Mandi are not convertible into percentage. However, notionally, the CGPA may be multiplied by a factor of 10 to obtain a numerical percentage i.e. Marks in percentage = 10 X CGPA (notional). The provision is applicable to all graduates of the Institute irrespective of the year of the graduation.

भारतीय प्रौद्योगिकी संस्थान मण्डी
कमान्द – 175075, ज़िला – मण्डी,
हिमाचल प्रदेश, भारत

Indian Institute of Technology Mandi
Kamand – 175 075, District – Mandi,
Himachal Pradesh, India

Ref. No.: IIT Mandi/IR/2024/04-16 **4th April 2024**

English Language Certificate

This is to certify that **Mr. Sukhvansh Jain,** undergraduate, Computer Science Engineering, has been awarded a certificate of proficiency in the communicative use of the English Language according to the standards of evaluation set forth by the academic rules of the **Indian Institute of Technology, Mandi** with level C1.1. The evaluation is based on classroom performance and achievements and at IIT Mandi all the courses are being taught in English language.

Oral Communication Skills

The student is able to use English to satisfy professional needs in a wide range of sophisticated and demanding tasks. The individual shows discourse competence in many contexts and tasks, often matching a native speaker's strategic and organizational abilities and expectations.

Written Communication Skills

The student is able to read with facility, understand and appreciate contemporary expository, technical or literary texts which do not rely heavily on slang or unusual idioms.
The individual develops paragraphs logically and fully, using sophisticated and appropriate vocabulary and expressions, can synthesize a variety of information with reasonable accuracy and focus.

In case of any clarifications, the undersigned can be contacted.

Sincerely,

Assistant Registrar
SRIC & IR
सहायक कुलसचिव
(एसआरआईसी और आईआर) भा.प्रौ.सं. मण्डी
Assistant Registrar
(SRIC & IR), IIT Mandi

Respected Ma’am/Sir,

I am writing to express my fervent interest in participating in the semester exchange program at Technische Universität München (TUM) for the upcoming semester i.e. semester 5 in the CIT (Informatics) department at TUM. I believe this opportunity aligns perfectly with my academic goals and personal aspirations.

I have been keenly interested in computer science and robotics along with emerging fields such as quantum computing. TUM's reputation for excellence in these areas combined with the opportunity to learn from the likes of renowned professors such as Prof Daniel Cremers, Prof Alin Albu-schäffer and Prof Knoll, makes TUM the best environment to broaden my knowledge and understanding of this field. Additionally, this exchange program goes beyond academics for me as I am eager to immerse myself in the vibrant German culture too. I'm excited to explore the beautiful art and nightlife scenery, the historic Berlin Wall, Brandenburg Gate, along with a multitude of places that house 2 millennia of history.

As a highly motivated and adaptable student with a strong consistent academic record (current GPA of 9.19/10), I am confident that I will excel in this program. My experience in projects such as the “Mars Rover Project” (URC) and “Inter IIT Mid - Quantum Computing Challenge” (Mphasis), has honed my teamwork, communication, technical and research skills. I am a dedicated individual with a strong work ethic, and I am confident that I will be a valuable asset to the exchange program.

I am committed to actively engaging with the academic and social life at TUM. I believe this exchange program will not only enrich my academic pursuits but also foster personal growth and international understanding. The knowledge and experience gained will enable me to contribute significantly to my home university upon return, inspiring others to pursue similar opportunities. Furthermore, this experience will be instrumental in shaping my future career path in robotics.

Thank you for considering my application.

Sincerely,

Sukhvansh Jain

Sukhvansh Jain

Sukhvansh2004 | Sukhvansh Jain | sukhvanshjain@gmail.com

Education

Indian Institute of Technology Mandi — June 2026
B.Tech Computer Science and Engineering — *Current GPA: 9.19/10.0*

Banayan Tree School - Delhi — June 2022
Senior Secondary CBSE Board — *Percentage: 95.2*

Relevant Coursework

Data Structures and Algorithms, Probability and Statistics, Machine Learning, Design of Algorithms, Computer Organization, Deep Learning

Skills

Languages/Frameworks: C/C++, Python, JavaScript, HTML/CSS, ROS
Tools: Git/GitHub, Unix Shell, VS Code, SQL

Honours and Achievements

JEE Main Rank: 2942
JEE Advance Rank: 2936

KVPY Rank: 2806

Participation in online training programme "Overview of Space Science and Technology" by ISRO: Got B grade in its Exam

IAAC-2020 Silver Honour: Participated in IAAC and came in the top 7 percent overall

IYMC-2020 Bronze Honour: Participated in IYMC and came in the top 15 percent overall

Karate Nationals Bronze Medalist: Participated in National level Karate championship (KAI) representing Delhi State and won Bronze medal

Projects

Mars Rover, Team Deimos | *C++, ROS, Navigation Stack, Python* — June. 2023 – Present

- Developed a functioning prototype of a Mars Rover to participate in the University Rover Challenge 2024.
- Explored various approaches for autonomous traversal in 3D terrain without a built map.
- Implemented a spatio-temporal voxel layer in conjunction with the Navigation Stack for enhanced autonomous navigation capabilities.
- **Simulation done on Husky in Gazebo environment** **Some Demo Videos**

Inter IIT Mid - Quantum Computing Challenge by Mphasis | *Qiskit, Dwave*

- Won Bronze Medal at Inter IIT Tech Meet 12.0
- Overview The project aims at addressing the challenge of passenger re-accommodation due to planned schedule changes in airlines.
- The key objectives include identifying impacted flights and passengers, determining suitable alternate flights, ranking alternate flight solutions, and prioritizing PNR re-accommodation.
- The solution incorporates a business rule engine for flexibility in rule application and produces two sets of solution files: a default flight level re-accommodation solution and an exception list for individual PNR re-accommodation.

- The project emphasizes the creation of various rule profiles, flexibility in rule enforcement, and the generation of comprehensive solution files catering to different scenarios.
- **Link**

*** Moon Mapping Project** | *Python,PyTorch*

- Taking images of the moon and upscaling it through DL models.
- Mapping the upscaled images on a lunar atlas/map.
- **Drive Link**

Foundations of Design Practicum | *Arduino*

- Developing an obstacle avoidance robot using ultrasonic sensors and arduino.
- **Github Repo**

*** Design Practicum** | *Motor/Micro Controllers, C++*

- Developing an EV conversion kit for 3 wheeler.

*** Some work maybe left as its an ongoing project**

Experience

Tutor | *IIT Mandi* June 2023 – July 2023
Prayas 2.0
IIT Mandi

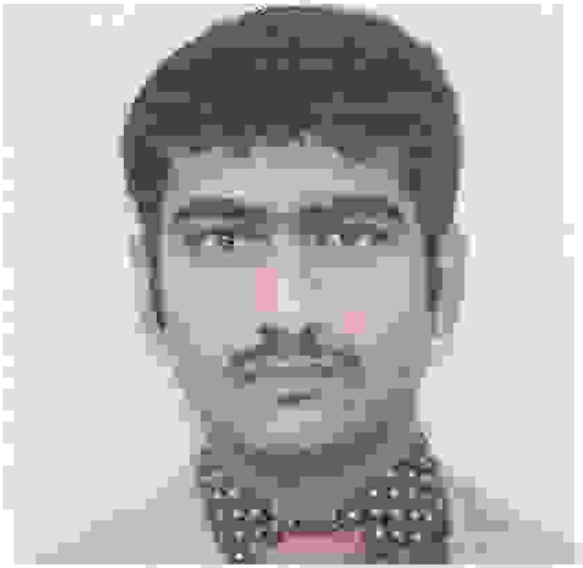
- Taught Arduino Programming, AI / ML , Sensors to students in a 1 month workshop

Volunteering

STAC (Space Technology and Astronomy Cell) IIT Mandi | *Coordinator*
Conducted and managed events for the club such as mini rocket launch, etc.

भारत गणराज्य / REPUBLIC OF INDIA

टाईप / Type	कोड / Code	राष्ट्रीयता / Nationality	पासपोर्ट नं. / Passport No.
P	IND	भारतीय / INDIAN	W5673524



उपनाम / Surname

JAIN

दिया गया नाम / Given Name(s)

SUKHVANSH

जन्मतिथि / Date of Birth

21/02/2004

लिंग / Sex

M

जन्म स्थान / Place of Birth

DELHI,DELHI

जारी करने का स्थान / Place of Issue

DELHI

जारी करने की तिथि / Date of Issue

20/10/2022

[illegible] / Date of Expiry

19/10/2032

P<INDJAIN<<SUKHVANSH<<<<<<<<<<<<<<<<<<<<<<<<<<<<

W5673524<4IND0402213M3210190406703940942 2<28

V5673524

पिता / संरक्षक का नाम / Name of Father / Legal Guardian

DINESH JAIN

माता का नाम / Name of Mother

PUJA JAIN

पति या पत्नी का नाम / Name of Spouse

पता / Address

P-15,3RD FLOOR

GREEN PARK EXTENSION,DELHI

PIN:110016,DELHI,INDIA

पुराने पासपोर्ट का नं. और इसके जारी होने की तिथि एवं स्थान/ Old Passport No. with Date and Place of Issue

फाइल नं / File No.

DL4067039409422