

Physics and Photonics Science

The Physics & Photonics Science department at National Institute of Technology Hamirpur was established in 2009 as Department of Physics. There are 14 faculty members in the department, including Guest faculty. National Institute of Technology Hamirpur is situated in the land of Gods i.e. Himachal Pradesh. The campus sits in the lap of scenic beauty and the snow-clad mountains of Dhauladhar range are vividly visible from the campus. The Department is providing world-class undergraduate and postgraduate education, as well as research facilities for doctoral program in diverse areas of fundamental and applied Physics. The department is one of the few places offering a B.Tech. academic degree, in Engineering Physics from 2020. This unique course blends the best of contemporary physics and technology, to create professionals who are equally equipped with both science and technology. The department is equipped with the latest world class equipment available to facilitate the fundamental understanding of different concepts to UG and PG students and to give them more exposure of experimentation.

The department also offers 2-year M.Sc. program in Physics and Ph. D. program in various specialized areas of research in experimental and theoretical Physics. At present, there are eight full time research scholars pursuing Ph. D. degree and more than 20 Ph.D. degrees have been awarded so far. The faculty members of the department have grants under different research projects sponsored by external agencies.

Within a very short span of time, the department has made an impression of excellence in the field of academics and research. Our M.Sc. program started in 2017 and the graduated students have secured exceptionally good rankings/scores in competitive examinations like GATE, JEST, etc. and have been selected for Ph.D. programs at different Institutions like National University of Ireland Galway, Raja Raman Centre for Advanced Technology (RRCAT), Indore, Indian Institute of Technology Madras, Jawaharlal Nehru University- New Delhi, Indian Institute of Technology Dhanbad, Indian Institute of Technology Kharagpur, Indian Institute of Technology (BHU) Varanasi, Indian Institute of Science Education and Research Bhopal, NIT Jalandhar and NIT Kurukshetra, NIT Durgapur, Indian Institute of Technology Delhi, and Tata Institute of Fundamental Research Mumbai .

The department is actively involved in organizing activities like, Conferences, Workshops, Symposium, DST sponsored SERC School, Seminars, Short-term Courses etc. and planning to organize many more of such events in the near future. The department is proactive and would like to attract talented students.

Recent Achievements:

a) Industry Placements:

- Er. Girish Gaurav Sharma of B.Tech. (Engineering Physics) student has received a prestigious placement offer with a package of ₹18 LPA from Goodspace AI and also from PatentsKart through the Training and Placement Cell of NIT Hamirpur.



- Er. Ashmit Gupta B.Tech. (Engineering Physics) student has been selected as a Software Developer by OpenGig with a package of ₹14 LPA, and also secured an offer from Goodspace AI with a package of ₹18 LPA through the Training and Placement Cell of NIT Hamirpur.

- Er. Vasu Gupta, a B.Tech. student in Engineering Physics, has received multiple placement offers through the Training and Placement Cell of NIT Hamirpur. He has been selected by Acmegrade, Tech Mahindra, and Nexturn.



- Er. Anshika Singh Jaiswal and Er. Rudrani Bhardwaj, B.Tech. students in Engineering Physics, have received a placement offer from ACMERGRAD through the Training and Placement Cell of NIT Hamirpur.

- Er. Bhisham Sharma, a B.Tech. student in Engineering Physics, has received multiple placement offers through the Training and Placement Cell of NIT Hamirpur. He has been selected by Acmegrade and P3C.





- Er. Pritika Choudhary, Er. Rishabh Kumar, and Er. Anish Kumar Sharma, B.Tech. students in Engineering Physics have received placement offers from PatentsKart through the institute's Training and Placement Cell.

- Er. . Sambhavi Upadhyay, a B.Tech. student in Engineering Physics, has received placement offers from Acmegrade and Tata Motors through the institute's Training and Placement Cell.



- Er. Tusharkant Sharma, a B.Tech. student of Engineering Physics, has received placement offers from PatentsKart and Sri Chaitanya Educational Institutions through the Training and Placement Cell of the institute.

- Er. Divyanshu, a B.Tech. student in Engineering Physics, has received placement offers from PatentsKart and Sigmoid Astar Data LLP through the Training and Placement Cell of the institute. 
- Er. Rajat Sharma, a B.Tech. student of Engineering Physics, has received placement offers from Infosys and P3C through the Training and Placement Cell of the institute.
- Er. Lav Naruka, a B.Tech. student of Engineering Physics, has received placement offers from Sri Chaitanya Educational Institutions through the Training and Placement Cell of the institute. 
- Er. Pooja, a B.Tech. student in Engineering Physics, has received an offer from an EdTech company through the Training and Placement Cell of the Institute.



- Er. Preeti Sharma, a B.Tech. student in Engineering Physics received placement offers from PatentsKart and Tech Mahindra through the Training and Placement Cell of the Institute.

➤ M.Sc. (Physics) students Mr. Sarthak Sharma, Mr. Prince Kumar, Mr. Hemant Prajapat, Mr. Shivappa Pujari, Mr. Yash Yadav, Mr. Kanav Sharma, and Mr. Ravindra Choudhary Sesma, have received placement offers for the position of Associate Lecturer at Sri Chaitanya Educational Institutions through the Training and Placement Cell of the Institute.



- B.Tech. (Engineering Physics) 4th Year students V Ashutosh Prajapati, Er. Prashant Dhiman, Er. Aryan Verma, and Er. Amarendra Kumar have been selected by M/s Hiremi.



- B.Tech. 4th year (Engineering Physics) students Er. Parinay Rana and Er. Praveen Yadav have selected by M/s @Decision Point through Training and Placement Cell NIT Hamirpur.

➤ B.Tech. 4th year (Engineering Physics) student Er. Uttam Kumar has been selected by M/s C-DAC Hyderabad through Training and Placement Cell NIT Hamirpur.



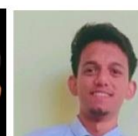


➤ Er. Kajal Kumari B.Tech. (Engineering Physics) and Mr. Nayan Kumar Agarwal M.Sc (Physics) Students have been selected by M/s Sri Chaitanya Educational.

➤ B.Tech. 4th year (Engineering Physics) Er. Md Taushif Ali and Mr. Vitthul Chandrakant Mute M.Sc. (Physics) students have been selected by M/s Avanti Fellows.

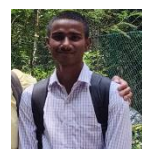


➤ B.Tech. 4th year (Engineering Physics) Er. Vidhi Garg has been selected by M/s CDIL.



b) Higher education placements/offers:

➤ Er. Uttam Kumar B.Tech.. (Engg. Physics) has received an offer to pursue his Ph.D. at the prestigious Indian Institute of Science, Bangalore.



➤ Er. Shanu Kumari B.Tech. (Engg. Physics) has received an offer to pursue Ph.D. at the Indian Institute of Technology Kanpur.

➤ Er. Sambhavi Upadhyay, a B.Tech student in Engineering Physics, has received an offer to pursue MBA at the Indian Institute of Management Jammu.



➤ Er. Devanshu Sharma, a B.Tech graduate in Engineering Physics, is currently pursuing M.Tech in Semiconductor Technology at the prestigious Indian Institute of Technology (IIT) Roorkee.

➤ Rohit Singh, an M.Sc. (Physics) has received offers to pursue a Ph.D. at the prestigious Physical Research Laboratory (Ahmedabad), Indian Institute of Technology Roorkee, Tata Institute of Fundamental Research Hyderabad, and Indian Institute of Science Education and Research Thiruvananthapuram.



➤ Ms. Rinku Boora, a student of M.Sc. (Physics) has received an offer to pursue her Ph.D. at the prestigious Indian Institute of Technology, Roorkee.

➤ Mr. Amit Kumar, M.Sc. (Physics) student has received an offer to pursue a Ph.D. at the prestigious Indian Institute of Technology, Patna.



- Mr. Mahendra Sinwar has received an offer to pursue a Ph.D. program at the esteemed Indian Institute of Technology Jodhpur and Indian Institute of Science Education and Research (IISER) Mohali.



- Mr. Shobhit Dogra has received an offer to pursue a Ph.D. program at the esteemed Indian Institute of Science Education and Research (IISER) Mohali.

- Mr. K Denesh, an M.Sc. (Physics) has been admitted to the doctoral program in Civil, Environmental, and Geo-Engineering (CEGE) at the University of Minnesota



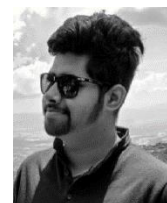
- Mr. Abishek Pandey M.Sc. (Physics) has received an offer to pursue his Ph.D. at the prestigious Tyndall National Institute, Ireland!

- Mr. Shivansh Sharma of B.Tech. (Engineering Physics) student is pursuing Ph.D., at IIT Mandi.



- Ms. Kiran Aggarwal was selected to pursue Ph.D. at the Indian Institute of Science Education and Research Mohali (IISER Mohali).

- Er. Vaibhav Sharma of B.Tech. (Engineering Physics) student is pursuing a Master of Technology in “Semiconductor Materials and Devices” at the Indian Institute of Technology, Hyderabad.



- Mr. Yash Saraswat, M.Sc. (Physics), is pursuing the Ph.D degree at Indiana University Bloomington. His study is fully funded which includes stipend, tuition fee, and health insurance. The amount of total study package is more than fifty five lakh per year.



- Mr. Karan Roy M.Sc. (Physics) student is pursuing PhD on topic “Micropower Devices Development” at the Micro Nano Systems Centre of the Tyndall National Institute, Ireland.

- Ms. Memansa Thapa, a M.Sc. (Physics) student of the Physics and Photonics Science department at the National Institute of Technology Hamirpur, has secured admission to the prestigious Ph.D. program at the Indian Institute of Technology, Mandi.



- Mr. Deepak Bhardwaj of M.Sc. (Physics) student, has been awarded a Quantum Engineering CDT international studentship to pursue a Ph.D. in Quantum Engineering at the University of Bristol beginning in the academic year 2023-24 under the supervision of Professor Jorge Barreto. He was given a package of more than two crores (Indian Rupees) to pursue his Ph.D. His topic of study will be "Shaken Lattice



Interferometry with Ultra-Cold Alkali Atoms."

- Ms. Mansi Talwar, a M.Sc. (Physics) student, has been selected into the Doctor of Philosophy programme in the Department of High Energy Physics at the Tata Institute of Fundamental Research in Mumbai.



- Ms. Anjali Yadav has been offered to learn about research work on ultrafast dynamics at surfaces and interfaces at the Department of Physics, University of Duisburg-Essen. She will contribute to a scientific project on "Time resolved X-ray absorption spectroscopy and sample preparation by pulsed laser deposition". After three month period, there is opportunity for her to get registered for Ph.D. Program with a monthly gross salary 2,558,30 EURO.

➤ Er. Yash Upadhyay 4th year student of B.Tech. (Engineering Physics) got selected for direct Ph.D in the area of Quantum Sensing at Indian Institute of Technology Bombay.



- Mr. Bisaj Sujith Kumar, M.Sc. (Physics) has been admitted to the English-language Master Advanced Functional Materials course at Technische Universität Chemnitz (University of Technology), 09107, Chemnitz, GERMANY.

- Ms. Minakshi Dadhwal, a M.Sc. (Physics) student, has joined as a Stipendiary Trainee (Category-I) in Physics at the prestigious Homi Bhabha National Institute, Anushaktinagar, Mumbai, Maharashtra.





- M.Sc. (Physics) student, Mr. Sri Ram G., has been appointed as a Scientific Officer (C), at the Bhabha Atomic Research Centre. And based on the results of the National Level- Combined Graduate Level Examination, 2020, another M.Sc. (Physics) student Mr. Praveen Kumar of the Department, has been appointed as Inspector of GST & Central Excise.

c) National Level Examinations and others

- Er. Devanshu Sharma and Er. Divyam Jha, B.Tech students in Engineering Physics, have secured outstanding All India Ranks (AIR) of 41 and 230 respectively in the highly competitive GATE 2025 examination.



- Ms. Ritu and Mr. Rohit Singh, have successfully qualified for the Joint CSIR-UGC NET Examination in December 2024.
- Er. Aayush Dabrey, Er. Devashish, Er. Sudharsan, Er. Swastik Choudhary, Er. Divyanshu, and Er. Anushka Gautam from B.Tech. (Engineering Physics), along with Mr. Aryansh Saxena, Mr. Ajay Kumar, Mr. Satish Kaintura, Mr. Amit Kumar, Ms. Ritu, Mr. Divyanshu, and Mr. Ajay Sahu from M.Sc. (Physics), have successfully qualified the GATE 2025 examination.
- Er. Vasu Gupta and Er. Sambhavi Upadhyay, B.Tech students in Engineering Physics, have successfully qualified the CAT 2024 examination.
- B.Tech. (Engineering Physics) student Er. Uttam Kumar and M.Sc. Physics student Ms. Kashish Verma has qualified the Joint CSIR-UGC NET Dec. 2023 examination.
- B.Tech.(Engineering Physics) 4th year Er. Uttam Kumar, Er. Shivansh Sharma, and M.Sc. Physics students Mr. Rupam Roy, Ms. Kiran have qualified Joint Entrance Screening Test-2024 (JEST-2024).





- Er. Girish Gaurav Sharma of B.Tech. (Engineering Physics) 3rd year student participated in the National Level "35th DAE All India Essay Contest" on the theme of Nuclear Science and Technology which was organized by Department of Atomic Energy. Students from various reputed institutions like Indian universities, IITs, Medical and Engineering colleges are invited to participate. The essay contest was on three topics: i) Nuclear Power-a viable option against global warming, ii) Radioisotopes and radiation Technology: Harbinger of Prosperity and well-being?, and iii) Applications of Lasers and Plasma Technologies in the Nuclear Fusion energy. A total 30 students, 10 from above each category were shortlisted for oral presentation at Bhabha Atomic Research Centre Mumbai. Traveling fare, boarding and lodging born by Department of Atomic Energy-Government of India-New Delhi. This event was conducted for a period of ten days at Bhabha Atomic Research Centre-Mumbai. Beside this, students also visited the various international-level facilities of country such as Dhruv Nuclear Reactor, Bhabha Atomic Research Centre, Electron Beam Centre, Tarapur Nuclear Power Plant etc.. Mr. Girish Gaurav Sharma won the first prize along with cash prize of Rs. 25,000.00/ in the subject category head: Nuclear Power-a viable option against global warming.
- M.Sc. (Physics) student, Amardeep Singh Jhala, secured place in the preliminary round of the National Anveshika Experimental Skill Test (NAEST), an annual competition in India that aims to evaluate and develop students' experimental, analytic, and observational skills in physics. Students must create and build their own tools, read, analyse errors, and present a comprehensive report. Amardeep Singh Jhala has conducted the three experiments listed below:



1. Analysing the characteristics of small particles
2. Examine the waves produced by the water manometer.
3. Using a water box prism for measurements

The National Anveshika Network of India (NANI), a division of the IAPT, in collaboration with Shiksha Sopan, organises the NAEST.

- Er. Yash Upadhyay 4th year student of B.Tech. (Engineering Physics) of Department of Physics and Photonics

Science, National Institute of Technology Hamirpur has been selected to participate in the 2024 New York University Abu Dhabi (NYUAD) Hackathon for Social Good focusing on Quantum Computing and the UN Sustainable Development Goals. The Hackathon is held in person in Abu Dhabi from April 25 to April 28, 2024. The NYUAD Hackathon is supported by top global Quantum Computing experts from both industry and academia such as NYUAD



Center for Quantum and Topological Systems, Technology Innovation Institute (TII), Geneva Science and Diplomacy Anticipator (GESDA), Xanadu, ETH Zurich in Quantum Information, Zurich EPFL Center for Quantum Science and Engineering (QSE Center), University of Calgary's Institute for Quantum Science and Technology (IQST), IBM, qBraid, QWorld, NIEW, the MIT's iQuHACK, QC Hack (Yale, Stanford, and Berkeley QC Hackathon), and many others to mentor teams and explore along with the students quantum computing solutions to a wide range of challenging projects from machine learning and AI, to physics (complex simulation problems), chemistry, computer science, Healthcare, Math, to climate change, healthcare, online gaming, security, social sciences and the arts (quantum-generated artwork). The NYUAD Hackathon Award covers financial support for the cost of air travel, visa charges, food charges, hotel charges, local transportation, etc. for him. He achieved the fourth position in this event.

- Mr. Amardeep, Mr. Ashutosh, Mr. Denesh, Mr. Amit, Mr. Mahendra, M.Sc. Students establish their presence among the many departments within the

institute by finishing second in an Inter-Branch Table Tennis (TT) Tournament.

