

## Frequently Asked Questions (FAQs) on B.Sc. (Hons.) Physics Course

### 1. What are the career opportunities after B.Sc. (Hons.) Physics in the field of Physics?

**Ans:** *Physics is a highly inter-disciplinary subject with a wide range of Research and Job opportunities.* For B.Sc.(H) Physics students, the most logical/recommended progression after completing their Undergraduate Program would be to pursue higher studies in Physics. Students can pursue M.Sc. Physics followed by Ph.D in Physics or directly pursue an integrated Ph.D in Physics offered by many prestigious Universities and Institutes in India and abroad, after which students can further pursue teaching and research in Physics and many others.

Many Research Labs. in India such as ISRO, DRDO, BARC, NPL etc. offers opportunity as a Scientist to those who have done M.Sc. or Ph.D in Physics. A Postgraduate student becomes eligible for the post of Assistant Professor in various Universities and Institutes in India after clearing UGC – NET exam and many others.

After B.Sc.(Hons.) Physics, students can pursue B.Ed and then become a science teacher. Students can also apply for Physics Lab. Assistant post in various Universities and Institutes in India.

### 2. What are the career and job opportunities after B.Sc. (Hons.) Physics outside the field of Physics?

**Ans:** A graduate student in B.Sc. (Hons.) Physics is eligible for taking competitive exams for civil services, Railways, Banking sector, Insurance sector, SSC etc. Students can also appear for Job interview offered by various Corporate/Companies, organized through the College Placement Cell.

A sincere student of B.Sc. (Hons.) Physics, after completing his/her Undergraduate Programs, will be able to develop not just the mathematical prowess and analytical ability to solve numerical problems, but also the art of analyzing and interpreting the mathematical equations and results/data obtained and situate it to a real life problems. In addition to this, students also will develop computational skills such as Scilab, FORTRAN, Python, C, C++ etc. which are part of the course. With this knowledge and skills, students will be equipped and eligible to pursue highly demanded and job-fetching courses such as Statistics and Data Analytics, Data Science, Actuarial Science, MCA, Business and Management, MBA, Econometrics etc.

3. I didn't have Computer Science in my Secondary School, but when I check the proposed syllabus of B.Sc.(H) Physics under NEP 2020 in official DU website, the Laboratory experiments of some papers contain computer programming like Scilab, Python, C++, FORTRAN, LaTeX, Gnuplot etc. What should I do?

**Ans:** With the advancement in Technology, the way we learn and approach problems in Physics also should evolve (advance) proportionally. Hence, Computational skills and programming becomes a prerequisite tool to learn and solve Physics problems more efficiently, especially, for Research purposes in higher studies. In light of this, the syllabus of B.Sc.(H) Physics Programs under Undergraduate Curriculum framework (UGCF)-2022, based on National Education Policy (NEP)-2020 is designed to incorporate this needs. *However, students who didn't have Computer Science in Secondary School need not worry because prior knowledge of Computer Science is not required.* Students are first taught the introductory and basic concepts followed by the applications in solving Physics problems, which can be easily managed by any Science students.

4. Are students exposed to research environment during their Undergraduate Programs in Physics?

**Ans:** In every Semester, the Department of Physics organize an educational visits to prestigious Research Laboratories in Delhi such as IUAC, NPL, Nehru Planetarium etc. so that students can have a glimpse of the many fascinating research works and activities carried out in the field of Physics. Students also will get the opportunity to interact with the Research Scholars, Professors and Scientists working in those Research laboratories/Institutes.

The Department regularly organizes Talks/Lectures, Seminars and Workshops on various relevant and cutting edge topics in Physics delivered by eminent Physicists and Scientists. Through these events, students will get more exposure to various research opportunities in Physics.

The Department highly encourages students to undertake Summer/Winter Internships and Research Projects offered by Various Research Institutes across India where students will get the opportunity to work on some Hands-on Research Projects.

**5. Which SEC (Skill Enhancement Course) & DSE (Discipline Specific Elective) papers are best suited for students of B.Sc.(H) Physics?**

**Ans: SEC (Skill Enhancement Course)** - Since Physics is a highly experimental subject, SEC papers like **Basic of Instruments** and **Introduction to Physics of Devices**, would be very suited and helpful, in which students will learn the various aspects of instruments and their usage through hands-on mode. The experimental skills students will learn and develop through these courses will be of great aid in their research in higher studies, especially in the area of Experimental Physics and other jobs opportunities in various Research Laboratories/Industries.

With the advancement in Technology, since computational skills and programming has become a prerequisite tool to learn and solve Physics problems more efficiently, especially, for Research purposes in higher studies, **Programming for Physical Applications (C/C++ or Python)** paper can also be a good choice for SEC paper.

**DSE (Discipline Specific Elective)** – Since Mathematics is a prerequisite tools and language to learn Physics, **Advanced Mathematical Physics** paper will be a good choice to develop the mathematical prowess and analytical ability to approach Physics problems.

**Astronomy and Astrophysics** and **Nuclear and Particle Physics** papers are remarkably a good choice because research in these topics is one of the most exciting and well sought after in India and abroad as well. India has a large number of prestigious Research Institutes and Laboratories which provides Research opportunities, Internships and hands-on Research Projects in these areas. Learning these papers can be of great aid for students who wants to do Internships, Summer/Winter research project in these topics even during their Undergraduate Programs.

**Communication System** and **Physics of Devices** papers will be of great aid for those who are interested especially in Experimental Physics and seeking for Job opportunities in Various Industries and Research Laboratories.

**6. Is there any provision of financial assistance to students?**

**Ans:** Yes, there is a provision. Needy and deserving students can avail the financial assistance through fee concession as per the rules of University of Delhi.

❖ **Note:**

- For proposed Course Structure and Syllabus of B.Sc.(H) Physics, under Undergraduate Curriculum framework (UGCF)-2022 , based on National Education Policy (NEP)-2020, please visit the official website of University of Delhi: [https://physics.du.ac.in/feedback\\_bsc.php](https://physics.du.ac.in/feedback_bsc.php)
- For admission related queries under Undergraduate Curriculum framework (UGCF)-2022 , based on National Education Policy (NEP)-2020, please visit the official website of University of Delhi : <https://admission.uod.ac.in/>