

## Placements:

Students are carrying out research in many renowned research institutions in India and Abroad including Oxford, Cambridge, Harvard and Caltech. Others join teaching as a career. Many join the Armed forces and other companies including...



Apart from Undergraduate courses we also have PG courses and we are a recognized Research Centre in Physics with recognized research guides. The department has many ongoing projects funded by BCUD, ISRO, BRNS, DST, UGC, and other funding agencies. At present department is having research projects worth Rs. 68 lacs.

We are National Graduate examination in Physics (NGPE) centre for the past 20 years. We are also IUCAA Node for Astronomy & Astrophysics Development INAAD centre involved in popularizing the subject.

As we have introduced the project component in the Third year of B.Sc. itself many students carry out their projects in renowned institutes in and around Pune. This helps them immensely if they wish to do further research in the field.

### Linkages for Projects & Research within the country:

- \*National Chemical Laboratory (NCL), Pune.
- \*National Center for Radio Astronomy (NCRA), Pune
- \*Indian Institute for Astrophysics (IIA), Bangalore
- \*Inter University Center for Astronomy & Astrophysics (IUCAA), Pune
- \*Center for Electronics Materials (C-MET), Pune
- \*Bhabha Atomic Research Center (BARC), Mumbai
- \*Indian Institute of Tropical Meteorology (IITM), Pune
- \*Savitribai Phule Pune University (SPPU), Pune
- \*Defense Institute of Advanced Technology (Deemed University) (DIAT), Pune
- \*Indian Institute of Science Education and Research (IISER), Pune

**International collaboration:** Cork Institute of Technology- CIT, Ireland  
**TARA Project:** Fergusson college, Autonomous Robotic telescope (to be linked to Blackrock Observatory, Ireland and San Francisco, USA)



**Fergusson College,  
(Autonomous) Pune – Est.1885**

**Department of Physics (Est.1903)**



**INFORMATION BROCHURE  
YEAR 2017-18**

### Programs offered:

- Undergraduate
- Postgraduate Grant-in-aid
- Postgraduate Self Finance
- Ph. D. Research Center

**DEPARTMENT HISTORY:** The department of Physics is the largest and oldest department in Fergusson College as per the number of teaching faculty members and students. It was founded in 1903 and the Post Graduation centre was established in 1969.

### CURRICULUM:

B.Sc. in Physics is a Three Year course under Autonomous structure.

The course is designed in such a way that it enables our students to develop a strong base in applied and experimental Physics. Our department offers all core courses along with the Elective Courses at the third year of B.Sc.

Presently our first year and second year of B.Sc. courses are under autonomous Fergusson college course, however third year of B.Sc. is still under the SPPU course structure. It will be under autonomous structure from the academic year 2018-19.

## CONTACTS:

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Our undergraduate Physics courses are as follows:

**F.Y. B.Sc.** Under autonomous Fergusson College course:

**Semester I:** Mechanics and Properties of matter, Heat and thermodynamics, Physics Practical Course – I

**Semester II:** Introduction to Mathematical Physics, Electricity & Magnetism, Physics Practical Course - II

**S.Y. B.Sc.** Under autonomous Fergusson College course:

**Semester III:** Oscillations, Waves and Sound, Principles and Applications of Optics, Physics Practical Course – III

**Semester IV:** Introductory Quantum Physics and Relativity, Measurement Techniques in Physics, Physics Practical Course - IV

**T.Y. B.Sc.** Presently under Savitribai Phule Pune University (SPPU):

**Semester V:** Mathematical methods in Physics, Solid State Physics, Classical mechanics, Atomic & Molecular Physics, Computational physics, Astronomy & Astrophysics OR Elements of Materials Science. Practical Lab I

**Semester VI:** Classical Electrodynamics, Quantum Mechanics, thermodynamics & Statistical Physics, Nuclear Physics, Electronics Basic/Advanced, Lasers OR Physics of Nonmaterial's. Practical Lab II and Practical Lab. III- Projects - This a special feature where by students carry out research projects in any topic of their choice in Physics.

Continuous assessment of the students is carried out throughout the semester through various class based activities.

### Association Activities:

#### ➤ Astro Club Activities:

Guest lectures by renowned speakers, problem solving sessions, National Seminar-Frontiers in Physics, star gazing, meteor shower observations & exhibitions.

The Astro Club has discovered six main belt Asteroids till date through International Asteroid Hunt program.



#### ➤ Physics Forum Activity :

Annual Physics Exhibition-Gravity, white board and wall paper activity, talks.

#### ➤ Indian Physics Association (IPA) Activities:

Physics Quiz competitions Poster & Paper presentation competitions.



### Our Alumni includes....

\***Hon. V.P. Singh:** Former, Prime Minister of India

\***Prof. Ram Takwale:** Former Vice-chancellor of three Universities: Pune University, Pune , Yashwantrao Chavan Maharashtra Open University, Nashik and Indira Gandhi National Open University, New Delhi

\***Padmashree Prof. Pramod Kale:** Former Director, ISRO Ahmedabad

\***Prof. M.G. Takawale:** Former Vice-chancellor of Shivaji University, Kolhapur

\***Prof. R.R. Kelkar:** Former Director General, IMD, New Delhi

\***Dr. Vivek Sharma** (LHC Higgs analysis co-ordinator)

\***Prof. Sanjiv Dhurandhar,** Scientist, IUCAA, team member in the detection of the Gravitational waves.

\***Adv. Vandana Chavan** - Hon. Rajya Sabha member

\***Lt. Vikrant Deshmukh** – Kirti Chakra winner 2011

\***Dr. Varun Bhalerao** - Won Two Golds and One Bronze medal for India, at three consecutive International Astronomy Olympiads

\***Dr. Poornima Lalwani,** Software Div. Motorola USA

\***Shri. Suresh Menon,** Vice-President, TCS

\***Dr. Medha Khole** , Deputy Director (Weather Forecasting) of Indian Meteorological Department (IMD), Pune

### Science Education Initiative:

Initiated by past students. This activity has gained momentum over the past two years undergraduate students work as interns in 30+ municipal corporation schools in Pune and the results are astonishing.

