Department-Wise Information:

1. Pharmaceutical Chemistry

❖ **About the Department (Overview)**

The **Department of Pharmaceutical Chemistry** is one of the core departments at **TSB IPER**, offering strong academic and practical training in medicinal chemistry, analytical chemistry, organic chemistry, and pharmaceutical quality assurance. The department aims to develop skilled pharmacy graduates with expertise in drug discovery, synthesis, analysis, and regulatory standards. Students gain hands-on experience through well-equipped chemistry laboratories, modern analytical instruments, and project-based learning.

❖ **Vision**

- To build competent pharmaceutical chemists with strong fundamentals in drug chemistry, analytical skills, and research capabilities aligned with industry and academic needs.

❖ **Mission**

- To provide high-quality teaching in pharmaceutical and medicinal chemistry.
- To develop analytical and problem-solving skills through practical laboratory training.
- To encourage research, innovation, and academic excellence.
- To prepare students for careers in formulation, analysis, regulatory affairs, and pharmaceutical manufacturing.

❖ **Laboratories & Facilities**

➢ **Pharmaceutical Chemistry Lab**

- Provides hands-on training in chemical synthesis, qualitative & quantitative analysis.
- Students learn identification, purification, and analysis of organic & inorganic compounds.

➢ **Major Equipment:**

- Hot air oven

- Melting point apparatus
- UV-visible spectrophotometer
- Digital pH meter
- Analytical balance
- Fume hood
- Distillation units
- Heating mantle
- Water bath

2. Pharmacology

❖ **About the Department**

The **Department of Pharmacology** plays a vital role in pharmacy education by providing a strong foundation in the study of drugs, their mechanisms of action, therapeutic uses, adverse effects, and safety profiles. The department focuses on developing skilled pharmacy professionals who can contribute to quality healthcare through scientific understanding and rational drug use.

Pharmacology is taught through a balanced combination of **theory and practical learning**, supported by modern teaching aids, computer-assisted learning tools, and well-equipped laboratories. Students gain hands-on experience in studying drug effects on various body systems, analysing pharmacokinetic and pharmacodynamic principles, and understanding toxicological and clinical pharmacology aspects.

❖ **Vision**

- To develop competent pharmacists with strong knowledge of drug actions, safety, and therapeutic applications.
- To promote ethical, research-oriented learning in experimental and clinical pharmacology.
- To contribute to healthcare by training students in rational drug use and patient safety.

❖ **Mission**

- To provide quality education in pharmacodynamics, pharmacokinetics, and toxicology.
- To train students using modern **software-based simulations**, demonstrations, and experimental models.
- To encourage participation in **research, seminars, and pharmacological investigations**.
- To cultivate ethical practices based on **CPCSEA and regulatory guidelines**.
- To prepare students for careers in **clinical research, pharmacovigilance, and hospital pharmacy**.

❖ **Laboratories & Facilities**

- **Pharmacology Laboratory** equipped with:
  - Software-based experimentation systems
  - Kymographs / Student organ bath simulator
  - Analgesia meters (simulation)
  - Plethysmometer (simulation)
  - Histology slides and specimens
- **Human Anatomy & Physiology (HAP) Lab** support for integrated learning.
- Well-designed charts, models, and demonstration tools.
- Facilities following **ethical guidelines**, with emphasis on safe and responsible experimentation.
- ICT-enabled classroom teaching with **projectors, animations, and e-content**.

3. Pharmaceutics

❖ **About the Department**

The Department of Pharmaceutics is a core branch of pharmaceutical sciences that focuses on the design, development, and evaluation of various dosage forms. It plays a vital role in transforming active pharmaceutical ingredients into safe, effective, and patient-friendly medicines. The department provides a strong foundation in formulation science, biopharmaceutics, physical pharmaceutics, and industrial pharmacy. Students gain hands-on experience in preparing tablets, capsules, ointments, suspensions, emulsions, sterile formulations, and novel drug delivery systems. With well-equipped

laboratories and modern instruments, the department emphasises Good Manufacturing Practices (GMP), quality assurance, and standard operating procedures. Highly qualified faculty guide students through practical training, research activities, and project-based learning, helping them develop the technical and analytical skills required for careers in pharmaceutical production, formulation R&D, QA, QC, and regulatory affairs. The department aims to nurture competent professionals capable of meeting industry standards and contributing to the development of high-quality medicines.

❖ Vision

- To become a centre of excellence in **drug formulation, development, and delivery systems**.
- To produce skilled pharmacy professionals with strong practical knowledge in **dosage form design and manufacturing**.
- To promote innovation in **pharmaceutical technology** for improved patient care.

❖ Mission

- To provide quality education in **formulation science, biopharmaceutics, and industrial pharmacy**.
- To train students in **modern equipment**, **GMP practices**, and **standard operating procedures (SOPs)**.
- To encourage research, mini-projects, seminars, and hands-on learning in **pharmaceutical manufacturing**.
- To prepare students for careers in **production, formulation R&D, QA, QC, and regulatory affairs**.
- To develop problem-solving skills for real-world industrial challenges.

4. Quality Assurance

❖ **About the Department**

The Quality Assurance Department is dedicated to developing skilled professionals with strong knowledge of pharmaceutical quality systems and regulatory standards. This department focuses on ensuring the safety, efficacy, and consistency of drug products through systematic quality control and assurance practices. Students are trained in essential concepts such as Good Manufacturing Practices (GMP), Good Laboratory Practices (GLP), Quality by Design (QbD), documentation procedures, validation methods, and regulatory guidelines issued by agencies like WHO, USFDA, and ICH. The department is equipped with advanced instruments and facilities that enable students to perform analytical validations, stability studies, sampling techniques, and documentation audits. Highly experienced faculty guide learners through practical demonstrations, case studies, and real-time quality system applications. The department aims to prepare students for careers in quality control, quality assurance, regulatory affairs, production compliance, and pharmaceutical auditing.

❖ **Vision**

- To establish a centre of excellence in pharmaceutical quality systems by nurturing skilled professionals who uphold global standards of drug safety, efficacy, and regulatory compliance.

❖ **Mission**

- To provide comprehensive education in **GMP, GLP, QbD, validation,** and **regulatory guidelines**.
- To train students in **documentation practices**, audit procedures, and quality management systems.
- To develop strong analytical and problem-solving skills through **practical demonstrations, case studies, and industry-oriented learning**.
- To prepare students for careers in **QA, QC, regulatory affairs, production compliance, and pharmaceutical auditing**.
- To promote an ethical approach towards maintaining **product quality, patient safety, and industry standards**.

❖ **Laboratories & Facilities**

- Dedicated **Quality Assurance Laboratory** aligned with GMP and GLP standards.
- Facilities for **documentation practice**, validation procedures, and quality audits.
- Instruments for **stability testing, sampling, and analytical validation**.
- Access to **SOP manuals, regulatory guidelines**, and QA documentation formats.
- ICT-enabled teaching with charts, models, and e-content on quality systems.

5. Pharmaceutical Technology

❖ **About the Department**

The Department of Pharmaceutical Technology focuses on the industrial aspects of drug manufacturing, including formulation design, process development, and large-scale production. It integrates principles of pharmaceutics, engineering, and material science to develop safe and effective dosage forms. Students gain detailed knowledge of unit operations such as drying, mixing, filtration, size reduction, granulation, distillation, and sterilisation. The department emphasises real-time problem-solving, process optimisation, and compliance with Good Manufacturing Practices (GMP). With experienced faculty and well-equipped labs, students receive hands-on training using industrial-type equipment and simulation-based learning tools. The department prepares graduates to work confidently in production industries, formulation R&D, technology transfer units, and pharmaceutical machinery operations.

❖ **Vision**

- To develop a centre of excellence in advanced pharmaceutical manufacturing processes and modern drug delivery technologies, contributing skilled professionals to meet global industry standards.

❖ **Mission**

- To provide strong academic and practical knowledge in **unit operations, pharmaceutical engineering, and process technology**.
- To train students in **industrial-scale equipment, formulation technology, and process optimisation**.

- To promote research, innovation, and mini-projects in **novel drug delivery systems and manufacturing science**.
- To prepare students for careers in **production, formulation development, technology transfer, and industrial operations**.
- To ensure students follow **GMP, SOPs, safety guidelines, and quality standards** in every practical application.

Department-wiseDepartment-Wise

❖ **Laboratories & Facilities**

- **Pharmaceutical Technology Lab** equipped with:
    - Tray dryer
    - Fluidized bed dryer (model)
    - Mechanical stirrers and mixers
    - Ball mill / grinder
    - Filtration and sedimentation units
    - Sieving and particle size analysis equipment
- **Unit Operations Lab** with models and working setups for:
    - Distillation
    - Extraction
    - Heat exchangers
    - Evaporation and drying systems

6. Regulatory Affairs

❖ **About the Department**

The **Department of Regulatory Affairs** at P.R.I.T.S.'s Hon. Tukaramsheth S. Baviskar Institute of Pharmaceutical Education & Research is dedicated to preparing students for the dynamic field of drug regulation, compliance, and pharmaceutical law. This specialised department ensures that students gain in-depth knowledge of national and international

regulatory frameworks governing drug development, approval, manufacturing, quality control, marketing, and pharmacovigilance. With the pharmaceutical industry becoming increasingly global and regulated, expertise in regulatory affairs is critical for ensuring that medicinal products meet stringent safety, efficacy, and quality standards. Our department blends theoretical knowledge with practical insights through case studies, regulatory document preparation, and industry interactions.

❖ Vision

To emerge as a centre of excellence in pharmaceutical regulatory education, producing competent professionals capable of navigating complex regulatory landscapes and contributing to public health through compliance, ethics, and innovation.

❖ Mission

1. **Education & Training:**
   To provide comprehensive education in regulatory science, covering Indian and international regulations (USFDA, EMA, WHO, CDSCO, etc.).
2. **Industry Readiness:**
   To equip students with skills in dossier preparation, regulatory submissions, clinical trial protocols, and quality assurance.
3. **Research & Development:**
   To promote research in regulatory policies, compliance strategies, and emerging areas such as biotechnology regulations, biosimilars, and digital health.
4. **Ethical Practice:**
   To instil a strong sense of ethics, responsibility, and commitment to patient safety and public health.

❖ Laboratories & Facilities

- Regulatory Affairs Simulation Lab
- Computer Lab with Regulatory Databases
- Quality Assurance & Documentation Center
- Virtual Learning & Webinar Facility
- Library & Resource Section

7. Clinical Pharmacy

❖ About the Department

The **Department of Clinical Pharmacy** at P.R.I.T.S.'s Hon. Tukaramsheth S. Baviskar Institute of Pharmaceutical Education & Research is at the forefront of integrating pharmaceutical sciences with patient-centred care. This department focuses on the safe, effective, and rational use of medicines in real-world clinical settings. Our curriculum and training are designed to produce clinical pharmacists who can collaborate with healthcare teams, optimise drug therapy, improve patient outcomes, and contribute to public health. Clinical pharmacy bridges the gap between pharmacology and clinical practice, emphasising evidence-based medicine, therapeutic drug monitoring, patient counselling, and medication management.

❖ Vision

- To develop competent, compassionate, and clinically skilled pharmacists capable of delivering optimal pharmaceutical care, advancing medication safety, and contributing to holistic patient wellness in diverse healthcare settings.

❖ Mission

- Education & Training
- Patient-Centred Care
- Research & Evidence-Based Practice
- Community & Hospital Engagement
- Ethics & Professionalism:

❖ Laboratories & Facilities

- Clinical Skills & Simulation Lab
- Pharmacy Practice & Counseling Lab
- Therapeutic Drug Monitoring (TDM) Lab
- Computer-Assisted Learning Lab
- Hospital & Clinical Posting Facilities
- Research & Seminar Hall