VILASRAO DESHMUKH FOUNDATION,

SCHOOL OF PHARMACY, LATUR

New MIDC, Airport Road, Latur - 413 531

DTE CODE: 2254

PCI -2611

POs-COs Mapping

BP 101T: Human Anatomy & Physiology-I

CO-PO Mapping matrix for BP101T: Human Anatomy & Physiology – I, based on your Course Outcomes (CO1–CO6) and the defined Program Outcomes (PO1–PO11).

The relevance of each mapping is rated as: 3 = High relevance, 2 = Moderate relevance, 1 = Low relevance, Blank = Not relevant/applicable

Course Outcome \ Program Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1: Gross anatomy & physiological systems	3		2						2	2	1
CO2: Structure & function of cells/tissues	3		2	1						1	1
CO3: Signal transduction mechanisms	3		3	2							1
CO4: Anatomy & physiology of organs	3		2						2	1	1
CO5: Differentiate organ types	3		2								1
CO6: Apply knowledge for health awareness	2		1			2	2	2	3	2	2

Interpretation Highlights:

- **PO1 (Pharmaceutical Knowledge):** Strongly mapped to all COs (especially CO1–CO5), reflecting the foundational anatomy and physiology knowledge.
- **PO3 (Analytical and Problem Solving):** CO3 and CO2 involve critical understanding of signal mechanisms and biological structures.
- **PO9 (Social Responsibility & Public Health):** Strong link with CO6, since it involves applying anatomical knowledge to raise health awareness.
- **PO6 (Professional Identity), PO7 (Ethics), and PO8 (Communication):** Moderately mapped to CO6, which touches on real-life community health promotion.
- **PO11 (Lifelong Learning):** Low but present relevance for most COs, supporting continued learning of physiological advancements.
- **PO4 (Modern Tools):** Mildly connected to CO3 for understanding signal pathways using modern biological techniques.

Prof. Tigote A.A.
Name & Sign of Faculty Member

Name & Sign of IQAC Coordinator
Prof. Salunke A.A

BP102T: Pharmaceutical Analysis–I

CO-PO Mapping Matrix for **BP102T: Pharmaceutical Analysis–I**, based on your provided **Course Outcomes (CO1–CO6)** and **Program Outcomes (PO1–PO11)**.

The relevance of each mapping is rated as: 3 = High relevance, 2 = Moderate relevance, 1 = Low relevance, Blank = Not relevant/applicable

Course Outcome \ Program Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1: Understand principles & scope of analysis	3		2								2
CO2: Prepare standard volumetric solutions	3	2	2	2						1	2
CO3: Analytical errors & minimization methods	3		3	2			1			1	2
CO4: Principles of volumetric & electrochemical methods	3		3	3							2
CO5: Apply volumetric titration methods	3		3	3							2
CO6: Electrodes & electrochemical instrumentation	3		3	3							2

Interpretation Highlights:

- **PO1 (Pharmaceutical Sciences):** All COs relate to foundational and advanced pharmaceutical analytical knowledge.
- **PO3 (Problem Solving):** Error analysis, method applications, and interpretation involve strong critical thinking (CO3–CO6).
- **PO4 (Modern Tools & Tech):** Electrochemical instrumentation and volumetric techniques (CO2, CO4CO6) directly connect here.
- **O2 (Planning & Execution):** Preparing standard solutions (CO2) requires time/resource management.
- **PO10 (Environmental Awareness):** Minimizing analytical waste and error (CO2, CO3) ties into sustainable practices.
- **PO11 (Lifelong Learning):** Most COs involve principles and tools evolving with technology—justifying moderate relevance.
- **PO7 (Ethics):** CO3 has minor relevance as minimizing errors relates to integrity in data reporting.

Salunke

Prof. Salunke M.A

Name & Sign of Faculty Member

Prof. Rather S.S.

Name & Sign of IQAC Coordinator

BP 103T: Pharmaceutics-I

CO-PO Mapping Matrix for BP103T: Pharmaceutics–I, mapped against the defined Program Outcomes (PO1–PO11) using the relevance scale:

The relevance of each mapping is rated as: 3 = High relevance, 2 = Moderate relevance, 1 = Low relevance, Blank = Not relevant/applicable

Course Outcome \ Program Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1: History, scope, pharmacopoeias, prescriptions, calculations	3		2			2	1				2
CO2: Dosage forms and excipients	3		2	2						1	2
CO3: Monophasic & biphasic dosage forms	3		2	2						1	2
CO4: Powders – techniques & components	3	1	2	2							2
CO5: Semisolid dosage form selection & formulation	3		2	2						1	2
CO6: Pharmaceutical incompatibilities	3		3	1			2				2

Interpretation Highlights:

- **PO1 (Pharmaceutical Sciences):** All COs involve basic-to-intermediate formulation science.
- **PO3 (Analytical Skills):** CO6 (incompatibility resolution) and CO4–CO5 (formulation logic) require analytical thinking.
- **PO4 (Modern Tools & Tech):** Moderate relevance for formulation and evaluation of dosage forms (CO2–CO5).
- **PO6 (Professional Identity):** CO1 connects students to professional standards (pharmacopoeias, prescriptions).
- **PO10 (Environmental Awareness):** Low relevance in CO2–CO5, where excipient and solvent choices may affect sustainability.
- **PO11 (Lifelong Learning):** Present across all COs as the field continuously evolves.
- **PO2 (Planning):** Mild relevance in CO4 (technique application) involving logical sequencing.
- **PO7 (Ethics):** Slightly relevant in CO6 (incompatibility resolution linked to patient safety).

Name & Sign of Faculty Member
Prof. Utikar M. C.

Prof. Salunke M. A.
Name & Sign of IQAC Coordinator

BP 104T: Pharmaceutical Inorganic Chemistry-I

CO-PO Mapping Matrix for **BP104T: Pharmaceutical Inorganic Chemistry–I**, based on your provided **Course Outcomes (CO1–CO6)** and the standard **Program Outcomes (PO1–PO11)**.

The relevance of each mapping is rated as: 3 = High relevance, 2 = Moderate relevance, 1 = Low relevance, Blank = Not relevant/applicable

Course Outcome \ Program Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1: Impurities- sources and detection methods	3		2	2			2			1	2
CO2: Acid-base, buffers, tonicity	3		2	2							2
CO3: Physiological roles of ions; dental applications	3		2			2			2	1	2
CO4: GI and antimicrobial inorganic compounds	3		2						2	1	2
CO5: Expectorants, emetics, hematinic, antidotes, etc.	3		2				1		2	1	2
CO6: Radioisotopes & radiopharmaceuticals	3		3	3						2	2

Interpretation Highlights:

- **PO1 (Knowledge of Pharmaceutical Sciences):** Strongly mapped to all COs as the entire course is rooted in inorganic pharmaceutical principles.
- **PO3 (Problem-Solving):** Involved in understanding detection of impurities, mechanisms of action (CO1, CO5, CO6).
- **PO4 (Modern Tools and Technology):** Important for CO1 (detection), CO2 (buffer analysis), CO6 (radioisotope techniques).
- **PO6 (Professional Identity):** CO3 links to pharmacist roles in dental/medical fields.
- **PO7 (Ethics):** Minor relevance in impurity control and use of safe compounds (CO1, CO5).
- **PO9 (Social Responsibility):** Relevant in CO3–CO5, as they involve public health and therapeutic outcomes.
- **PO10 (Environmental Awareness):** Mild relevance in CO1, CO4, CO5, and CO6, due to disposal and safe handling of chemicals and radiopharmaceuticals.
- **PO11 (Lifelong Learning):** Moderate relevance across all COs due to evolving standards, especially in CO6.

Name & Sign of Faculty Member

Ms. Nagargoje S.V.

Name & Sign of IQAC Coordinator

Prof-Salunke M.A.

BP 105T: Communication Skills

CO-PO Mapping Matrix for BP105T: Communication Skills, aligned with the standard Program Outcomes (PO1–PO11) and your defined Course Outcomes (CO1–CO6).

The relevance of each mapping is rated as: 3 = High relevance, 2 = Moderate relevance, 1 = Low relevance, Blank = Not relevant/applicable

Course Outcome \ Program Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1: Recognize behavioral & communication skills	1				2	2	2	3	2		2
CO2: Apply verbal, non-verbal, visual techniques					1		1	3			2
CO3: Writing and listening for professional development								3			2
CO4: Confidence in interviews and group discussions					2			3			2
CO5: Leadership & interpersonal communication		1			3	2		3	1		2
CO6: Deliver messages with body language & format					2			3			2

Interpretation Highlights:

- **PO8 (Effective Communication):** Central to all COs; hence mapped as **high (3)** across CO1–CO6.
- **PO5 (Leadership and Teamwork):** Strong mapping in CO4, CO5, CO6 where interpersonal and team-based communication is critical.
- **PO6 (Professional Identity):** Communication shapes a pharmacist's professional image- reflected in CO1, CO5.
- **PO7 (Ethical Practice):** Some relevance in CO1 and CO2 (sensitivity, cultural tone, non-verbal ethics).
- **PO9 (Social Responsibility):** Moderate mapping in CO1 and CO5 when communication affects public understanding and health behaviour.
- **PO11 (Lifelong Learning):** Communication skill development is lifelong; hence, moderately mapped to all COs.
- **PO2 (Planning & Execution):** Mild relevance in CO5 (leadership, teamwork).
- **PO1 (Pharma Knowledge):** Slight relevance in CO1 where behavioural skills integrate with pharmacy role.

Name & Sign of Faculty Member

Ms. Dhone Y. S.

Salunke

Prof. Salunke M. A.

Name & Sign of IQAC Coordinator

BP 106RBT: Remedial Biology

CO-PO Mapping Matrix for **BP106RBT: Remedial Biology**, based on your Course Outcomes (CO1–CO3) and the standard Program Outcomes (PO1–PO11).

The relevance of each mapping is rated as: 3 = High relevance, 2 = Moderate relevance, 1 = Low relevance, Blank = Not relevant/applicable

Course Outcome \ Program Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1: Classification & characteristics of 5 kingdoms	3		2							1	2
CO2: Anatomy & physiology of plants	3		2	1						1	2
CO3: Anatomy & physiology of animals (incl. humans)	3		2			1			1	1	2

Interpretation Highlights:

- **PO1 (Knowledge of Pharmaceutical Sciences):** Strongly mapped as this subject lays the biological foundation for pharmacy students.
- **PO3 (Analytical Skills):** Needed to understand and distinguish between physiological processes in various organisms.
- **PO10 (Environmental Awareness):** Basic biological diversity and classification (CO1) link to ecological understanding.
- **PO4 (Modern Tools):** Slight relevance in CO2 if practical or microscopy techniques are introduced.
- **PO6 (Professional Identity):** CO3 relates to foundational knowledge of human biology, essential to the pharmacy role.
- **PO9 (Social Responsibility):** Understanding human systems (CO3) ties into health awareness and community health.
- **PO11 (Lifelong Learning):** Encourages continued learning, especially for students without a prior biology background.

Name & Sign of Faculty Member

Ms. Dhone Y.S.

Name & Sign of IQAC Coordinator

Prof. Saluoke P.A.

BP 106RMT: Remedial Mathematics

CO-PO Mapping Matrix for **BP106RMT: Remedial Mathematics**, mapped against the standard **Program Outcomes (PO1–PO11)** and your defined **Course Outcomes (CO1–CO6)**.

The relevance of each mapping is rated as: 3 = High relevance, 2 = Moderate relevance, 1 = Low relevance, Blank = Not relevant/applicable

Course Outcome \ Program Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1: Apply partial fractions, logarithms, continuity	3		2								2
CO2: Solve linear equations for pharmacokinetics	3		3								2
CO3: Calculus in pharmacy problems	3		3								2
CO4: Analytical geometry in pharmaceutical contexts	2		2								2
CO5: Use integration in pharma processes	3		3								2
CO6: Differential eqns & Laplace in pharma models	3		3								2

Interpretation Highlights:

- **PO1 (Pharmaceutical Sciences):** Strongly mapped as math is foundational to understanding pharmacokinetics, calculations, and modelling.
- **PO3 (Analytical and Problem Solving):** Central to all COs, especially CO2, CO3, CO5, and CO6 involving advanced mathematical modeling.
- **PO11 (Lifelong Learning):** Math is a lifelong tool for adapting to new technologies and methods in pharmaceutical sciences.
- **PO4 (Modern Tools & Tech):** Can be linked in practice via simulation tools (not directly shown here unless lab work is involved).
- **PO2 (Planning):** May be relevant where students apply systematic steps for solving models (minor).
- **Other POs (PO5–PO10)**: Typically, less relevant unless integrated with communication or ethics-focused topics, which is rare for Remedial Mathematics.

Name & Sign of Faculty Member

Ms. Dhone Y.S.

Salunke
Prof. Salunke B.A.

Name & Sign of IQAC Coordinator

BP 107P: Human Anatomy & Physiology-I (Practical)

CO-PO Mapping Matrix for **BP107P: Human Anatomy & Physiology–I (Practical)**, mapped against the standard **Program Outcomes (PO1–PO11)** and your defined **Course Outcomes (CO1–CO6)**.

The relevance of each mapping is rated as: 3 = High relevance, 2 = Moderate relevance, 1 = Low relevance, Blank = Not relevant/applicable

Course Outcome \ Program Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1: Use of microscope & tissue study	3		2	2							2
CO2: Identify tissues & organs	3		2							1	2
CO3: Identify bones of skeletal system	3		2								2
CO4: Perform & interpret haematological tests	3		3	2			1			1	2
CO5: Understand physiological body mechanisms	3		2								2
CO6: Relate symptoms to pathophysiology	3		3			2	1		2		2

Interpretation Highlights:

- **PO1 (Pharmaceutical Sciences):** Strong relevance across all COs due to focus on anatomical and physiological fundamentals.
- **PO3 (Problem Solving & Analysis):** High for CO4 and CO6—interpreting tests and clinical symptom correlation.
- **PO4 (Modern Tools & Technology):** Relevant in CO1 and CO4 due to microscope handling and diagnostic techniques.
- **PO6 (Professional Identity):** Present in CO6 (clinical relevance) and moderately in understanding of human health.
- **PO7 (Ethics & Integrity):** Mildly relevant in CO4 and CO6 when dealing with patient data or clinical interpretation.
- **PO9 (Social Responsibility):** CO6 relates to recognizing public health implications of pathophysiology.
- **PO10 (Environment):** Minor mapping in CO2–CO4 where biological waste or lab safety might apply.
- **PO11 (Lifelong Learning):** Present in all COs due to evolving techniques in diagnostics and anatomical study.

Tigote

Name & Sign of Faculty Member

Prof. Tigote A.A.

Prof. Salunke P.A.

Name & Sign of IQAC Coordinator

BP 108P: Pharmaceutical Analysis-I (Practical)

CO-PO Mapping Matrix for **BP108P: Pharmaceutical Analysis–I (Practical)**, based on your provided **Course Outcomes (CO1–CO6)** and the standard **Program Outcomes (PO1–PO11)**.

The relevance of each mapping is rated as: 3 = High relevance, 2 = Moderate relevance, 1 = Low relevance, Blank = Not relevant/applicable

Course Outcome \ Program Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1: Handling & calibration of volumetric apparatus	3		2	3						1	2
CO2: Preparation & standardization of solutions	3	2	2	2						1	2
CO3: Principles of volumetric analysis	3		2	2							2
CO4: Assay using titration techniques	3		3	2			1			1	2
CO5: Data interpretation & analytical calculations	3		3	2							2
CO6: Electrochemical methods in analysis	3		3	3						1	2

Interpretation Highlights:

- **PO1 (Pharmaceutical Sciences):** Strongly relevant in all COs, as the course builds core analytical concepts.
- **PO3 (Analytical and Problem Solving):** Highly relevant in CO4–CO6 for interpretation, calculation, and problem-solving in experiments.
- **PO4 (Modern Tools & Technology):** Especially relevant in CO1, CO4, and CO6 for instrumentation and advanced techniques.
- **PO2 (Planning and Execution):** Mapped in CO2 where accurate preparation and time/resource management are essential.
- **PO10 (Environmental Awareness):** Minor relevance for awareness of waste and safety in lab practices.
- **PO7 (Ethics):** Slightly relevant in CO4 where accurate reporting and honesty in assay results matter.
- **PO11 (Lifelong Learning):** Present in all COs as analytical techniques and instruments evolve continuously.

Name & Sign of Faculty Member
Prof. Ranher S.S.

Msalunke
Prof. Salunke M.A
Name & Sign of IQAC Coordinator

BP 109P: Pharmaceutics-I (Practical)

CO-PO Mapping Matrix for BP109P: Pharmaceutics–I (Practical) based on the provided Course Outcomes (CO1–CO6) and Program Outcomes (PO1–PO11).

The relevance of each mapping is rated as: 3 = High relevance, 2 = Moderate relevance, 1 = Low relevance, Blank = Not relevant/applicable

Course Outcome \ Program Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1: Understand role & selection of excipients	3		2	2							2
CO2: Differentiate dosage forms	3		2	1							2
CO3: Calculate ingredient quantities	3	2	3								2
CO4: Prepare dosage forms in lab	3	2	3	2			1			1	2
CO5: Select excipients for stable formulations	3		2	2						1	2
CO6: Integrate formulation techniques	3	2	3	2						1	3

Interpretation Highlights:

- **PO1** (Pharmaceutical Sciences): Strongly relevant across all COs, particularly in CO1, CO2, CO3, and CO4.
- **PO3** (Analytical and Problem-Solving): Essential in CO3, CO4, and CO6 for applying theoretical knowledge in lab work.
- **PO4** (Modern Tools & Techniques): Relevant in preparation (CO4), excipient selection (CO5), and formulation development (CO6).
- **PO2** (Planning & Execution): CO3 and CO6 require careful calculations and integration of formulation processes.
- **PO10** (Environmental Awareness): Slightly present due to safe lab practices and sustainable formulation choices.
- **PO7** (Ethics): Minor consideration in accurate lab work and adherence to good laboratory practices (CO4).
- **PO11** (Lifelong Learning): Important in all COs for keeping pace with evolving formulation techniques and standards.

Name & Sign of Faculty Member
Prof. Utikar M.C.

Name & Sign of IQAC Coordinator

BP 110P: Pharmaceutical Inorganic Chemistry-I (Practical)

CO-PO Mapping Matrix for **BP110P: Pharmaceutical Inorganic Chemistry–I (Practical)** based on your provided **Course Outcomes (CO1–CO6)** and the standard **Program Outcomes (PO1–PO11)**.

The relevance of each mapping is rated as: 3 = High relevance, 2 = Moderate relevance, 1 = Low relevance, Blank = Not relevant/applicable

Course Outcome \ Program Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1: Perform pharmacopeial limit tests	3	2	3	2			2				2
CO2: Identify & quantify inorganic impurities	3		3	2			2				2
CO3: Conduct qualitative analysis	3		3	2							2
CO4: Perform tests to confirm identity	3		2	2							1
CO5: Execute pharmacopeial purity tests	3	1	3	2			2				2
CO6: Synthesize and purify pharmaceutical-grade compounds	3	2	3	3						1	3

Interpretation Highlights:

- **PO1 (Knowledge of Pharmaceutical Sciences):** Strongly aligned across all COs due to deep involvement in pharmacopeial procedures and chemical knowledge.
- **PO3 (Analytical and Problem-Solving):** Highly relevant for all analytical procedures and synthesis.
- **PO4 (Modern Tools & Technology):** Practical lab techniques and identification methods involve use of standard tools.
- **PO2 (Planning and Execution):** Needed in CO1, CO5, and CO6 for executing multi-step practical protocols with precision.
- **PO7 (Ethical Practice):** Ensuring adherence to pharmacopeial standards and responsible lab conduct.
- **PO10 (Environmental Awareness):** Slight relevance in CO6 regarding safe handling of chemicals during synthesis.
- **PO11 (Lifelong Learning):** Essential for continuous adaptation to new pharmacopeial revisions and inorganic testing techniques.

Name & Sign of Faculty Member

Ms. Nagargoje S.V.

Name & Sign of IQAC Coordinator

Prof. Salunke M.A.

BP 111P: Communication Skills (Practical)

CO–PO Mapping Matrix for **BP111P: Communication Skills (Practical)** based on your listed **Course Outcomes (CO1–CO6)** and **Program Outcomes (PO1–PO11).**

The relevance of each mapping is rated as: 3 = High relevance, 2 = Moderate relevance, 1 = Low relevance, Blank = Not relevant/applicable

Course Outcome \ Program Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1: Enhance fluency & confidence					2	2		3			2
CO2: Improve pronunciation & word stress						1		3			2
CO3: Oral & written communication for growth						2		3			2
CO4: Use diverse communication strategies			1		2	2		3			2
CO5: Structure & deliver content effectively		1			2	2		3			2
CO6: Job prep, GDs, & interviews		2			3	2		3			3

Interpretation Highlights:

- **PO8 (Effective Communication Skills):** Core PO for all COs; highly relevant throughout the course.
- **PO5 (Leadership & Teamwork):** Required for group discussions, team presentations, and job preparation.
- **PO6 (Professional Identity):** Supports building confidence and clarity in pharmacy-specific communication.
- **PO2 (Strategic Planning):** Reflected in preparing for interviews, organizing content, and time management.
- **PO11 (Lifelong Learning):** Communication is a lifelong skill, emphasized in all COs.
- **PO3 (Analytical & Problem Solving):** Low-level relevance where communication strategy choice is based on context.

Name & Sign of Faculty Member

Ms. Phone Y.S.

Pbalunke

Prof. Salunke M.A.

Name & Sign of IQAC Coordinator

BP 112RBP: Remedial Biology (Practical)

CO–PO Mapping Matrix for **BP112RBP: Remedial Biology (Practical)**, aligned with the **Program Outcomes (PO1–PO11)** and your given **Course Outcomes (CO1–CO3)**.

The relevance of each mapping is rated as: 3 = High relevance, 2 = Moderate relevance, 1 = Low relevance, Blank = Not relevant/applicable.

Course Outcome \ Program Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1: Microscopy principles and operation	3		2	3				1		1	2
CO2: Structure & function of cells/tissues	3		3	2							2
CO3: Diagnostic tools for body system study	3		2	3				2	2	1	2

Interpretation Highlights:

- **PO1 (Knowledge of Pharmaceutical Sciences):** All COs are deeply rooted in biological and physiological fundamentals.
- **PO3 (Analytical & Problem-Solving Skills):** Especially relevant in understanding diagnostic tools and cellular mechanisms.
- **PO4 (Modern Tools & Technology):** Strongly associated with use and understanding of microscopes and diagnostic devices.
- **PO11 (Lifelong Learning):** Reinforces continuous learning through evolving bio-diagnostic technology.
- **PO9 (Social Responsibility & Public Health):** Indirect relevance in CO3 due to awareness of health assessments and diagnostics.
- **PO8 (Communication Skills):** Minor relevance where students explain findings or techniques.

Name & Sign of Faculty Member
Ms. Dhone Y. S.

Name & Sign of IQAC Coordinator
Prof. Salunke P.A.

BP 201T: Anatomy & Physiology-II

CO–PO Mapping Matrix with Relevance Levels for **BP 201T: Anatomy & Physiology-II**, based on the strength of correlation between each Course Outcome (CO) and Program Outcome (PO).

The relevance of each mapping is rated as: 3 = High relevance, 2 = Moderate relevance, 1 = Low relevance, Blank = Not relevant/applicable.

CO \ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1	3		3			2					
CO2	3		2								
CO3	3		3			2					
CO4	3		3			2			2		
CO5	3		2			2					
CO6						3		3			2

Interpretation Highlights:

- **PO1** (Knowledge): Highly relevant to **CO1 to CO5**.
- **PO3** (Analytical Skills): Strong mapping with **CO1, CO3, CO4**.
- **PO6** (Professional Identity): Strong in **CO1, CO3, CO4, CO5, CO6**.
- **PO8** (Communication): Strongly linked with **CO6**.
- **PO11** (Lifelong Learning): Moderately relevant to **CO6**.

Tigote

Name & Sign of Faculty Member

Ms. Tigote. A. A.

PGaluake

PEO A. Galunke P.A.

Name & Sign of IQAC Coordinator

BP 202T: Pharmaceutical Organic Chemistry-I

CO–PO Mapping Matrix with Relevance Levels for **BP 202T: Pharmaceutical Organic Chemistry-I,** based on the strength of correlation between each Course Outcome (CO) and Program Outcome (PO).

The relevance of each mapping is rated as: 3 = High relevance, 2 = Moderate relevance, 1 = Low relevance, Blank = Not relevant/applicable.

Course Outcomes (COs)	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1. Determine the structure and nomenclature of organic compounds and describe their pharmaceutical applications.	3		2								
CO2. Understand and differentiate types of isomerism.	3		3								
CO3. Explain hybridization and bonding in organic molecules.	3		2								
CO4. Interpret named organic reactions and reaction orientation principles.	3		3								
CO5. Describe the preparation, reactions, and reactivity of functional groups like alkanes, alkenes, alcohols, aldehydes, and amines.	3		3								
CO6. Illustrate mechanisms of nucleophilic substitution, addition, and elimination reactions.	3		3	2							1

Interpretation Highlights:

- **PO1 (Knowledge of Pharmaceutical Sciences): Strongly mapped across all COs, especially CO1–CO6.**
- **PO3 (Analytical and Problem-Solving Skills): Strong link with reaction mechanisms and interpretation (CO2, CO4, CO5, CO6).**
- **PO4 (Proficiency in Modern Tools): Relevant to reaction mechanisms and synthesis (CO6).**
- **PO11 (Lifelong Learning): Slight link through complex reaction understanding (CO6).**

Name & Sign of Faculty Member

Mr Waghmare V.S.

Msalunke

Prof. Salunke M.A.

Name & Sign of IQAC Coordinator

BP 203T: Biochemistry

CO–PO Mapping Matrix with Relevance Levels for **BP 203T: Biochemistry,** based on the strength of correlation between each Course Outcome (CO) and Program Outcome (PO).

The relevance of each mapping is rated as: 3 = High relevance, 2 = Moderate relevance, 1 = Low relevance, Blank = Not relevant/applicable.

Course Outcomes (COs)	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1. Explain classifications and functions of carbohydrates, lipids, amino acids, proteins, and nucleic acids.	3		2								
CO2. Describe carbohydrate metabolism and its physiological and pathological implications.	3		3			2					
CO3. Analyse lipid metabolism, amino acid catabolism, and their disorders.	3		3			2					
CO4. Understand the biosynthesis and degradation of nucleotides and related genetic processes.	3		3			2					
CO5. Discuss enzyme kinetics, classification, regulation, and clinical relevance.	3		3	2							
CO6. Interpret organ function tests and fundamentals of nutrition and basal metabolic rate.	3		2			2			2		1

Interpretation Highlights:

- **PO1** (Pharmaceutical Knowledge): Strongly linked across all COs.
- **PO3** (Analytical & Problem Solving): Strongly linked to metabolic pathways, enzyme kinetics, and biochemistry-based analysis (CO2–CO6).
- **PO4** (Modern Tools): Applicable in enzyme and metabolism studies (CO5).
- **PO6** (Professional Identity): Relevant in understanding disease and diagnostic relevance (CO2–CO4, CO6).
- **PO9** (Social & Public Health): Tied to nutritional and metabolic disease understanding (CO6).
- **PO11** (Lifelong Learning): Moderate relevance for continued learning in biochemistry applications (CO6).

Name & Sign of Faculty Member
Patil Aishwarya S.

Name & Sign of IQAC Coordinator
Prof. Salunke M.A.

CO–PO Mapping Matrix with Relevance Levels for **BP 204T: Pathophysiology,** based on the strength of correlation between each Course Outcome (CO) and Program Outcome (PO).

The relevance of each mapping is rated as: 3 = High relevance, 2 = Moderate relevance, 1 = Low relevance, Blank = Not relevant/applicable.

Course Outcomes (COs)	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1. Define the pathogenesis of common human diseases.	3		2								
CO2. Identify etiologies and risk factors for various diseases.	3		3								
CO3. Understand laboratory and diagnostic methods relevant to disease states.	3		3	2		2					
CO4. Correlate pathophysiological knowledge with social health awareness.	2		2			2			3		
CO5. Relate systemic interactions and promote holistic disease understanding and treatment.	3		3			3			2		
CO6. Recognize and interpret signs and symptoms of common diseases.	3		3			2					1

Interpretation Highlights:

- **PO1 (Pharmaceutical Sciences):** Strongly relevant across all COs as pathology is foundational.
- **PO3 (Analytical & Problem Solving):** Highly relevant for interpretation, diagnosis, and systemic understanding.
- **PO4 (Tools & Technology):** Relevant in diagnostics (CO3).
- **PO6 (Professional Identity):** Mapped to CO3–CO6 for understanding professional roles in healthcare.
- **PO9 (Social Responsibility & Health):** Strong link with CO4 and CO5 for promoting health awareness.
- **PO11 (Lifelong Learning):** Minor link through continued recognition and application of knowledge (CO6).

Name & Sign of Faculty Member
Ms. Suryawanshi A.S.

Name & Sign of IQAC Coordinator
Prof. Salunke P.A

BP 205T: Computer Applications in Pharmacy

CO–PO Mapping Matrix with Relevance Levels for **BP 205T: Computer Applications in Pharmacy,** based on the strength of correlation between each Course Outcome (CO) and Program Outcome (PO).

The relevance of each mapping is rated as: 3 = High relevance, 2 = Moderate relevance, 1 = Low relevance, Blank = Not relevant/applicable.

Course Outcomes (COs)	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1. Understand computer fundamentals, number systems, and pharmacy-specific databases.	2			3							
CO2. Use web technologies like HTML, XML, CSS for pharmaceutical data.	2			3							
CO3. Apply computer applications in pharmacokinetics, drug design, hospital and clinical pharmacy.	3		3	3		2					
CO4. Explain bioinformatics and its applications in pharmaceutical development.	3		2	3		2					
CO5. Analyse preclinical data using various computational tools.	3		3	3							1
CO6. Stay updated on recent technological trends in healthcare.	2			3						2	3

Interpretation Highlights:

- **PO1 (Pharmaceutical Sciences):** Linked to drug design, databases, bioinformatics.
- **PO3 (Analytical and Problem-Solving):** Strong mapping to data interpretation and analysis tasks (CO3–CO5).
- **PO4 (Modern Tools & Technology):** High across all COs.
- **PO6 (Professional Identity):** Relevant where digital tools are applied in professional healthcare settings.
- **PO10 (Environmental Awareness):** Moderately relevant in CO6 when trends promote sustainable/eco-friendly technology.
- **PO11 (Lifelong Learning):** Strong for CO6 to promote tech adaptability.

Name & Sign of Faculty Member

Ms. Utikar M. C

Name & Sign of IQAC Coordinator

Prof. Salunke M.A.

CO–PO Mapping Matrix with Relevance Levels for **BP 206T: Environmental Sciences,** based on the strength of correlation between each Course Outcome (CO) and Program Outcome (PO).

The relevance of each mapping is rated as: 3 = High relevance, 2 = Moderate relevance, 1 = Low relevance, Blank = Not relevant/applicable.

Course Outcomes (COs)	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1. Develop awareness of environmental issues and climate change.	2								2	3	2
CO2. Understand types and importance of natural resources.	2								2	3	2
CO3. Describe components of the environment and ecosystems.	2								2	3	2
CO4. Identify sources and effects of environmental pollution.	2								2	3	2
CO5. Explain ecological principles and interactions.	2								2	3	2
CO6. Recognize human impact on environmental sustainability.	2								2	3	2

Interpretation Highlights:

- **PO10 (Environmental Awareness & Sustainability):** Direct and strong mapping with **all COs** (rated 3).
- **PO9 (Social Responsibility & Public Health):** Strongly linked due to the societal implications of environmental education.
- **PO11 (Lifelong Learning):** Moderately relevant for encouraging lifelong environmental responsibility.
- **PO1 (Pharmaceutical Sciences):** Basic awareness relevance (rated 2) — especially in environmental impact of pharmaceutical practices.

Name & Sign of Faculty Member

Ms. Utikar M.C

Name & Sign of IQAC Coordinator

Prof. Salunke M.A

BP 207P: Human Anatomy & Physiology-II

CO–PO Mapping Matrix with Relevance Levels for **BP 207P: Human Anatomy & Physiology-II,** based on the strength of correlation between each Course Outcome (CO) and Program Outcome (PO).

The relevance of each mapping is rated as: 3 = High relevance, 2 = Moderate relevance, 1 = Low relevance, Blank = Not relevant/applicable.

Course Outcomes (COs)	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1. Perform experiments on healthy human volunteers to verify and understand fundamental physiological processes.	3		3	2		2					1
CO2. Examine and interpret the structure and function of various human body systems using specimens, models, charts, and other educational tools.	3		2	2		2					1

Interpretation Highlights:

- **PO1 (Pharmaceutical Sciences):** Strongly relevant due to core physiological knowledge being applied practically.
- **PO3 (Analytical & Problem-Solving):** Applied in interpreting physiological functions and observations.
- **PO4 (Modern Tools & Technology):** Use of lab tools, models, and techniques makes this highly relevant.
- **PO6 (Professional Identity):** Understanding real human data cultivates professional understanding in a healthcare setting.
- **PO11 (Lifelong Learning):** Encourages reflective and continuous learning through practical interpretation.

Tigale

Name & Sign of Faculty Member

Ms. Tigale. A.A.

Salunke

Prof. Salunke P.A.

Name & Sign of IQAC Coordinator

BP 208P: Pharmaceutical Organic Chemistry (Practical)

CO–PO Mapping Matrix with Relevance Levels for **BP 208P: Pharmaceutical Organic Chemistry (Practical),** based on the strength of correlation between each Course Outcome (CO) and Program Outcome (PO).

The relevance of each mapping is rated as: 3 = High relevance, 2 = Moderate relevance, 1 = Low relevance, Blank = Not relevant/applicable.

CO \ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1	3	2	3	2						1	2
CO2	3		3	2							2
CO3	3		3	2							2
CO4	3		3	2						2	2
CO5	3	2	3	2							3
CO6	3		2	3						2	2

Interpretation Highlights:

- **PO1 (Knowledge of Pharmaceutical Sciences) and PO3 (Analytical and Problem-Solving Skills)** are highly relevant (3) across all COs.
- **PO4** (Proficiency in Modern Tools and Technology) is moderately to highly relevant (2–3), especially for CO6.
- **PO11** (Lifelong Learning) supports all COs with medium to high relevance (2–3).
- **PO10** (Environmental Awareness) has low to medium relevance (1–2) for experiments involving solvents and lab safety.
- **PO2** (Strategic Planning) has medium relevance (2) for CO1 and CO5, which involve experiment execution.
- Other **POs (PO5–PO9)** are not directly applicable in this practical course, hence left blank.

Name & Sign of Faculty Member
Mr. Waghmare V.S.

Msalunke
Prof Salunke M.A
Name & Sign of IQAC Coordinator

BP 209P: Biochemistry (Practical)

CO–PO Mapping Matrix with Relevance Levels for **BP 209P: Biochemistry (Practical),** based on the strength of correlation between each Course Outcome (CO) and Program Outcome (PO).

The relevance of each mapping is rated as: 3 = High relevance, 2 = Moderate relevance, 1 = Low relevance, Blank = Not relevant/applicable.

CO \ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1	3		3	2					2	1	2
CO2	3	2	3	3							2
CO3	3	2	3	2					2		2
CO4	3		3	2					2	1	2
CO5	3		3	3							3
CO6	3		3	3						2	2

Interpretation Highlights:

- **PO1 (Knowledge of Pharmaceutical Sciences):** Strong relevance (3) across all COs due to direct application of biochemical knowledge.
- **PO3 (Analytical and Problem-Solving Skills):** Highly relevant (3) as each CO involves analysis, interpretation, and application of biochemical techniques.
- **PO4 (Modern Tools and Technology):** Medium to high relevance (2–3) for CO2 to CO6 where instruments (e.g., pH meter, polarimeter) and methods are used.
- **PO11 (Lifelong Learning):** Medium to high relevance (2–3) due to ongoing skill development in evolving biochemical techniques.
- **PO2 (Strategic Planning and Execution):** Relevant in CO2 and CO3 for preparing solutions and performing quantitative estimations.
- **PO9 (Social Responsibility and Public Health):** Appears in CO1, CO3, CO4 as the tests relate to diagnostic insights and public health monitoring.
- **PO10 (Environmental Awareness and Sustainability):** Low to medium relevance (1–2) in CO1, CO4, CO6 where chemical waste and biological safety are involved.

Name & Sign of Faculty Member

Patil Aishwarya S.

Name & Sign of IQAC Coordinator

Prof. Salunke M. A.

BP 210P: Computer Applications in Pharmacy (Practical)

CO–PO Mapping Matrix with Relevance Levels for **BP 210P: Computer Applications in Pharmacy (Practical),** based on the strength of correlation between each Course Outcome (CO) and Program Outcome (PO).

The relevance of each mapping is rated as: 3 = High relevance, 2 = Moderate relevance, 1 = Low relevance, Blank = Not relevant/applicable.

CO \ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1	2	2	2	3				3	2		2
CO2	2		2	3				2			2
CO3	1		2	3				2			2
CO4	3	2	3	3				3			3
CO5	3	2	3	3				2			3
CO6	2	2	3	3				2	2		3

Interpretation Highlights:

- **PO4 (Proficiency in Modern Tools and Technology):** Strong relevance (3) across all COs as the course centres around MS Office, HTML, and databases.
- **PO3 (Analytical and Problem-Solving Skills):** High (3) for CO4 to CO6 where data handling, reporting, and customization require problem-solving.
- **PO11 (Commitment to Lifelong Learning):** Important throughout (2–3) as students must adapt to new technologies and software over time.
- **PO1 (Knowledge of Pharmaceutical Sciences):** Medium relevance (2–3), as applications are tailored for pharmacy-related tasks.
- **PO2 (Strategic Planning):** Medium relevance (2) where tasks involve planning document structures, reports, or database designs.
- **PO8 (Effective Communication):** Especially important for CO1, CO2, CO3, and CO4 due to documentation, presentations, and web-based communication.
- **PO9 (Social Responsibility and Public Health):** Appears in CO1 and CO6, where patient data and healthcare relevance are involved.

Name & Sign of Faculty Member

Ms. Utikar M.C

Name & Sign of IQAC Coordinator

Prof. Salunke M.A

BP 301T: Pharmaceutical Organic Chemistry-II

CO–PO Mapping Matrix with Relevance Levels for **BP 301T: Pharmaceutical Organic Chemistry-II,** based on the strength of correlation between each Course Outcome (CO) and Program Outcome (PO).

The relevance of each mapping is rated as: 3 = High relevance, 2 = Moderate relevance, 1 = Low relevance, Blank = Not relevant/applicable.

CO \ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1	3		3								2
CO2	3		3								2
CO3	3		2						2	2	2
CO4	3		3								2
CO5	3		2	1							2
CO6	3		3			2			2		2

Interpretation Highlights:

- **PO1 (Knowledge of Pharmaceutical Sciences):** Highly relevant (3) to all COs as the course deepens foundational and advanced organic chemistry knowledge.
- **PO3 (Analytical and Problem-Solving Skills):** Highly relevant (3) to most COs, given the emphasis on chemical behaviour analysis, structure-function relationships, and reactivity.
- **PO11 (Commitment to Lifelong Learning):** Medium relevance (2) throughout, as the course builds critical thinking and a base for advanced study and research.
- **PO4 (Modern Tools and Technology):** Minor relevance (1) for CO5, potentially involving visualization tools like molecular models.
- **PO6 (Professional Identity):** Medium relevance (2) in CO6, where medicinal chemistry connects structural features to pharmacological applications.
- **PO9 (Social Responsibility and Public Health):** Medium relevance (2) in CO3 and CO6, linking lipid analysis and drug chemistry to health outcomes.
- **PO10 (Environmental Awareness):** Relevant (2) in CO3, as lipid sources and processing have implications for sustainability.

Name & Sign of Faculty Member
Mr. Waghmare V.S.

Name & Sign of IQAC Coordinator
Prof. Salunke M.A

BP 302T: Physical Pharmaceutics-I

CO–PO Mapping Matrix with Relevance Levels for **BP 302T: Physical Pharmaceutics-I,** based on the strength of correlation between each Course Outcome (CO) and Program Outcome (PO).

The relevance of each mapping is rated as: 3 = High relevance, 2 = Moderate relevance, 1 = Low relevance, Blank = Not relevant/applicable.

CO \ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1	3		2							1	2
CO2	3	2	2							1	2
CO3	3		3							1	2
CO4	3		3	1							2
CO5	3		3								2
CO6	3	2	3						2	1	2

Interpretation Highlights:

- **PO1 (Knowledge of Pharmaceutical Sciences):** Highly relevant (3) for all COs, as the course is rooted in core principles of physical chemistry applied to pharmaceutics.
- **PO3 (Analytical and Problem-Solving Skills):** Strong relevance (3) for CO3 to CO6 due to application of theoretical knowledge to formulation-related problem-solving.
- **PO11 (Commitment to Lifelong Learning):** Medium relevance (2) across COs as the concepts are foundational for further pharmaceutical development.
- **PO2 (Strategic Planning):** Medium relevance (2) in CO2 and CO6, involving excipient selection and formulation balancing.
- **PO9 (Social Responsibility and Public Health):** Appears in CO6 (2), as isotonicity and buffer systems directly affect patient safety and drug effectiveness.
- **PO4 (Modern Tools and Technology):** Minor relevance (1) in CO4 where interfacial phenomena might involve instrumentation or simulation.
- **PO10 (Environmental Awareness):** Low relevance (1) in CO1–CO3 where solvents and formulation strategies can impact sustainability.

Name & Sign of Faculty Member
Prof. Shaikh K.K.

Name & Sign of IQAC Coordinator
Prof. Salunke P.A.

BP 303T: Pharmaceutical Microbiology

CO–PO Mapping Matrix with Relevance Levels for **BP 303T: Pharmaceutical Microbiology,** based on the strength of correlation between each Course Outcome (CO) and Program Outcome (PO).

The relevance of each mapping is rated as: 3 = High relevance, 2 = Moderate relevance, 1 = Low relevance, Blank = Not relevant/applicable.

CO \ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1	3		3	2						1	2
CO2	3		3	2			2		2	2	2
CO3	3		3	2					2		2
CO4	3	2	3	2		2	2		2		2
CO5	3		2						2	2	2
CO6	3		2							1	2

Interpretation Highlights:

- **PO1 (Knowledge of Pharmaceutical Sciences):** Strongly relevant (3) across all COs due to the biological and pharmaceutical foundation of microbiology.
- **PO3 (Analytical and Problem-Solving Skills):** Highly relevant (3) in CO1–CO4 due to experimental design, data analysis, and sterility verification.
- **PO4 (Modern Tools and Technology):** Medium relevance (2) in CO1–CO4 where instruments and aseptic techniques are used.
- **PO7 (Ethical Practice and Integrity):** Relevant (2) in CO2 and CO4, which involve sterility, cleanroom protocols, and handling of biological materials responsibly.
- **PO9 (Social Responsibility and Public Health):** Medium relevance (2) in CO2 to CO5 due to the significance of microbial control in public safety and pharmaceutical production.
- **PO10 (Environmental Awareness):** Medium to low relevance (1–2) in CO1, CO2, and CO5, where sterilization and waste handling impact environmental safety.
- **PO6 (Professional Identity):** Medium relevance (2) in CO4, as pharmacists in industry or hospital settings must apply aseptic and microbiological principles confidently.
- **PO11 (Lifelong Learning):** Medium relevance (2) across all COs, as microbiology techniques and regulations evolve continuously.
- **PO2 (Strategic Planning):** Relevant (2) in CO4, where planning cleanroom operations and executing sterile procedures are key.

Name & Sign of Faculty Member

PROF. PURI R.A.

Name & Sign of IQAC Coordinator

Prof. Galunke M.A.

BP 304T: Pharmaceutical Engineering

CO–PO Mapping Matrix with Relevance Levels for **BP 304T: Pharmaceutical Engineering,** based on the strength of correlation between each Course Outcome (CO) and Program Outcome (PO).

The relevance of each mapping is rated as: 3 = High relevance, 2 = Moderate relevance, 1 = Low relevance, Blank = Not relevant/applicable.

CO \ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1	3	2	3	2						1	2
CO2	3		3	2						1	2
CO3	3	2	3	2						1	3
CO4	3		3	2						1	2
CO5	3		3	2						1	2
CO6	3		2	2						2	2

Interpretation Highlights:

- **PO1 (Knowledge of Pharmaceutical Sciences):** Strong relevance (3) across all COs, as the subject directly involves understanding of core manufacturing science.
- **PO3 (Analytical and Problem-Solving Skills):** High relevance (3) throughout the course as students evaluate and compare unit operations and equipment functionality.
- **PO4 (Proficiency in Modern Tools and Technology):** Medium relevance (2), especially for CO1 to CO6, involving knowledge of industrial equipment and processes.
- **PO11 (Lifelong Learning):** Consistently relevant (2–3), as students are introduced to scalable, evolving technologies in pharmaceutical manufacturing.
- **PO2 (Strategic Planning):** Relevant (2) in CO1 and CO3, where resource and process planning are integral to unit operation selection.
- **PO10 (Environmental Awareness):** Low to medium relevance (1–2) for CO1–CO6, considering material handling, equipment cleaning, and corrosion control.

S. N. Ugade.

Name & Sign of Faculty Member

Sheshgiri N. Ugade.

Psaluoke

Prof. Saluoke P.A

Name & Sign of IQAC Coordinator

BP 305P: Pharmaceutical Organic Chemistry-II (Practical)

CO–PO Mapping Matrix with Relevance Levels for **BP 305P: Pharmaceutical Organic Chemistry-II (Practical),** based on the strength of correlation between each Course Outcome (CO) and Program Outcome (PO).

The relevance of each mapping is rated as: 3 = High relevance, 2 = Moderate relevance, 1 = Low relevance, Blank = Not relevant/applicable.

CO \ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1	3		3	2						2	2
CO2	3		2						2	2	2
CO3	3		3	2		2					2
CO4	3	2	3	2						1	3
CO5	3		3	2							3
CO6	3		3	2		2					3

Interpretation Highlights:

- **PO1 (Knowledge of Pharmaceutical Sciences):** Highly relevant (3) for all COs due to the practical application of organic chemistry in synthesis and analysis.
- **PO3 (Analytical and Problem-Solving Skills):** Highly relevant (3) across all COs, particularly CO3–CO6, involving reaction troubleshooting, interpretation, and mechanistic reasoning.
- **PO4 (Modern Tools and Technology):** Medium relevance (2) in purification, synthesis, and reagent handling (CO1, CO3–CO6).
- **PO11 (Lifelong Learning):** Strong relevance (3) in CO4–CO6 where students build lab competence for advanced learning and research.
- **PO10 (Environmental Awareness):** Low to medium relevance (1–2) where chemical waste, energy usage, and sustainability of reagents are considered.
- **PO2 (Strategic Planning and Execution):** Medium relevance (2) in CO4 for lab preparation, measurement, and time-sensitive reactions.
- **PO6 (Professional Identity):** Appears in CO3 and CO6 (2) as students prepare for medicinal chemistry and pharmaceutical research.
- **PO9 (Social Responsibility and Public Health):** Medium relevance (2) in CO2, where lipid chemistry and health implications are explored.

Name & Sign of Faculty Member
Mr. Waghmare V.S.

Name & Sign of IQAC Coordinator
Prof. Salunke P.A.

BP 306P: Physical Pharmaceutics-I (Practical)

CO–PO Mapping Matrix with Relevance Levels for **BP 306P: Physical Pharmaceutics-I (Practical),** based on the strength of correlation between each Course Outcome (CO) and Program Outcome (PO).

The relevance of each mapping is rated as: 3 = High relevance, 2 = Moderate relevance, 1 = Low relevance, Blank = Not relevant/applicable.

CO \ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1	3	2	3	2						1	2
CO2	3		3	2						1	2
CO3	3		2	2						1	2
CO4	3		3	2							3
CO5	3		3	2						2	3
CO6	3		3	2						2	2

Interpretation Highlights:

- **PO1 (Knowledge of Pharmaceutical Sciences):** Strong relevance (3) for all COs as the course reinforces foundational principles of physical chemistry in pharmaceutics.
- **PO3 (Analytical and Problem-Solving Skills):** Highly relevant (3) for CO1, CO2, CO4–CO6 due to hands-on experimentation, data analysis, and scientific reasoning.
- **PO4 (Modern Tools and Technology):** Medium relevance (2) across COs due to the use of laboratory instruments and measurement techniques.
- **PO11 (Commitment to Lifelong Learning):** Medium to high relevance (2–3), particularly in CO4–CO6, where students engage in analysis and develop research competencies.
- **PO2 (Strategic Planning and Execution):** Moderate relevance (2) in CO1 where preparation and precise execution are critical for solubility and partition studies.
- **PO10 (Environmental Awareness and Sustainability):** Minor to medium relevance (1–2) as experiments involve solvent systems and surfactants with ecological considerations.

Name & Sign of Faculty Member
Prof. Shaikh K.K.

Name & Sign of IQAC Coordinator
Prof. Salunke M.A.

BP 307P: Pharmaceutical Microbiology (Practical)

CO–PO Mapping Matrix with Relevance Levels for **BP 307P: Pharmaceutical Microbiology (Practical),** based on the strength of correlation between each Course Outcome (CO) and Program Outcome (PO).

The relevance of each mapping is rated as: 3 = High relevance, 2 = Moderate relevance, 1 = Low relevance, Blank = Not relevant/applicable.

CO \ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1	3		3	2					2	1	2
CO2	3	2	3	2			2		3	2	2
CO3	3		3	2			3		3	2	2
CO4	3		2	2							2
CO5	3		3	2							2
CO6	3		2	3						1	2

Interpretation Highlights:

- **PO1 (Knowledge of Pharmaceutical Sciences):** All COs score highly (3) due to essential microbiology concepts relevant to pharmacy.
- **PO3 (Analytical and Problem-Solving Skills):** High relevance (3) for CO1–CO3 and CO5, as students analyse data, identify microbes, and assess sterility.
- **PO4 (Modern Tools and Technology):** Medium to high relevance (2–3) for most COs due to instrument use, staining techniques, and sterility testing.
- **PO9 (Social Responsibility and Public Health):** Strong mapping (2–3) in CO1–CO3 where safety, hygiene, and public health implications are evident.
- **PO7 (Ethical Practice and Integrity):** Important for CO2 and CO3 (2–3) due to adherence to sterility protocols and responsibility in lab work.
- **PO11 (Lifelong Learning):** Moderate relevance (2) across all COs for encouraging curiosity, lab confidence, and practical skill advancement.
- **PO2 (Strategic Planning and Execution):** Relevant to CO2 (2), which involves executing sterilization protocols under time and resource constraints.

Name & Sign of Faculty Member

Prof. Puri R.A.

Prof. Salunke M.A.

Name & Sign of IQAC Coordinator

BP 308P: Pharmaceutical Engineering (Practical)

CO–PO Mapping Matrix with Relevance Levels for **BP 308P: Pharmaceutical Engineering (Practical),** based on the strength of correlation between each Course Outcome (CO) and Program Outcome (PO).

The relevance of each mapping is rated as: 3 = High relevance, 2 = Moderate relevance, 1 = Low relevance, Blank = Not relevant/applicable.

CO \ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1	3	2	2	3						2	2
CO2	3	2	3	2						2	2
CO3	3	2	2	3						2	2
CO4	3	1	3	2						1	2
CO5	3	2	3	2						1	2
CO6	3	2	3	2						1	2

Interpretation Highlights:

- **PO1 (Knowledge of Pharmaceutical Sciences):** Strongly relevant to all COs (score: 3), as they cover foundational engineering and processing concepts.
- **PO3 (Analytical and Problem-Solving Skills):** CO2–CO6 involve interpreting process parameters and troubleshooting formulation issues, making PO3 highly relevant (3).
- **PO4 (Modern Tools and Technology):** Practical exposure to equipment like tablet press, freeze dryers, and fluidized bed coaters links well to PO4 (2–3).
- **PO2 (Strategic Planning and Execution):** Process planning, parameter monitoring, and operating equipment require planning (moderate relevance: 1–2).
- **PO10 (Environmental Awareness and Sustainability):** Handling heat, moisture, and drying operations has environmental implications (1–2).
- **PO11 (Lifelong Learning):** All COs support lifelong learning through exposure to industry-relevant operations and equipment (score: 2).

S.N.Yada.
Sheshgiri N. Yada.
Name & Sign of Faculty Member

PSaluoke
Prof-Saluoke P.A.
Name & Sign of IQAC Coordinator

BP 401T: Pharmaceutical Organic Chemistry-III

CO–PO Mapping Matrix with Relevance Levels for **BP 401T: Pharmaceutical Organic Chemistry-III,** based on the strength of correlation between each Course Outcome (CO) and Program Outcome (PO).

The relevance of each mapping is rated as: 3 = High relevance, 2 = Moderate relevance, 1 = Low relevance, Blank = Not relevant/applicable.

CO \ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1	3		3	2							2
CO2	3		3	2							2
CO3	3		3	2							2
CO4	3		3	2							2
CO5	3		2			2					1
CO6	3		3	2		2					2

Interpretation Highlights:

- **PO1 (Pharmaceutical Sciences):** All COs build theoretical foundations in stereochemistry, synthesis, and heterocyclic chemistry—core topics in pharmaceutical sciences.
- **PO3 (Analytical and Problem-Solving Skills):** Involves evaluating molecular structures, stereoisomers, reaction mechanisms, and resolution strategies—key analytical skills.
- **PO4 (Modern Tools & Technology):** Moderate relevance where visualization of stereochemistry and reaction mechanisms may involve modern molecular modeling tools.
- **PO6 (Professional Identity):** Relevant for CO5 and CO6—students learn the medicinal value and therapeutic significance of heterocycles and named reactions, reinforcing their professional role.
- **PO11 (Lifelong Learning):** Organic synthesis and stereochemistry are foundational skills that need constant updating, making this PO relevant to all COs.

Name & Sign of Faculty Member
Mr. Waghmare V.S.

Name & Sign of IQAC Coordinator
Prof. Salunke M.A.

BP 402T: Medicinal Chemistry-I

CO–PO Mapping Matrix with Relevance Levels for **BP 402T: Medicinal Chemistry-I,** based on the strength of correlation between each Course Outcome (CO) and Program Outcome (PO).

The relevance of each mapping is rated as: 3 = High relevance, 2 = Moderate relevance, 1 = Low relevance, Blank = Not relevant/applicable.

CO \ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1	3		3	2							2
CO2	3		3	2							2
CO3	3		3	1							2
CO4	3		3			2					2
CO5	3		2			2					1
CO6	3		2	1		2					2

Interpretation Highlights:

- **PO1 (Pharmaceutical Sciences):** All COs are grounded in medicinal chemistry, focusing on drug design, SAR, and pharmacodynamics.
- **PO3 (Analytical and Problem-Solving Skills):** Critical thinking is required in analysing SAR, designing synthetic pathways, and evaluating drug actions.
- **PO4 (Modern Tools and Technology):** Moderate relevance in CO1–CO3, where computational drug design and chemical modelling tools may be applied.
- **PO6 (Professional Identity):** Emphasized in CO4–CO6 where students connect drug structures with their therapeutic functions, reinforcing the pharmacist's healthcare role.
- **PO11 (Lifelong Learning):** Drug discovery is a rapidly evolving field, requiring ongoing learning and adaptation, especially across all COs.

Tidake

Name & Sign of Faculty Member

Tidake Yashoda N.

PSalunke

Prof Salunke P.A.

Name & Sign of IQAC Coordinator

BP 403T: Physical Pharmaceutics-II

CO–PO Mapping Matrix with Relevance Levels for **BP 403T: Physical Pharmaceutics-II,** based on the strength of correlation between each Course Outcome (CO) and Program Outcome (PO).

The relevance of each mapping is rated as: 3 = High relevance, 2 = Moderate relevance, 1 = Low relevance, Blank = Not relevant/applicable.

CO \ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1	3		2	2							2
CO2	3		3	2							2
CO3	3	2	3	2							2
CO4	3	2	3	3							2
CO5	3		2	3							2
CO6	3		3	2							3

Interpretation Highlights:

- **PO1 (Pharmaceutical Sciences):** Strongly aligned with all COs as the course is deeply rooted in core pharmaceutical principles.
- **PO3 (Analytical and Problem-Solving Skills):** Applied throughout in analysing stability, flow properties, and formulation strategies.
- **PO4 (Modern Tools and Technology):** Involved in experimental formulation techniques and analysis tools (micromeritics, rheology tools).
- **PO2 (Strategic Planning and Execution):** Relevant in CO3 and CO4, involving formulation development and dosage planning.
- **PO11 (Lifelong Learning):** Encourages continued learning in formulation science, kinetics, and evolving dosage form technologies.

Name & Sign of Faculty Member
Prof. Shaikh K.K.

Name & Sign of IQAC Coordinator
Prof. Salunke M.A

BP 404T: Pharmacology-I

CO–PO Mapping Matrix with Relevance Levels for **BP 404T: Pharmacology-I,** based on the strength of correlation between each Course Outcome (CO) and Program Outcome (PO). **The relevance of each mapping is rated as: 3 = High relevance, 2 = Moderate relevance, 1 = Low relevance, Blank = Not relevant/applicable.**

CO \ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1	3		3	2							2
CO2	3		2								2
CO3	3		3	2							2
CO4	3	2	3				2		2		2
CO5	3		3				2		2		2
CO6	3		3				2		2		2

Interpretation Highlights:

- **PO1 (Pharmaceutical Sciences):** Heavily addressed across all COs, especially with foundational pharmacology concepts.
- **PO3 (Analytical and Problem-Solving):** Central to applying pharmacological knowledge to therapeutic decision-making and understanding drug interactions.
- **PO4 (Modern Tools):** Moderate relevance for pharmacokinetic and receptor studies.
- **PO7 (Ethics) & PO9 (Social Responsibility):** Touched upon in CO4–CO6 due to discussions of ADRs, dependency, and responsible prescribing.
- **PO11 (Lifelong Learning):** Encouraged through ongoing advancements in pharmacology and drug development.

Name & Sign of Faculty Member

Ms. Sweyawanshi A.S.

Name & Sign of IQAC Coordinator

Prof. Galunke P.A

BP 405T: Pharmacognosy & Phytochemistry-I

CO–PO Mapping Matrix with Relevance Levels for **BP 405T: Pharmacognosy & Phytochemistry-I,** based on the strength of correlation between each Course Outcome (CO) and Program Outcome (PO).

The relevance of each mapping is rated as: 3 = High relevance, 2 = Moderate relevance, 1 = Low relevance, Blank = Not relevant/applicable.

CO \ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1	3	2	3	2			2			2	2
CO2	3	2	2						2	3	2
CO3	3		2								2
CO4	2		2				2		2		2
CO5	3		2	2							2
CO6	3		2			2	2		2	2	3

Interpretation Highlights:

- **PO1 (Pharmaceutical Sciences):** Strong linkage across all COs due to foundational role of pharmacognosy and phytochemistry.
- **PO3 (Analytical and Problem-Solving):** Vital in identifying, classifying, and ensuring quality of plant-based drugs.
- **PO4 (Modern Tools):** Relevant in CO1 and CO5 for plant analysis and tissue culture techniques.
- **PO10 (Environmental Awareness):** Addressed via sustainable cultivation and storage practices in CO2 and CO6.
- **PO11 (Lifelong Learning):** Encouraged throughout, especially in CO6 to bridge traditional and modern practices.

Pmahajan

Name & Sign of Faculty Member

Ms. Mahajan P. S.

PSaluoke

Prof. Saluoke P.A

Name & Sign of IQAC Coordinator

BP 406P: Medicinal Chemistry-I (Practical)

CO–PO Mapping Matrix with Relevance Levels for **BP 406P: Medicinal Chemistry-I (Practical),** based on the strength of correlation between each Course Outcome (CO) and Program Outcome (PO).

The relevance of each mapping is rated as: 3 = High relevance, 2 = Moderate relevance, 1 = Low relevance, Blank = Not relevant/applicable.

CO \ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1	3	2	3	2							2
CO2	2	2	3								2
CO3	3		2	2						2	2
CO4	3		3				2				2
CO5	2		2	3							

Interpretation Highlights:

- **PO1 (Pharmaceutical Sciences):** Strongly connected with synthesis, purification, and assay-related outcomes (CO1–CO6).
- **PO3 (Analytical & Problem-Solving):** Critical in identifying compounds, monitoring reactions, and estimating purity.
- **PO4 (Modern Tools & Technology):** Especially for CO1, CO3, CO5, CO6 involving synthesis setups, partition coefficient testing, and industry-relevant methodologies.
- **PO11 (Lifelong Learning):** Inherent in applying scalable techniques and pharmacopeial standards.
- **PO10 (Environmental Awareness):** Linked to CO3 for solvent handling and waste minimization during purification.
- **PO7 (Ethical Practice):** CO4 indirectly relates via adherence to official pharmacopeial standards.

Tidake

Name & Sign of Faculty Member

Tidake Yashoda N.

Asaluke

Prof Saluke M.A

Name & Sign of IQAC Coordinator

BP 407P: Physical Pharmaceutics-II (Practical)

CO–PO Mapping Matrix with Relevance Levels for **BP 407P: Physical Pharmaceutics-II (Practical),** based on the strength of correlation between each Course Outcome (CO) and Program Outcome (PO).

The relevance of each mapping is rated as: 3 = High relevance, 2 = Moderate relevance, 1 = Low relevance, Blank = Not relevant/applicable.

CO \ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1	3		3	3							2
CO2	3		3	2							2
CO3	3		3	2							2
CO4	3		2	3							2
CO5	3		2	2							2
CO6	3	2	2	2							2

Interpretation Highlights:

- **PO1 (Pharmaceutical Sciences):** Strong relevance across all COs for foundational knowledge on dispersions, colloids, emulsions, kinetics, and flow properties.
- **PO3 (Analytical and Problem-Solving):** Central to sedimentation analysis, kinetic calculations, and formulation optimization.
- **PO4 (Modern Tools & Technology):** Tied to measurements and evaluation of physical systems like emulsions, suspensions, and viscosity.
- **PO11 (Lifelong Learning):** Laboratory problem-solving and analysis promote independent learning.
- **PO2 (Strategic Planning):** Relevant for CO6 (formulating emulsions with varied parameters).

Name & Sign of Faculty Member
Prof. Shaikh K.K.

Name & Sign of IQAC Coordinator
Prof. Galunke M.A

BP 408P: Pharmacology-I (Practical)

CO–PO Mapping Matrix with Relevance Levels for **BP 408P: Pharmacology-I (Practical),** based on the strength of correlation between each Course Outcome (CO) and Program Outcome (PO).

The relevance of each mapping is rated as: 3 = High relevance, 2 = Moderate relevance, 1 = Low relevance, Blank = Not relevant/applicable.

CO \ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1	3	2	2	3							2
CO2	3	2	3	2			2				2
CO3	2						3				2
CO4	3		2	3							2
CO5	3		3	2							2
CO6	3	2	3	2							2

Interpretation Highlights:

- **PO1 (Pharmaceutical Sciences):** Strong relevance for all COs due to deep integration of pharmacological knowledge and experimental drug actions.
- **PO3 (Analytical and Problem-Solving):** Critical in designing and interpreting drug effect studies and preclinical experiments.
- **PO4 (Modern Tools & Technology):** High relevance in CO1 and CO4 where pharmacological instruments and software simulations are used.
- **PO7 (Ethical Practice):** Highly relevant in CO2 and CO3, emphasizing animal ethics and compliance with institutional guidelines.
- **PO11 (Lifelong Learning):** All COs nurture continuous learning and skill development in experimental pharmacology.

Salunke

Name & Sign of Faculty Member

ms. Suryawanshi A.S.

Prof. Salunke M.A

Name & Sign of IQAC Coordinator

BP 409P: Pharmacognosy-I (Practical)

CO–PO Mapping Matrix with Relevance Levels for **BP 409P: Pharmacognosy-I (Practical),** based on the strength of correlation between each Course Outcome (CO) and Program Outcome (PO).

The relevance of each mapping is rated as: 3 = High relevance, 2 = Moderate relevance, 1 = Low relevance, Blank = Not relevant/applicable.

CO \ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1	3		2	2		2			2	2	2
CO2	3		2	2							1
CO3	3		3	2							2
CO4	3		2	2						2	2
CO5	3		2	2						2	2
CO6	3		2	2							2

Interpretation Highlights:

- **PO1 (Knowledge of Pharmaceutical Sciences):** All COs contribute to pharmacognostic knowledge, plant anatomy, and natural product identification.
- **PO3 (Analytical and Problem-Solving Skills):** Repeated microscopic evaluations and quantitative assessments demand analytical accuracy.
- **PO4 (Modern Tools and Technology):** Involves microscopic and chemical analysis techniques aligned with pharmaceutical standards.
- **PO9 (Social Responsibility and Public Health):** Indirectly relevant, as correct plant identification ensures safety and efficacy in herbal medicine use.
- **PO10 (Environmental Awareness and Sustainability):** Plant-based knowledge promotes sustainable harvesting and conservation.
- **PO11 (Lifelong Learning):** Encourages detailed observational skills and continuing education in herbal and natural drug evaluation.

Name & Sign of Faculty Member

Ms. Mahajan P.S.

Name & Sign of IQAC Coordinator

Prof. Salunke M.A

BP 501T: Medicinal Chemistry-II

CO–PO Mapping Matrix with Relevance Levels for **BP 501T: Medicinal Chemistry-II,** based on the strength of correlation between each Course Outcome (CO) and Program Outcome (PO).

The relevance of each mapping is rated as: 3 = High relevance, 2 = Moderate relevance, 1 = Low relevance, Blank = Not relevant/applicable.

CO \ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1	3		3								2
CO2	3		3	2			2				2
CO3	3		3	2							2
CO4	3		3				3		2		2
CO5	3		2								1
CO6	3	2	3	2							3

Interpretation Highlights:

- **PO1 (Pharmaceutical Sciences Knowledge):** All COs are grounded in medicinal chemistry and SAR.
- **PO3 (Analytical and Problem-Solving):** Key in drug design, mechanism analysis, SAR, and ADME evaluations.
- **PO4 (Modern Tools and Technology):** Some COs include understanding of modern synthetic strategies and molecular modelling tools.
- **PO7 (Ethical Practice):** Understanding adverse effects and drug misuse supports ethical decision-making (CO4).
- **PO9 (Social Responsibility):** Drug safety and therapeutic evaluation contribute to public health awareness (CO4).
- **PO11 (Lifelong Learning):** COs like CO6 foster a mindset toward continual advancement in drug discovery.

Name & Sign of Faculty Member
Ms. Nagargoje S.V.

Salunke
Prof. Salunke M.A
Name & Sign of IQAC Coordinator

BP 502T: Industrial Pharmacy-I

CO–PO Mapping Matrix with Relevance Levels for **BP 502T: Industrial Pharmacy-I,** based on the strength of correlation between each Course Outcome (CO) and Program Outcome (PO).

The relevance of each mapping is rated as: 3 = High relevance, 2 = Moderate relevance, 1 = Low relevance, Blank = Not relevant/applicable.

CO \ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1	3	2	3	2							2
CO2	3		3								2
CO3	3	2	3	3							2
CO4	3	2	2	3					2	2	2
CO5	3		3	2							2
CO6	2		2	2						2	2

Interpretation Highlights:

- **PO1 (Knowledge of Pharmaceutical Sciences):** All COs involve pharmaceutical formulation and industrial practices.
- **PO3 (Analytical and Problem-Solving Skills):** Applied in designing and evaluating formulations.
- **PO4 (Modern Tools and Technology):** Used in dosage form evaluation, sterile manufacturing, packaging, and cosmetics.
- **PO2 (Strategic Planning):** Required for systematic product development and production planning.
- **PO9 (Social Responsibility):** Especially in sterile and cosmetic products where patient/user safety is critical.
- **PO10 (Environmental Sustainability):** Particularly relevant in CO4 and CO6 for sustainable packaging and cosmetic formulation.
- **PO11 (Lifelong Learning):** Continual innovation in formulations and delivery systems encourages lifelong learning.

Name & Sign of Faculty Member

Patil Aishwarya S.

Name & Sign of IQAC Coordinator

Prof. Salunke P.A.

BP 503T: Pharmacology-II

CO–PO Mapping Matrix with Relevance Levels for **BP 503T: Pharmacology-II,** based on the strength of correlation between each Course Outcome (CO) and Program Outcome (PO). **The relevance of each mapping is rated as: 3 = High relevance, 2 = Moderate relevance, 1 = Low relevance, Blank = Not relevant/applicable.**

CO \ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1	3		3				2		2		2
CO2	3		3				2		2		1
CO3	3		3				2				2
CO4	3		3				2				2
CO5	3		2				2				2
CO6	2		3	2							2

Interpretation Highlights:

- **PO1 (Pharmaceutical Sciences):** Strongly addressed across all COs due to focus on drug mechanisms, therapeutic classes, and physiological systems.
- **PO3 (Analytical & Problem-Solving):** Clinical application, treatment selection, and understanding bioassays require analytical reasoning.
- **PO7 (Ethical Practice):** Relevant to prescribing rational pharmacotherapy and understanding ADRs and hormonal therapy.
- **PO9 (Social Responsibility):** CO1 & CO2 emphasize socially responsible healthcare through appropriate cardiovascular and urinary treatment.
- **PO4 (Modern Tools):** Bioassay techniques in CO6 involve laboratory tools and techniques.
- **PO11 (Lifelong Learning):** Pharmacological advancements demand continuous learning, especially in endocrine and cardiovascular therapy.

Name & Sign of Faculty Member
Mr. Kumbhar P.B.

Name & Sign of IQAC Coordinator
Prof - Salunke M.A.

BP 504T: Pharmacognosy & Phytochemistry-II

CO–PO Mapping Matrix with Relevance Levels for **BP 504T: Pharmacognosy & Phytochemistry-II,** based on the strength of correlation between each Course Outcome (CO) and Program Outcome (PO).

The relevance of each mapping is rated as: 3 = High relevance, 2 = Moderate relevance, 1 = Low relevance, Blank = Not relevant/applicable.

CO \ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1	3		2						2		2
CO2	3		2	3							2
CO3	3		3						2		2
CO4	3		3	3							2
CO5	3	2	2	2							2
CO6	3		3	3							3

Interpretation Highlights:

- **PO1 (Knowledge of Pharmaceutical Sciences):** All COs build on deep subject knowledge of natural products, phytochemistry, and biosynthetic pathways.
- **PO3 (Analytical and Problem-Solving Skills):** Structural elucidation, chemistry interpretation, and constituent evaluation require critical analysis.
- **PO4 (Modern Tools & Technology):** CO2, CO4, and CO6 directly involve advanced techniques like chromatography and spectroscopy.
- **PO9 (Social Responsibility & Public Health):** CO1 and CO3 relate plant-based therapeutics to public health and traditional medicine.
- **PO11 (Lifelong Learning):** Evolving methods in natural product research and phytochemistry align with continuous professional development.
- **PO2 (Strategic Planning):** CO5 includes estimation and production, touching upon practical planning skills in natural drug development.

Prof. Salunke M.A.
Name & Sign of Faculty Member

Prof. Salunke M.A.
Name & Sign of IQAC Coordinator

BP 505T: Pharmaceutical Jurisprudence

CO–PO Mapping Matrix with Relevance Levels for **BP 505T: Pharmaceutical Jurisprudence,** based on the strength of correlation between each Course Outcome (CO) and Program Outcome (PO).

The relevance of each mapping is rated as: 3 = High relevance, 2 = Moderate relevance, 1 = Low relevance, Blank = Not relevant/applicable.

CO \ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1	3		2				3		2	2	2
CO2	2					2	2		2		
CO3	3						3		3		
CO4	2		2				3	2	2		2
CO5	2		1				3		3		
CO6	2					2	2		2		

Interpretation Highlights:

- **PO1 (Pharmaceutical Sciences Knowledge):** Legal aspects are part of core knowledge in pharmacy education.
- **PO3 (Analytical and Problem-Solving Skills):** Applied when interpreting laws, penalties, and regulatory frameworks.
- **PO6 (Professional Identity):** Understanding roles of regulatory bodies enhances awareness of professional roles in pharmacy.
- **PO7 (Ethical Practice and Integrity):** Most COs contribute to legal compliance and ethical conduct in pharmaceutical contexts.
- **PO8 (Communication Skills):** Essential for applying legal principles and interacting with authorities or patients.
- **PO9 (Social Responsibility):** Law and ethics guide safe practices and public welfare in pharmacy.
- **PO10 (Environmental Awareness):** CO1 includes topics like handling of toxic substances (as per specific Schedules).
- **PO11 (Lifelong Learning):** Pharmacists must keep updated with evolving legal frameworks.

Name & Sign of Faculty Member

Ms. Dhone Y.S.

Salunke

Prof Salunke M.A

Name & Sign of IQAC Coordinator

BP 506P: Industrial Pharmacy-I (Practical)

CO–PO Mapping Matrix with Relevance Levels for **BP 506P: Industrial Pharmacy-I (Practical),** based on the strength of correlation between each Course Outcome (CO) and Program Outcome (PO).

The relevance of each mapping is rated as: 3 = High relevance, 2 = Moderate relevance, 1 = Low relevance, Blank = Not relevant/applicable.

CO \ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1	3	2	3	2							2
CO2	3	2	3	3	1			2		1	2
CO3	3	2	2	3			2	1	2		2
CO4	3	3	3	3			2	2	2	1	2
CO5	3	2	3	2			2	2			2
CO6	3	2	2	2			2	2		2	2

Interpretation Highlights:

- **PO1 (Pharmaceutical Sciences Knowledge):** All COs involve core pharmaceutical formulation knowledge.
- **PO2 (Strategic Planning):** Planning and executing practical experiments require time and resource management.
- **PO3 (Analytical Skills):** Evaluation and formulation of dosage forms demand strong problem-solving and analysis.
- **PO4 (Modern Tools & Technology):** Use of formulation equipment, sterility testing, and evaluation instruments.
- **PO5 (Teamwork):** Some collaborative work involved in lab settings (minor contribution).
- **PO7 (Ethical Practice):** Ensuring sterility and quality aligns with professional responsibility.
- **PO8 (Communication Skills):** Lab report writing and result documentation contribute to communication.
- **PO9 (Social Responsibility):** Particularly in sterile dosage forms and safety considerations.
- **PO10 (Environmental Awareness):** Cosmetic and parenteral formulation may involve packaging and waste implications.
- **PO11 (Lifelong Learning):** Practical exposure builds habits for continued learning and professional development.

Name & Sign of Faculty Member

Patil Aishwarya S.

Name & Sign of IQAC Coordinator

Prof. Salunke M.A

BP 507P: Pharmacology-II (Practical)

CO–PO Mapping Matrix with Relevance Levels for **BP 507P: Pharmacology-II (Practical),** based on the strength of correlation between each Course Outcome (CO) and Program Outcome (PO).

The relevance of each mapping is rated as: 3 = High relevance, 2 = Moderate relevance, 1 = Low relevance, Blank = Not relevant/applicable.

CO \ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1	3	2	3	3				1			2
CO2	3	2	3	3				1			2
CO3	3	2	3	3				1			2
CO4	3	2	3	2				1			2
CO5	3	3	3	2	1		1	2	1		3
CO6	3	2	3	2				2			3

Interpretation Highlights:

- **PO1 (Pharmaceutical Sciences Knowledge):** Strong foundation in pharmacological principles and drug action.
- **PO2 (Planning & Execution):** Designing and conducting complex experiments needs structured execution.
- **PO3 (Analytical Skills):** Core to all COs—data interpretation, bioassay calculation, and dose–response analysis.
- **PO4 (Modern Tools & Tech):** Use of experimental tools and software (e.g., simulation, data plotting tools).
- **PO5 (Teamwork):** CO5 involves collaborative work in in vivo models (limited but relevant).
- **PO7 (Ethical Practice):** Especially relevant for CO5, where animal experiments require ethical adherence.
- **PO8 (Communication Skills):** Documenting results, drawing conclusions, and presenting findings clearly.
- **PO9 (Social Responsibility):** Applying pharmacological knowledge in therapeutic development and safety testing.
- **PO11 (Lifelong Learning):** Experiment design and software-based analysis prepare students for continued learning and research.

Name & Sign of Faculty Member
Mr. Kumbhar P.B.

Name & Sign of IQAC Coordinator
Prof. Salunke M.A.

BP 508P: Pharmacognosy & Phytochemistry-II (Practical)

CO–PO Mapping Matrix with Relevance Levels for **BP 508P: Pharmacognosy & Phytochemistry-II (Practical),** based on the strength of correlation between each Course Outcome (CO) and Program Outcome (PO).

The relevance of each mapping is rated as: 3 = High relevance, 2 = Moderate relevance, 1 = Low relevance, Blank = Not relevant/applicable.

CO \ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1	3	2	2	2		2		1	1		2
CO2	3	2	3	3		2		1			3
CO3	3	2	3	3				2			3
CO4	3	1	2	2		1		1	1	1	2
CO5	3	2	3	3				1			2
CO6	3	1	2	2				1			2

Interpretation Highlights:

- **PO1 (Knowledge of Pharmaceutical Sciences):** All COs directly relate to core pharmacognosy and phytochemistry knowledge.
- **PO2 (Planning & Execution):** Required in extraction, chromatography, and analytical experiments.
- **PO3 (Analytical Skills):** Central to all COs—evaluation, identification, and quantification of phytoconstituents.
- **PO4 (Modern Tools & Tech):** Use of TLC, Paper Chromatography, UV/Vis spectroscopy, and advanced microscopy.
- **PO6 (Professional Identity):** Appreciating the traditional knowledge and therapeutic relevance of natural products.
- **PO8 (Communication Skills):** Documenting lab results and analytical reports clearly.
- **PO9 (Social Responsibility):** Ensuring natural product quality and safety for therapeutic use.
- **PO10 (Environmental Awareness):** Recognizing sustainability in the use of herbal materials (applicable in CO4).
- **PO11 (Lifelong Learning):** Exposure to advanced techniques fosters adaptability and ongoing learning in natural product research.

Prof. Salunke M.A.
Name & Sign of Faculty Member

Prof. Salunke M.A.
Name & Sign of IQAC Coordinator

BP 601T: Medicinal Chemistry-III

CO–PO Mapping Matrix with Relevance Levels for **BP 601T: Medicinal Chemistry-III,** based on the strength of correlation between each Course Outcome (CO) and Program Outcome (PO).

The relevance of each mapping is rated as: 3 = High relevance, 2 = Moderate relevance, 1 = Low relevance, Blank = Not relevant/applicable.

CO \ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1	3	2	2								2
CO2	3	2	3								2
CO3	3	3	3	2							3
CO4	3	2	2	1				1			2
CO5	3	2	3	3	2						3
CO6	3	2	3	2							2

Interpretation Highlights:

- **PO1 (Pharmaceutical Knowledge):** Strongly mapped across all COs due to medicinal chemistry focus.
- **PO2 (Problem Analysis):** Required for understanding SAR, drug design, and stereochemistry.
- **PO3 (Design/Development):** Emphasized in CO3 and CO5 where drug synthesis and QSAR are central.
- **PO4 (Modern Tool Usage):** QSAR and pharmacophore modelling involve computational tools (CO5).
- **PO5 (Ethics):** Relevant in rational drug design and safety profiling of anti-infectives (CO5).
- **PO8 (Communication):** Mild relevance in explaining adverse effects and patient counselling (CO4).
- **PO11 (Lifelong Learning):** High across all COs as medicinal chemistry is constantly evolving.

Name & Sign of Faculty Member

Ms. Nagargoje S.V.

Prof Salunke M.A

Name & Sign of IQAC Coordinator

CO–PO Mapping Matrix with Relevance Levels for **BP 602T: Pharmacology-III,** based on the strength of correlation between each Course Outcome (CO) and Program Outcome (PO). **The relevance of each mapping is rated as: 3 = High relevance, 2 = Moderate relevance, 1 = Low relevance, Blank = Not relevant/applicable.**

CO \ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1	3	3	2					1			2
CO2	3	3	2					2			2
CO3	2	2	1								2
CO4	3	3	2					1			2
CO5	3	2	2					1			2
CO6	3	2	2								2

Interpretation Highlights:

- **PO1 (Pharmaceutical Knowledge):** Strong across all COs for drug mechanisms, chemotherapeutics, and immunotherapy.
- **PO2 (Problem Analysis):** Especially important in CO2, CO4, and CO6 where clinical decision-making and therapy selection are key.
- **PO3 (Design/Development of Solutions):** Moderate mapping, particularly where treatment planning or pharmacological application is discussed.
- **PO8 (Ethics):** Toxicology and immunotherapy (CO2, CO4, CO5) involve patient safety and ethical responsibility.
- **PO11 (Lifelong Learning):** Pharmacology is rapidly evolving, so all COs require ongoing learning and adaptability.

Name & Sign of Faculty Member
Mr. Kumbhar P.B.

Name & Sign of IQAC Coordinator
Prof. Salunke D.A.

BP 603T: Herbal Drug Technology

CO–PO Mapping Matrix with Relevance Levels for **BP 603T: Herbal Drug Technology,** based on the strength of correlation between each Course Outcome (CO) and Program Outcome (PO).

The relevance of each mapping is rated as: 3 = High relevance, 2 = Moderate relevance, 1 = Low relevance, Blank = Not relevant/applicable.

CO \ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1	3	2					3	2			2
CO2	3	2					3	2			2
CO3	3	3	2				2				2
CO4	3	2	3	2	2		2	1			2
CO5	3	2	3	2			3	2			2
CO6	2	2	2				3	2			3

Interpretation Highlights:

- **PO1 (Pharmaceutical Knowledge):** Strongly mapped across all COs due to focus on traditional systems, quality control, regulations, and formulations.
- **PO2 (Problem Analysis):** Needed for evaluating herbal drug efficacy, formulation standards, and regulatory adaptation.
- **PO3 (Design/Development of Solutions):** Applied in CO3–CO5 for dosage form design and nutraceutical development.
- **PO4 (Investigations of Complex Problems):** Mapped moderately for CO4–CO5 involving natural excipients and standardization methods.
- **PO7 (Environment & Sustainability):** Highly relevant due to the focus on biodynamic agriculture, traditional medicine systems, and ethnopharmacology.
- **PO8 (Ethics):** Especially for CO1, CO2, and CO5 in context of regulatory compliance and traditional healthcare systems.
- **PO11 (Lifelong Learning):** Herbal research and drug development require continuous knowledge upgrade.

Psalunke

Prof. Salunke M.A

Name & Sign of Faculty Member

Psalunke

Prof. Salunke M.A

Name & Sign of IQAC Coordinator

BP 604T: Biopharmaceutics and Pharmacokinetics

CO–PO Mapping Matrix with Relevance Levels for **BP 604T: Biopharmaceutics and Pharmacokinetics,** based on the strength of correlation between each Course Outcome (CO) and Program Outcome (PO).

The relevance of each mapping is rated as: 3 = High relevance, 2 = Moderate relevance, 1 = Low relevance, Blank = Not relevant/applicable.

CO \ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1	3	2									2
CO2	3	3	2	2							2
CO3	3	2	2								2
CO4	3	2									2
CO5	3	3	3	3	2						2
CO6	3	3	3	3	2				2	2	2

Interpretation Highlights:

- **PO1 (Pharmaceutical Knowledge):** Strongly aligned across all COs, especially for understanding ADME and PK modelling.
- **PO2 (Problem Analysis):** Involved in analysing factors affecting bioavailability and interpreting nonlinear kinetics.
- **PO3 (Design/Development of Solutions):** Critical for CO5–CO6 in modelling and BABE study design.
- **PO4 (Investigations of Complex Problems):** Required for applying compartment models and interpreting bioequivalence results.
- **PO5 (Modern Tool Usage):** Moderately mapped for CO5 and CO6 due to use of software for PK modelling.
- **PO9/PO10 (Teamwork/Communication):** Relevant to CO6, where designing and interpreting BABE studies may involve collaborative and reporting efforts.
- **PO11 (Lifelong Learning):** Encouraged throughout the course due to evolving PK tools and clinical practices.

Name & Sign of Faculty Member
Prof. Kale V.B.

Name & Sign of IQAC Coordinator
Prof Salunke P.A.

BP 605T: Pharmaceutical Biotechnology

CO–PO Mapping Matrix with Relevance Levels for **BP 605T: Pharmaceutical Biotechnology,** based on the strength of correlation between each Course Outcome (CO) and Program Outcome (PO).

The relevance of each mapping is rated as: 3 = High relevance, 2 = Moderate relevance, 1 = Low relevance, Blank = Not relevant/applicable.

CO \ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1	3	2	2	2							2
CO2	3	3	2	3	2						3
CO3	3	2				2					2
CO4	3	2	2	2							2
CO5	3	2	3	3	2						3
CO6	3	2		2							3

Interpretation Highlights:

- **PO1 (Pharmaceutical Knowledge):** Strong mapping across all COs due to deep focus on core biotechnological and genetic principles.
- **PO2 (Problem Analysis):** Moderate to strong mapping where analytical and logical thinking is required in understanding recombinant technologies, mutations, etc.
- **PO3 (Design/Development of Solutions):** Relevant for CO1, CO2, CO4, and CO5 due to formulation and diagnostic kit development.
- **PO4 (Investigations of Complex Problems):** Linked with experimental techniques (ELISA, blotting, gene studies) requiring interpretation and data analysis.
- **PO5 (Modern Tool Usage):** CO2 and CO5 moderately mapped, as biotechnological tools and software are employed in these outcomes.
- **PO6 (Pharmacist & Society):** Related to CO3 in terms of societal implications of vaccine and antibody development.
- **PO11 (Lifelong Learning):** Strongly mapped due to the evolving nature of biotechnology and genetics.

S.N.Ujada.

Name & Sign of Faculty Member

Sheshgiri N.Ujada.

Prof. Salunke

Name & Sign of IQAC Coordinator

BP 606T: Pharmaceutical Quality Assurance

CO–PO Mapping Matrix with Relevance Levels for **BP 606T: Pharmaceutical Quality Assurance,** based on the strength of correlation between each Course Outcome (CO) and Program Outcome (PO).

The relevance of each mapping is rated as: 3 = High relevance, 2 = Moderate relevance, 1 = Low relevance, Blank = Not relevant/applicable.

CO \ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1	3	2		2		2				2	2
CO2	3	2					3			2	2
CO3	3	2		2		3	2			2	2
CO4	3	2		2	2					2	1
CO5	3	1				2		3		3	2
CO6	3	2	2	3	2					2	3

Interpretation Highlights:

- **PO1 (Pharmaceutical Knowledge):** Strongly covered across all COs due to foundational concepts in QA, QC, GMP, documentation, and validation.
- **PO2 (Problem Analysis):** Required in interpreting standards and solving QA-related problems, hence moderate mapping across COs.
- **PO3 (Design/Development of Solutions):** Mapped in CO6 where calibration and validation procedures are developed.
- **PO4 (Investigation of Complex Problems):** Linked to CO1, CO3, CO4, and CO6 for systematic investigation of quality systems.
- **PO5 (Modern Tool Usage):** Moderate relevance in CO4 and CO6 for testing, validation, and equipment calibration tools.
- **PO6 (Pharmacist and Society):** Mapped for CO1, CO3, and CO5, reflecting ethical and compliant pharmaceutical practices.
- **PO7 (Environment & Sustainability):** Mapped in CO2 and CO3 as quality systems promote sustainable practices (e.g., ISO, TQM).
- **PO8 (Ethics):** CO5 shows strong mapping due to emphasis on regulatory and ethical documentation.
- **PO10 (Communication):** Essential in CO5 and CO1 where effective documentation and reporting are crucial.
- **PO11 (Lifelong Learning):** Strong mapping for CO6 and CO2 due to the evolving nature of QA practices and standards.

Name & Sign of Faculty Member

Prof. Puri R.A.

Name & Sign of IQAC Coordinator

Prof. Salunke P.A.

BP 607P: Medicinal Chemistry-III (Practical)

CO–PO Mapping Matrix with Relevance Levels for **BP 607P: Medicinal Chemistry-III (Practical),** based on the strength of correlation between each Course Outcome (CO) and Program Outcome (PO).

The relevance of each mapping is rated as: 3 = High relevance, 2 = Moderate relevance, 1 = Low relevance, Blank = Not relevant/applicable.

CO \ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1	3	2	3	2	2					2	2
CO2	3	3		2						2	2
CO3	3	2	3							2	1
CO4	3	2		2						2	1
CO5	3	2	2		3					2	3
CO6	3	2		3	2					2	2

Interpretation Highlights:

- **PO1 (Pharmaceutical Knowledge):** Strongly addressed across all COs as the course builds foundational and applied knowledge in medicinal chemistry synthesis and analysis.
- **PO2 (Problem Analysis):** Reflected in CO2, CO4, CO5, and CO6 where learners analyse chemical reactions and assay results.
- **PO3 (Design/Development of Solutions):** Relevant in CO1, CO3, and CO5 where students design synthetic procedures and draw structures using software tools.
- **PO4 (Investigations):** Mapped for CO1, CO2, CO4, and CO6, where students perform experimental synthesis and assays.
- **PO5 (Modern Tool Usage):** Mapped for CO1, CO5, and CO6 due to use of software (e.g., ChemDraw), lab instruments, and QSAR tools.
- **PO10 (Communication):** Required in lab documentation, reporting of synthesis data, and interpretation across all COs.
- **PO11 (Lifelong Learning):** Moderate to strong mapping, especially in CO5 and CO6, due to modern software and evolving analytical techniques.

Name & Sign of Faculty Member

Ms. Nagargoje S.V.

Name & Sign of IQAC Coordinator

Prof. Salunke P.A.

BP 608P: Pharmacology-III (Practical)

CO–PO Mapping Matrix with Relevance Levels for **BP 608P: Pharmacology-III (Practical),** based on the strength of correlation between each Course Outcome (CO) and Program Outcome (PO).

The relevance of each mapping is rated as: 3 = High relevance, 2 = Moderate relevance, 1 = Low relevance, Blank = Not relevant/applicable.

CO \ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1	3	3		2	2					2	2
CO2	3	3			2					1	2
CO3	3	2	2	3	2					2	3
CO4	3	2	2	3	2					2	3
CO5	3	3		3	2					2	3
CO6	3	2	2	2	3					2	3

Interpretation Highlights:

- **PO1 (Pharmaceutical Knowledge):** Strongly developed through foundational and applied pharmacology (all COs).
- **PO2 (Problem Analysis):** Applied in designing experiments, converting doses, interpreting outcomes (CO2–CO6).
- **PO3 (Design of Experiments):** Clearly mapped in CO3, CO4, and CO6 which involve designing and performing experiments.
- **PO4 (Investigation):** Key in executing preclinical and simulated studies and toxicity evaluation (CO3–CO6).
- **PO5 (Modern Tools):** CO6 emphasizes the use of simulation tools, while others use modern instruments for pharmacological analysis.
- **PO10 (Communication):** Related to reporting and interpreting experimental findings (all COs).
- **PO11 (Lifelong Learning):** Mapped to all COs encouraging practical adaptability and continued pharmacological exploration.

Name & Sign of Faculty Member

Mr. Kumbhar P.B.

Prof. Saluske P.A

Name & Sign of IQAC Coordinator

BP 609P: Herbal Drug Technology (Practical)

CO–PO Mapping Matrix with Relevance Levels for **BP 609P: Herbal Drug Technology (Practical),** based on the strength of correlation between each Course Outcome (CO) and Program Outcome (PO).

The relevance of each mapping is rated as: 3 = High relevance, 2 = Moderate relevance, 1 = Low relevance, Blank = Not relevant/applicable.

CO \ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1	3	2	2	3	2		2			2	2
CO2	3	2		3	2					2	2
CO3	3	3		3	2					2	2
CO4	3	3	2	3	2		2			2	3
CO5	3	2		2	1					2	2
CO6	3	3		2	2					2	2

Interpretation Highlights:

- **PO1 (Pharmaceutical Knowledge):** Strongly achieved across all COs through practical herbal drug formulation and evaluation.
- **PO2 (Problem Analysis):** Used in evaluating excipients, interpreting guidelines, and estimating constituents.
- **PO3 (Design/Development of Solutions):** Reflected in formulation design tasks (CO1, CO4).
- **PO4 (Investigation):** Critical in performing standardization, phytochemical analysis, and quantification (CO2–CO6).
- **PO5 (Modern Tools):** Applied during estimation techniques, analytical methods, and phytochemical screening.
- **PO7 (Environment and Sustainability):** Incorporated via emphasis on natural ingredients and eco-friendly herbal practices (CO1, CO4).
- **PO10 (Communication):** Required for documentation, reporting, and interpretation of data.
- **PO11 (Lifelong Learning):** Supports continuous learning in evolving herbal and Ayurvedic drug technologies.

Prof. Salunke M.A.
Name & Sign of Faculty Member

Prof Salunke M.A.
Name & Sign of IQAC Coordinator

BP 701T: Instrumental Methods of Analysis

CO–PO Mapping Matrix with Relevance Levels for **BP 701T: Instrumental Methods of Analysis,** based on the strength of correlation between each Course Outcome (CO) and Program Outcome (PO).

The relevance of each mapping is rated as: 3 = High relevance, 2 = Moderate relevance, 1 = Low relevance, Blank = Not relevant/applicable.

CO \ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1	3	2		2	2					2	2
CO2	3	3		3	3					2	2
CO3	3	2	3	3	3					2	3

Interpretation Highlights:

- **PO1 (Pharmaceutical Knowledge):** Core analytical and instrumental knowledge underpins all COs.
- **PO2 (Problem Analysis):** Applied during interpretation of spectral and chromatographic data.
- **PO3 (Design/Development of Solutions):** Especially addressed in CO3, through instrument-based solution validation.
- **PO4 (Investigation):** Involved in applying and troubleshooting analytical methods.
- **PO5 (Modern Tool Usage):** Strongly met via handling and understanding instruments like UV-Vis, IR, HPLC, etc.
- **PO10 (Communication):** Relevant for data interpretation, report preparation, and method documentation.
- **PO11 (Lifelong Learning):** Encourages continual adaptation to evolving analytical technologies.

Name & Sign of Faculty Member

Mr. Kale V.B.

Name & Sign of IQAC Coordinator

Prof. Solunke P.A

BP 702T: Industrial Pharmacy-II

CO–PO Mapping Matrix with Relevance Levels for **BP 702T: Industrial Pharmacy-II,** based on the strength of correlation between each Course Outcome (CO) and Program Outcome (PO).

The relevance of each mapping is rated as: 3 = High relevance, 2 = Moderate relevance, 1 = Low relevance, Blank = Not relevant/applicable.

CO \ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1	3	2	3	2	3					2	2
CO2	3	3	2	3	3	2				2	3
CO3	3	3	3	3	3	2				2	3
CO4	3	2		2	2		2			2	3
CO5	3	3	3	3	3	2		3		3	3
CO6	3	2		2	2	2				2	3

Interpretation Highlights:

- **PO1 (Pharmaceutical Knowledge):** All COs rely on fundamental knowledge of industrial processes and regulations.
- **PO2 (Problem Analysis):** Applied in process troubleshooting, transfer planning, and regulatory assessment.
- **PO3 (Design/Development):** Reflected in scale-up (CO1) and system design (CO5).
- **PO4 (Investigations):** Critical in process validation and method transfer.
- **PO5 (Modern Tools & Practice):** Addresses QbD, SUPAC, and other industrial systems and standards.
- **PO6 (Ethics):** Regulatory compliance and risk management require ethical consideration.
- **PO7 (Environment & Sustainability):** Implicit in TQM and continuous improvement systems.
- **PO8 (Professional Practice):** Strongly addressed through quality systems and regulatory documentation.
- **PO10 (Communication):** Needed for reporting, documentation, and tech transfer coordination.
- **PO11 (Lifelong Learning):** Industry trends and evolving regulations require continuous upskilling.

mkuhada

Name & Sign of Faculty Member

Ms. Utikar M.C

Salunke

Prof. Salunke M.A

Name & Sign of IQAC Coordinator

BP 703T: Pharmacy Practice

CO–PO Mapping Matrix with Relevance Levels for **BP 703T: Pharmacy Practice,** based on the strength of correlation between each Course Outcome (CO) and Program Outcome (PO).

The relevance of each mapping is rated as: 3 = High relevance, 2 = Moderate relevance, 1 = Low relevance, Blank = Not relevant/applicable

CO \ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1	3	3	2		2	2		2	2	2	2
CO2	3	3	3	2	2	2				2	2
CO3	3	3	3	2	2	3		2	2	3	2
CO4	2	2	2		2				3	3	2
CO5	3	2	2	2	2			2		2	2
CO6	3	2	2	3	2			2		2	3

Interpretation Highlights:

- **PO1 (Pharmaceutical Knowledge):** All COs are grounded in knowledge of pharmacy roles, drug use, and therapeutics.
- **PO2 (Problem Analysis):** Key for CO1–CO3 and CO6 in solving administrative and clinical challenges.
- **PO3 (Design/Development):** Applied in planning distribution systems, patient counselling, and care strategies.
- **PO4 (Investigations):** Involved in interpreting lab data and handling investigational drugs (CO5, CO6).
- **PO5 (Modern Tools):** Utilized for lab interpretation, inventory systems, and counselling platforms.
- **PO6 (Ethics):** Important in all pharmacist roles, particularly in ADR monitoring and investigational drug use.
- **PO8 (Professionalism):** Strong emphasis on patient care, communication, and interprofessional responsibility.
- **PO9 & PO10 (Teamwork & Communication):** Central to counselling, clinical services, and committee involvement.
- **PO11 (Lifelong Learning):** Needed to stay updated with healthcare trends and therapeutic protocols.

Name & Sign of Faculty Member
Ms. Suryawanshi A.S.

Name & Sign of IQAC Coordinator
Prof. Salunke P.A.

BP 704T: Novel Drug Delivery System

CO–PO Mapping Matrix with Relevance Levels for **BP 704T: Novel Drug Delivery System,** based on the strength of correlation between each Course Outcome (CO) and Program Outcome (PO).

The relevance of each mapping is rated as: 3 = High relevance, 2 = Moderate relevance, 1 = Low relevance, Blank = Not relevant/applicable

CO \ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1	3	2			2						2
CO2	3	3	3	2	3						3
CO3	3	3	3	2	3						2
CO4	3	3	3	3	3						3
CO5	2	3	3	3	3						3
CO6	3	2	2		2		2				2

Interpretation Highlights:

- **PO1 (Pharmaceutical Knowledge):** All COs require deep theoretical understanding of drug delivery strategies.
- **PO2 (Problem Analysis):** Key in identifying and optimizing delivery methods and evaluating release profiles.
- **PO3 (Design/Development):** Strongly aligned in CO2–CO5 through formulation design and evaluation.
- **PO4 (Investigations):** Especially relevant to CO2–CO5 for experimental analysis of delivery systems.
- **PO5 (Modern Tools):** Required for developing and testing NDDS technologies.
- **PO6 (Ethics):** Relevant in CO6 for considerations in targeted therapies (e.g., oncology, gene delivery).
- **PO7 (Sustainability):** Tied to CO6 in developing site-specific, dose-sparing delivery strategies.
- **PO11 (Lifelong Learning):** Continuous advancement in NDDS technologies makes lifelong learning essential across all COs.

Yachawad

Name & Sign of Faculty Member

Yachawad R.D.

Salunke

Prof. Salunke M.A

Name & Sign of IQAC Coordinator

BP 705P: Instrumental Methods of Analysis

CO–PO Mapping Matrix with Relevance Levels for **BP 705P: Instrumental Methods of Analysis,** based on the strength of correlation between each Course Outcome (CO) and Program Outcome (PO).

The relevance of each mapping is rated as: 3 = High relevance, 2 = Moderate relevance, 1 = Low relevance, Blank = Not relevant/applicable

CO \ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1	3	2			3						2
CO2	3	3	2	2	3						2
CO3	3	3	3	3	3						3

Interpretation Highlights:

- **PO1 (Pharmaceutical Knowledge):** All COs demand strong foundational knowledge of instrumental techniques.
- **PO2 (Problem Analysis):** Especially in CO2 and CO3 for solving analytical problems and selecting appropriate techniques.
- **PO3 (Design/Development of Solutions):** CO3 applies this when planning and executing analytical protocols.
- **PO4 (Conduct Investigations):** CO2 and CO3 rely on hands-on experimentation and data interpretation.
- **PO5 (Modern Tools Usage):** Central to all COs due to use of UV, IR, HPLC, GC, and other instruments.
- **PO11 (Lifelong Learning):** Analytical technologies evolve rapidly, requiring continuous skill updates.

Name & Sign of Faculty Member

Mr. Kale V.B.

Prof. Salunke M.A.

Name & Sign of IQAC Coordinator

BP 801T: Biostatistics and Research Methodology

CO–PO Mapping Matrix with Relevance Levels for **BP 801T: Biostatistics and Research Methodology,** based on the strength of correlation between each Course Outcome (CO) and Program Outcome (PO).

The relevance of each mapping is rated as: 3 = High relevance, 2 = Moderate relevance, 1 = Low relevance, Blank = Not relevant/applicable

CO \ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1	3	3		2	2						2
CO2	3	3		2	3						2
CO3	3	3		3	3						2
CO4	3	2	2	3	2						2
CO5	3	3		3	3						3
CO6	3	3	3	3	3						3

Interpretation Highlights:

- **PO1 (Pharmaceutical Knowledge):** All COs are deeply rooted in understanding and applying statistical concepts in pharmaceutical research.
- **PO2 (Problem Analysis):** Statistical methods aid in solving experimental and clinical problems.
- **PO3 (Design/Development of Solutions):** Especially CO4 and CO6 for research design and experimental optimization.
- **PO4 (Investigation of Complex Problems):** Involves data analysis, hypothesis testing, and statistical validation.
- **PO5 (Modern Tool Usage):** Tools like Excel, SPSS, and R software are emphasized in CO5 and CO6.
- **PO11 (Lifelong Learning):** Continuous need to adapt to newer statistical tools and research methodologies.

Name & Sign of Faculty Member
Mr Kale V.B.

PSaluake
Prof. Saluake M.A
Name & Sign of IQAC Coordinator

BP 802T: Social and Preventive Pharmacy

CO–PO Mapping Matrix with Relevance Levels for **BP 802T: Social and Preventive Pharmacy,** based on the strength of correlation between each Course Outcome (CO) and Program Outcome (PO).

The relevance of each mapping is rated as: 3 = High relevance, 2 = Moderate relevance, 1 = Low relevance, Blank = Not relevant/applicable

CO \ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1	3	2				2	3	2	2	2	2
CO2	3	3	2	2	2	3	3	3	2	3	2
CO3	3	3				2	3	3	3	3	2
CO4	3	2	2	2		3	3	2	2	2	2
CO5	3	2				3	3	3	3	3	2
CO6	3	2	2		2	3	3	3	3	3	3

Interpretation Highlights:

- **PO1 (Pharmaceutical Knowledge):** All COs require foundational understanding of health, disease, and pharmacy's role.
- **PO2 (Problem Analysis):** Involves analysing community health challenges and designing preventive strategies.
- **PO6 (Pharmacist and Society):** Strong relevance as students learn to improve health outcomes and engage with public health.
- **PO7 (Environment & Sustainability):** Includes disease prevention and health promotion related to environmental and social factors.
- **PO8 (Ethics):** Emphasizes ethical practice in community engagement and public health roles.
- **PO9 & PO10 (Individual & Teamwork; Communication):** Required for health programs and working with communities.
- **PO11 (Lifelong Learning):** Continuous learning for evolving public health challenges and new programs.

Name & Sign of Faculty Member

Ms. Dhone Y.S.

Galunke

Prof. Galunke M.A

Name & Sign of IQAC Coordinator

BP 803ET: Pharmaceutical Marketing Management

CO–PO Mapping Matrix with Relevance Levels for **BP 803ET: Pharmaceutical Marketing Management,** based on the strength of correlation between each Course Outcome (CO) and Program Outcome (PO).

The relevance of each mapping is rated as: 3 = High relevance, 2 = Moderate relevance, 1 = Low relevance, Blank = Not relevant/applicable

CO \ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1	3	2	2		2	2		2	3	3	2
CO2	3	3	3	2	3	2		2	3	3	2
CO3	3	3	3	2	3	2		2	3	3	3

Interpretation Highlights:

- **PO1 (Pharmaceutical Knowledge):** All COs depend on a sound understanding of pharmaceutical products and the healthcare market.
- **PO2 (Problem Analysis):** Involves analysing consumer behaviour, market demand, and competitive positioning.
- **PO3 (Design/Development of Solutions):** Marketing strategies are essentially solution-based approaches for business goals.
- **PO4 (Investigations):** Applies to market research and analysis in developing marketing plans.
- **PO5 (Modern Tools):** Use of digital marketing tools, CRM, analytics, etc.
- **PO6 (Pharmacist and Society):** Marketing affects public health awareness, accessibility, and ethical considerations.
- **PO8 (Ethics):** Ethical marketing practices in pharmaceuticals are essential.
- **PO9 & PO10 (Teamwork & Communication):** Crucial for roles in sales, product management, and brand promotion.
- **PO11 (Lifelong Learning):** Ongoing learning is needed to adapt to evolving market trends and regulatory norms.

Name & Sign of Faculty Member
Yachawad R.D.

Name & Sign of IQAC Coordinator
Prof. Salunke M.A

BP 804ET: Pharmaceutical Regulatory Science

CO–PO Mapping Matrix with Relevance Levels for **BP 804ET: Pharmaceutical Regulatory Science,** based on the strength of correlation between each Course Outcome (CO) and Program Outcome (PO).

The relevance of each mapping is rated as: 3 = High relevance, 2 = Moderate relevance, 1 = Low relevance, Blank = Not relevant/applicable

CO \ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1	3	3	2	3	2	3	2	2	2	2	3
CO2	3	2	2	3	3	2	2	2	2	2	3
CO3	3	3	2	2	2	3	3	3	2	2	3
CO4	3	3	2	2	3	2	2	3	2	2	3
CO5	3	3	3	3	3	3	2	2	2	2	3
CO6	3	2	2	2	2	2	2	2	2	2	3

Interpretation Highlights:

- **PO1 (Pharma Knowledge):** All COs require deep understanding of global regulations, approvals, and documentation.
- **PO2 (Problem Analysis):** Required for identifying and resolving regulatory issues in submissions and compliance.
- **PO3 (Design/Development):** Related to designing regulatory pathways and documentation strategies.
- **PO4 (Investigations):** Involves interpreting clinical and regulatory data for applications.
- **PO5 (Modern Tools):** Use of software for CTD, submission, and regulatory tracking.
- **PO6 (Professional Responsibility):** Emphasizes ethics, GLP, GCP, and pharmacovigilance.
- **PO7 (Environment/Sustainability):** Consideration of safety and environmental impact during approvals.
- **PO8 (Ethics):** Strong component in clinical trials, data integrity, and public safety.
- **PO9 & PO10 (Teamwork & Communication):** Required for interdisciplinary coordination and regulatory correspondence.
- **PO11 (Lifelong Learning):** Vital due to evolving global regulatory landscapes.

Name & Sign of Faculty Member

Ms. Utikar M.C

Name & Sign of IQAC Coordinator

Prof. Saluske M.A