



PRAVARA RURAL EDUCATION SOCIETY'S
PRAVARA RURAL COLLEGE
OF PHARMACY
LONI

INDEX

Criteria No: 2

Metric no: 2.6.2

File name (QIM) Attainment of Programme outcomes and course outcomes are evaluated by the institution during the year 2023-24

Sr. No.	Content
1	Programme Outcomes
2	Course outcomes
3	Mapping and Assessment of CO Attainment



Principal
Pravara Rural College of Pharmacy
Pravaranagar, A/p.Loni-413 736



Name of Course	B. Pharmacy
Subject Name	Medicinal chemistry-II Theory
Subject Code	BP 501 T
Name of the teacher	Mr. Sagar D. Magar
Academic Year	2023-24

COURSE OUTCOME (CO)

After successful completion of course student will able to

CO No.	Course Outcome Statement	Bloom Levels (1-Knowledge, 2-Understand, 3-Apply, 4-Analyze, 5-Evaluate, 6-Creat)
1	Classify antihistaminics, antianginals, antihypertensives, antiarrhythmics, antihyperlipidemics, autocoids, diuretics, local anaesthetics and drugs acting on endocrinal system based on their chemical structure	2
2	Explain relationship between chemical structure and biological activity of antihistaminics, antianginals, antihypertensives, antiarrhythmics, antihyperlipidemics, autocoids, diuretics, local anaesthetics and drugs acting on endocrinal system	2
3	Illustrate chemical synthesis pathway of specified drug molecules	3
4	Explain mechanism of action of of antihistaminics, antianginals, antihypertensives, antiarrhythmics, antihyperlipidemics, autocoids, diuretics, local anaesthetics and drugs acting on endocrinal system	4
5	Discuss therapeutic uses and adverse effects of antihistaminics, antianginals, antihypertensives, antiarrhythmics, antihyperlipidemics, autocoids, diuretics, local anaesthetics and drugs acting on endocrinal system	2



PROGRAM OUTCOMES (PO) -

- 1. Pharmacy Knowledge:** Possess knowledge and comprehension of the core and basic knowledge associated with the profession of pharmacy, including biomedical sciences; pharmaceutical sciences; behavioural, social, and administrative pharmacy sciences; and manufacturing practices.
- 2. Planning Abilities:** Demonstrate effective planning abilities including time management, resource management, delegation skills and organizational skills. Develop and implement plans and organize work to meet deadlines.
- 3. Problem analysis:** Utilize the principles of scientific enquiry, thinking analytically, clearly and critically, while solving problems and making decisions during daily practice. Find, analyze, evaluate and apply information systematically and shall make defensible decisions.
- 4. Modern tool usage:** Learn, select, and apply appropriate methods and procedures, resources, and modern pharmacy-related computing tools with an understanding of the limitations.
- 5. Leadership skills:** Understand and consider the human reaction to change, motivation issues, leadership and team-building when planning changes required for fulfilment of practice, professional and societal responsibilities. Assume participatory roles as responsible citizens or leadership roles when appropriate to facilitate improvement in health and wellbeing.
- 6. Professional Identity:** Understand, analyze and communicate the value of their professional roles in society (e.g. health care professionals, promoters of health, educators, managers, employers, employees).
- 7. Pharmaceutical Ethics:** Honour personal values and apply ethical principles in professional and social contexts. Demonstrate behaviour that recognizes cultural and personal variability in values, communication and lifestyles. Use ethical frameworks; apply ethical principles while making decisions and take responsibility for the outcomes associated with the decisions.
- 8. Communication:** Communicate effectively with the pharmacy community and with society at large, such as, being able to comprehend and write effective reports, make effective presentations and documentation, and give and receive clear instructions.
- 9. The Pharmacist and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety and legal issues and the consequent responsibilities relevant to the professional pharmacy practices.
- 10. Environment and sustainability:** Understand the impact of the professional pharmacy solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
- 11. Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change. Self-assess and use feedback effectively from others to identify learning needs and to satisfy these needs on an ongoing basis.



Mapping of Course Outcome (CO) with Program Outcome (PO)

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO 9	PO 10	PO 11
CO1	√	√	√	√	--	√	--	√	--	--	√
CO2	√	√	√	√	--	√	--	√	--	--	√
CO3	√	√	√	√	--	√	--	√	--	--	√
CO4	√	√	√	√	--	√	--	√	--	--	√
CO5	√	√	-	√	--	√	--	√	√	--	√

Justification:

CO's	Justification
CO1	<p>PO1: Knowledge of heterocyclic moiety and other chemicals natures is required for classification</p> <p>PO2: Organization of drugs into various class required</p> <p>PO3: To interpret uses and adverse effect based on classification of drug</p> <p>PO4: Drawing the structure and using different software's tools based on the classification</p> <p>PO6: Information related to chemical class for professional discussion</p> <p>PO8: Information related to chemical class for writing reports and for documentation</p> <p>PO11: to understand information related to new chemical class of drug</p>



CO2	<p>PO1: Knowledge of heterocyclic moiety and its chemical natures is required for biological activity</p> <p>PO2: Modification of chemical structure will enhance biological activity.</p> <p>PO3: To interpret therapeutic efficacy, solubility enhancement based on structural modification.</p> <p>PO4: Studying relationship between chemical structures with its biological activity by using modern softwares like QSAR modeling, Molecular docking.</p> <p>PO6: Information related to chemical structure and its activity for professional discussion</p> <p>PO8: Information related to chemical structure and its activity for writing reports and for documentation</p> <p>PO11: to understand information related to new chemical and its biological activity</p>
CO3	<p>PO1: Knowledge of newly synthesized heterocyclic.</p> <p>PO2: Modification of synthetic pathway for drug moiety will enhance the activity.</p> <p>PO3: To interpret therapeutic efficacy, solubility enhancement based on structural modification.</p> <p>PO4: Synthesizing newly chemical moiety by microwave synthesizer.</p> <p>PO6: Synthesizing newly chemical moiety with its therapeutic effect for professional discussion</p> <p>PO8: Information related to newly synthesized drug with its activity for writing reports and for documentation</p> <p>PO11: to understand information related to new drugs.</p>
CO4	<p>PO1: Knowledge of heterocyclic moiety with its mechanism of action required for biological activity</p> <p>PO2: Modification of chemical structure will enhance biological activity.</p> <p>PO3: To interpret therapeutic efficacy, solubility enhancement based on structural modification and mechanism of action of drug.</p> <p>PO4: Studying relationship between chemical structures with its enzyme and receptor by Molecular docking and QSAR.</p>



	<p>PO6: Information related to chemical moiety with its pharmacological action for professional discussion</p> <p>PO8: Information related to chemical moiety with its mechanism of action for writing reports and for documentation</p> <p>PO11: to understand information related to new chemical and its pharmacological action.</p>
CO5	<p>PO1: Knowledge of therapeutic uses and adverse effect of drug required to cure disease.</p> <p>PO2: Modification in chemical structure will enhance therapeutic activity and lowers side effect.</p> <p>PO4: Structural modification by using modern tools of analysis enhances therapeutic activity.</p> <p>PO6: Information related to chemical moiety with its therapeutic uses and adverse effect for professional discussion</p> <p>PO8: Information related to chemical moiety with with its therapeutic uses and adverse effect for writing reports and for documentation.</p> <p>PO9: Information related to therapeutic uses will be useful for society.</p> <p>PO11: to understand information related to therapeutic uses and adverse effect.</p>

CO-PO MATRIX OF COURSE (MAPPING STRENGTH)

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO 9	PO 10	PO 11
CO1	3	2	2	2	0	1	0	1	0	0	1
CO2	3	2	2	2	0	1	0	1	0	0	1
CO3	3	2	2	2	0	1	0	1	0	0	1
CO4	3	2	2	2	0	1	0	1	0	0	1
CO5	3	2	2	2	0	1	0	1	1	0	1

1: Low

2: Moderate

3: High



Name of Course	B.Pharmacy
Subject Name	Medicinal chemistry-II
Subject Code	BP501T
Name of the teacher	Mr. Sagar D. Magar
Academic Year	2023-24 (2019 Pattern)

Evaluation	CIE				Average	SEE
	MT1	MT2	CT1	CT2		
CO's						
1	2.8	3	3	3	2.95	2
2	2.16	2.66	3	3	2.705	2
3	3	3	3	3	3	2
Avg.					2.885	2

FINAL CO ATTAINMENT

Direct Attainment = Avg. CO of CIE * 0.25 + Avg. CO of SEE*0.75

$$= 0.25*2.885+2*0.75$$

$$=0.7212+1.5$$

$$=2.22$$

Final Attainment = Direct Attainment * 0.9+Indirect Attainment*0.1

$$=2.22*0.9+2.95*0.1$$

$$=1.99 + 0.295$$

$$=2.29$$

CIE: Continuous Internal Evaluation

SEE: Semester End Examination



Department of Pharmacy
University of the Philippines



PRAVARA RURAL EDUCATION SOCIETY'S
PRAVARA RURAL COLLEGE
OF PHARMACY
LONI