KIET SCHOOL OF PHARMACY

Minutes of Meeting held on 21st April 2025 in KSOP Department

Agenda:
Discussion and approval of CO statements, CO-PO mapping, target benchmark for B. Pharm 2nd, 4th, 6th and 8th semester and M. Pharm 2nd and 4th semester for session 2024-25 Even semester

Time: 12:30 P.M.
Chair: Dr. K. Nagarajan (Principal-KSOP)

BoS Members Present:

1. Dr. N.G. Raghavendra Rao
2. Dr. Roma Ghai

Topics Discussed:

1. The BoS members reviewed and approved the CO statements and CO-PO mapping per IQAC requirements for the 2024-25 Even semester session.
2. The CO statements, CO-PO mapping, and target benchmarks were handed over to the OBE team for approval by higher authorities. Afterwards, they will be uploaded on the KIET ERP Portal and Cyber Vidya Portal through the respective CO-coordinator.

Prof. (Dr.) K. Nagarajan
Principal,
KIET School of Pharmacy

Prof. (Dr.) Yaduvir Singh
Dean, Ranking and Accreditation

Prof. (Dr.) Adesh Pandey
Director Academics

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TARGET BENCHMARK EVEN SEMESTER 2024-25

S NO.	SUBJECT CODE	SUBJECT NAME	SUBJECT TYPE	FACULTY NAME	INTERNAL TARGET	EXTERNAL EXAM OUTCOMES			PROPOSED EXTERNAL TARGET
						2021-22	2022-23	2023-24	
1	BP201T	Human Anatomy and Physiology II	Theory	Ms. Sheena Mehta	60	59.06	59.86	59.30	59.41
2	BP202T	Pharmaceutical Organic Chemistry I	Theory	Dr. Abhay Bhardwaj	55	48.41	50.43	56.27	51.70
3	BP203T	Biochemistry	Theory	Ms. Pragati Gupta	60	53.79	54.04	53.64	53.82
4	BP204T	Pathophysiology	Theory	Ms. Nidhi	59	57.29	58.00	60.34	58.54
5	BP205T	Computer Applications in Pharmacy	Theory	Ms. Surbhi Kamboj	60	NA	NA	NA	NA
6	BP206T	Environmental Sciences	Theory	Ms. Pallavi Barik	66	NA	NA	NA	NA
7	BP207P	Human Anatomy and Physiology II	Practical	Dr. Praveen Kr. Dixit	70	60	62	64	62.00
8	BP208P	Pharmaceutical Organic Chemistry I	Practical	Dr. Smriti Sahu	70	60	62	64	62.00
9	BP209P	Biochemistry	Practical	Mr. Surya Prakash	60	60	62	64	62.00
10	BP210P	Computer Applications in Pharmacy	Practical	Ms. Surbhi Kamboj	70	60	62	64	62.00
11	BP401T	Pharmaceutical Organic Chemistry III	Theory	Ms. Shipra Singhal	58	58.20	49.55	61.02	56.26
12	BP402T	Medicinal Chemistry I	Theory	Mr. Surya Prakash	60	55.20	53.94	59.67	56.27
13	BP403T	Physical Pharmaceutics II	Theory	Mr. Debaprasad Ghosh	55	49.27	53.56	59.97	54.27
14	BP404T	Pharmacology I	Theory	Ms. Nidhi	56	57.96	49.71	62.15	56.61
15	BP405T	Pharmacognosy I	Theory	Dr. Deepti Katiyar	55	59.02	55.40	66.16	60.19
16	BP406P	Medicinal Chemistry I	Practical	Ms. Shikha	70	60	62	64	62.00
17	BP407P	Physical Pharmaceutics II	Practical	Dr. Lakshmi	70	60	62	64	62.00
18	BP408P	Pharmacology I	Practical	Ms. Nidhi	70	60	62	64	62.00
19	BP409P	Pharmacognosy I	Practical	Dr. Richa Goel	70	60	62	64	62.00
20	BP601T	Medicinal Chemistry III	Theory	Dr. Garima Kapoor	60	58.88	54.64	53.54	55.69
21	BP602T	Pharmacology III	Theory	Dr. Shardendu	58	60.19	52.25	55.21	55.88
22	BP603T	Herbal Drug Technology	Theory	Mr. Balwan Singh	55	61.25	52.51	55.19	56.32
23	BP604T	Biopharmaceutics and Pharmacokinetics	Theory	Prof. (Dr.) Ashu Mittal	55	58.31	49.3	57.64	55.08
24	BP605T	Pharmaceutical Biotechnology	Theory	Mr. Debaprasad Ghosh	57	57.99	55.14	56.82	56.65
25	BP606T	Quality Assurance	Theory	Dr. Lakshmi	55	55.88	50.16	57.48	54.51
26	BP607P	Medicinal Chemistry III	Practical	Dr. Lalit	70	60	62	64	62.00
27	BP608P	Pharmacology III	Practical	Dr. Abhishek Kumar	70	60	62	64	62.00
28	BP609P	Herbal Drug Technology	Practical	Dr. Daksh Bhatia	70	60	62	64	62.00
29	BP610P	Report on Industrial Training	Practical	Mr. Kapil Sachan	NA	60	62	64	62.00
30	BP801T	Biostatistics and Research Methodology	Theory	Dr. Neelam Sharma	60	55.6	53.83	53.36	54.26
31	BP802T	Social and Preventive Pharmacy	Theory	Ms. Sheena Mehta	57	59.04	61.94	59.81	60.26
32	BP803ET	Pharma Marketing Management	Theory	Ms. Shikha Kaushik	62	58.75	63.7	59.43	60.63
33	BP807ET	Computer Aided Drug	Theory	Dr. Garima Kapoor	65	61.16	58.86	41.06	53.69
34	BP809ET	Cosmetic Science	Theory	Dr. Monika Kaurav	57	62.83	54.19	52.87	56.63
35	BP815PW	Project Work	Practical	Mr. Debaprasad Ghosh	NA	60	62	64	62.00
36	BP816P	Report on Industrial Tour	Practical	Ms. Vidhu Saxena	70	60	62	64	62.00
37	MPL201T	Advanced Pharmacology II	Theory	Dr. Shardendu K. Mishra	63	65.16	67.03	56.31	62.83
38	MPL202T	Pharmacological and Toxicological Screening Methods-II	Theory	Dr. Abhishek Kumar	61	59.47	62.93	56.10	59.50

39	MPL203T	Principles of Drug Discovery	Theory	Prof. (Dr.) K. Nagarajan	66	66.67	63.73	63.33	64.58
40	MPL204T	Clinical Research and Pharmacovigilance	Theory	Prof. (Dr.) Roma Ghai	68	66.13	62.57	73.62	67.44
41	MPL205P	Experimental Pharmacology - II	Practical	Dr. Roma	70	62	64	66	64.00
42	MPH201T	cular Pharmaceutics (Nano Tech and Targeted	Theory	Prof. (Dr.) N. G. R. Rao	60	59.14	62.15	74.1	65.13
43	MPH202T	dvanced Biopharmaceutics & Pharmacokineti	Theory	Prof. (Dr.) Ashu Mittal	70	49.81	59.38	63.05	57.41
44	MPH203T	Computer Aided Drug Delivery System	Theory	Dr. Lakshmi	60	66.00	66.05	64.00	65.35
45	MPH204T	Cosmetic and Cosmeceuticals	Theory	Mr. Anuj Pathak	63	67.05	62.05	54.76	61.29
46	MPH205P	Pharmaceutics Practical II	Practical	Dr. Snigdha	70	61	63	65	63.00
47	MQA201T	Hazards and Safety Management	Theory	Dr. Abhay Bhardwaj	73	67.85	74.42	73.20	71.82
48	MQA202T	Pharmaceutical Validation	Theory	Ms. Surbhi Kamboj	63	73.78	45.44	65.07	61.43
49	MQA203T	Audits and Regulatory Compliance	Theory	Dr. Smriti Sahu	77	82.37	76.19	71.47	76.68
50	MQA204T	Pharmaceutical Manufacturing Technology	Theory	Dr. Snigdha Bhardwaj	70	59.11	76.22	66.27	67.20
51	MQA205P	Pharmaceutical Quality Assurance Practical II	Practical	Dr. Shwetakshi	70	62	63	64	63.00

Signature of BoS, KSOP

Signature of Principal, KSOP

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Pharmacy Rank - 88
Innovation Rank Band (51-100)

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KIET SCHOOL OF PHARMACY

Program Name: B. Pharm	Academic Session: Even 2024-25	Semester: II
Course Name: Human Anatomy and Physiology-II	Course Code: BP201T	Faculty: Dr. Sheena Mehta

Tagging COs with BLs & KCs

CO No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	**Elaborate** the anatomy and physiology of the Nervous system.	Understand	Factual & Conceptual
CO2	**Illustrate** anatomy and physiology of Digestive System and energetics (ATP, Creatinine Phosphate).	Apply	Factual & Conceptual
CO3	**Explore** the structure and functions of Respiratory System and Urinary System.	Apply	Factual & Conceptual
CO4	**Illustrate** the anatomical and physiological aspects of the Endocrine System.	Apply	Factual & Conceptual
CO5	**Infer** the structural and functional aspects of Reproductive System and Genetics	Analyze	Factual & Conceptual

Mapping of Course outcomes with Program outcomes CO-POs Matrix

Human Anatomy and Physiology (BP201T)

Course Code	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11
CO-1	3	-	-	-	-	1	-	1	2	-	2
CO-2	3	-	-	-	-	1	-	1	2	-	2
CO-3	3	-	-	-	-	1	-	1	2	-	2
CO-4	3	-	-	-	-	1	-	1	2	-	2
CO-5	3	-	-	-	-	1	-	1	2	-	2
PO Target	3	-	-	-	-	1	-	1	2	-	2

Signature of Course Coordinator

Signature of Addl. HoD

Signature of HoD

Please Note (Reference: OBE Guidelines wef. Session 2023–24)

- The courses having credits 3 to 6 should have 5 number of Cos. The courses having credits less than 3 should have 4 number of COs.
- The statement of a CO must be formed considering a proper structure having mandatory and optional parts. The mandatory parts are Action & Knowledge and optional parts are Condition and Criteria.

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Program Name: B. Pharm	**Academic Session: Even 2024-25**	**Semester: II**
Course name: P. Organic Chemistry-I	**Course Code: BP202T**	**Faculty: Dr. Abhay Bhardwaj**

Tagging COs with BLs & KCs

CO No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	**Generalize** the chemistry and isomerism of Organic Compounds.	Understand	Factual & Conceptual
CO2	**Illustrate** the chemistry and applications of Alkanes, Alkenes and Conjugated dienes.	Apply	Factual & Conceptual
CO3	**Explore** the chemistry and applications of Alkyl halide and Alcohols	Apply	Factual & Conceptual
CO4	**Illustrate** about chemistry and applications of Carbonyl compounds.	Apply	Factual & Conceptual
CO5	**Explore** chemistry and applications of Carboxylic acids and Amines.	Apply	Factual & Conceptual

Mapping of Course outcomes with Program outcomes CO-POs Matrix

P. Organic Chemistry-I (BP202T)

Course Code	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11
CO-1	3	-	2	2	-	2	1	-	2	-	3
CO-2	3	-	2	2	-	2	1	-	2	-	3
CO-3	3	-	2	2	-	2	1	-	2	-	3
CO-4	3	-	2	2	-	2	1	-	2	-	3
CO-5	3	-	2	2	-	2	1	-	2	-	3
PO Target	**3**	-	**2**	**2**	-	**2**	**1**	-	**2**	-	**3**

Signature of Course Coordinator **Signature of Addl. HoD** **Signature of HoD**

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Program Name: Pragati Gupta	**Academic Session: Even 2024-25**	**Semester: I**
Course name: Biochemistry	**Course Code: BP203T**	**Faculty: Ms. Pragati Gupta**

Tagging COs with BLs & KCs

CO No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	**Elaborate** the concepts of biomolecules and bioenergetics.	Understand	Factual & Conceptual
CO2	**Explore** the knowledge of carbohydrate metabolism and biological oxidation and underlying diseases	Apply	Factual & Conceptual
CO3	**Analyze** the concepts of lipid and amino acid metabolism and their role in various diseases.	Analyze	Factual & Conceptual
CO4	**Illustrate** the concept of nucleic acid metabolism and transfer of genetic information.	Analyze	Factual & Conceptual
CO5	**Classify** various types of enzymes and their role as diagnostic and therapeutic applications	Analyze	Factual & Conceptual

Mapping of Course outcomes with Program outcomes CO-POs Matrix

Biochemistry (BP203T)

Course Code	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11
CO-1	3	-	-	-	-	-	-	-	-	-	2
CO-2	3	-	-	-	-	-	-	-	2	-	2
CO-3	3	-	-	-	-	1	-	-	2	-	2
CO-4	3	-	3	2	-	2	-	-	2	2	2
CO-5	3	1	1	1	-	1	1	2	1	1	2
PO Target	**3.00**	**1.00**	**2.00**	**1.50**	**-**	**1.33**	**1.00**	**2.00**	**1.75**	**1.50**	**2.00**

Signature of Course Coordinator

Signature of Addl. HoD

Signature of HoD

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Program Name: B. Pharm	**Academic Session: Even 2024-25**	**Semester: II**
Course name: Pathophysiology	**Course Code: BP204T**	**Faculty: Ms. Nidhi**

Tagging COs with BLs & KCs

CO No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	**Illustrate** the basic mechanisms involved in the process of cell injury and inflammation.	Apply	Conceptual
CO2	**Illustrate** the pathological mechanisms involved in the development of cardiovascular, renal, and respiratory diseases.	Apply	Conceptual
CO3	**Explore** the mechanisms of development of diseases associated with the blood, endocrine, nervous, and gastrointestinal systems.	Apply	Conceptual
CO4	**Illustrate** the development and progression of inflammatory diseases along with cancer.	Apply	Conceptual
CO5	**Infer** the etiology and pathogenesis of infectious and sexually transmitted diseases.	Analyze	Conceptual

Mapping of Course outcomes with Program outcomes CO-POs Matrix

Pathophysiology (BP204T)

Course Code	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11
CO-1	3	-	-	-	-	1	-	1	1	-	2
CO-2	3	-	1	-	-	1	-	1	3	-	2
CO-3	3	-	1	-	-	1	-	1	3	-	2
CO-4	3	-	1	-	-	1	-	1	3	-	2
CO-5	3	-	1	-	-	1	-	1	3	-	2
PO Target	**3**	-	**1**	-	-	**1**	-	**1**	**2.6**	-	**2**

Signature of Course Coordinator

Signature of Addl. HoD

Signature of HoD

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Program Name: B. Pharm	**Academic Session: Even 2024-25**	**Semester: II**
Course name: Computer Applications in Pharmacy	**Course Code: BP205T**	**Faculty: Ms. Sarbhi Kamboj**

Tagging COs with BLs & KCs

CO No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	**Elaborate** the concept of number system and information systems.	Understand	Factual & Conceptual
CO2	**Interpret** various web technologies and databases.	Evaluate	Factual & Conceptual
CO3	**Illustrate** various types of application of computers in pharmacy.	Apply	Factual & Conceptual
CO4	**Explore** the objective, concept and impact of Bioinformatics.	Analyze	Factual & Conceptual
CO5	**Acquire** the application of computers in data analysis in Preclinical development.	Apply	Conceptual & Procedural

Mapping of Course outcomes with Program outcomes CO-POs Matrix

Computer Applications in Pharmacy (BP205T)

Course Code	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11
CO-1	-	-	2	3	-	-	-	2	-	-	3
CO-2	2	2	2	3	1	-	-	-	-	-	3
CO-3	3	3	2	3	1	2	2	3	2	-	3
CO-4	3	2	2	3	-	2	2	2	3	-	3
CO-5	3	3	2	2	1	2	2	2	-	-	2
PO Target	**2.75**	**2.5**	**2.00**	**2.8**	**1.00**	**2.00**	**2.00**	**2.25**	**2.5**	**-**	**2.8**

Signature of Course Coordinator

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Program Name: B. Pharm	**Academic Session: Even 2024-25**	**Semester: II**
Course Name: Environmental Sciences Theory	**Course Code: BP206T**	**Faculty: Pallavi Barik**

Tagging COs with BLs & KCs

CO No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	**Review** the concept of environmental studies with its natural resources.	Understand	Factual & Conceptual
CO2	**Elaborate** the concept of ecosystem and its structural and functional components with its classification.	Understand	Factual & Conceptual
CO3	**Illustrate** the concept of environmental pollution, its impacts and mitigation measures.	Apply	Factual & Conceptual

Mapping of Course outcomes with Program outcomes CO-POs Matrix

Environmental Sciences Theory (BP206T)

Course Code	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11
CO-1	-	1	1	-	1	2	1	1	3	3	3
CO-2	-	2	1	-	1	1	1	1	2	3	3
CO-3	-	3	3	-	1	2	1	1	3	3	3
PO Target	-	**2**	**1.67**	-	**1**	**1.67**	**1**	**1**	**2.67**	**3**	**3**

Signature of Course Coordinator

Signature of Addl. HoD

Signature of HoD

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- The courses having credits 3 to 6 should have 5 number of Cos. The courses having credits less than 3 should have 4 number of COs.
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KIET SCHOOL OF PHARMACY

Program Name: B. Pharm	**Academic Session: Even 2024-25**	**Semester: II**
Course name: Human Anatomy & Physiology-II Practical	**Course Code: BP207P**	**Faculty: Dr. Praveen Kumar Dixit**

Tagging COs with BLs & KCs

CO No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	**Elaborate** the anatomy and physiology of CNS, Digestive system, Respiratory system, urinary system, endocrine system and reproductive system using models and charts.	Understand	Conceptual
CO2	**Demonstrate** the practical aspects related to reflex activity, body temperature recording, lung capacities, BMI and their importance.	Apply	Conceptual & Procedural
CO3	**Explore** the different mechanisms of responses related to sense organs and nervous system.	Apply	Conceptual
CO4	**Illustrate** the recent advancements in the treatment and diagnosis of respiratory, digestive and CVS related diseases.	Apply	Conceptual

Mapping of Course outcomes with Program outcomes CO-POs Matrix

Human Anatomy & Physiology-II Practical (BP207P)

Course Code	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11
CO-1	3	-	-	-	-	-	-	1	-	-	2
CO-2	3	-	-	-	-	-	-	1	2	-	2
CO-3	3	-	-	-	-	-	-	1	-	-	2
CO-4	3	-	-	-	-	-	-	1	2	-	2
PO Target	3	-	-	-	-	-	-	1	2	-	2

Signature of Course Coordinator

Signature of Addl. HoD

Signature of HoD

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- Optional parts are Condition and Criteria.

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Program Name: B. Pharm	**Academic Session: Even 2024-25**	**Semester: II**
Course name: Organic Chemistry Practical	**Course Code: BP208P**	**Faculty: Dr. Smriti Sahu**

Tagging COs with BLs & KCs

CO No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	**Explore** necessary skills for performing organic chemistry experiments, including proper handling of laboratory equipment and adherence to safety protocols.	Apply	Conceptual & Procedural
CO2	**Apply** synthetic techniques to prepare pharmaceutical compounds, gaining proficiency in common laboratory procedures for the synthesis of organic molecules.	Apply	Conceptual & Procedural
CO3	**Validate** methods for the isolation and purification of organic compounds, including techniques such as extraction, distillation, and chromatography.	Evaluate	Conceptual & Procedural
CO4	**Validate** methods for the isolation and purification of organic compounds, including techniques such as extraction, distillation, and chromatography.	Evaluate	Conceptual & Procedural

Mapping of Course outcomes with Program outcomes CO-POs Matrix

Organic Chemistry Practical (BP208P)

Course Code	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11
CO-1	3	3	3	3	-	-	1	-	2	2	3
CO-2	3	3	3	3	-	-	1	-	2	2	3
CO-3	3	3	3	3	-	-	1	-	2	2	3
CO-4	3	3	3	3	-	-	1	-	2	2	3
PO Target	3	3	3	3	-	-	1	-	2	2	3

Signature of Course Coordinator

Signature of Addl. HoD

Signature of HoD

Please Note (Reference: OBE Guidelines wef. Session 2023–24)

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KIET SCHOOL OF PHARMACY

Program Name: B. Pharm	**Academic Session: Even 2024-25**	**Semester: II**
Course name: Biochemistry Practical	**Course Code: BP209P**	**Faculty: Mr. Surya Prakash**

Tagging COs with BLs & KCs

CO No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	**Analyze** different carbohydrates, proteins, and abnormal constituents of urine.	Analyze	Conceptual & Procedural
CO2	**Estimate** blood creatinine, salivary amylase, blood sugar and serum total cholesterol.	Evaluate	Conceptual & Procedural
CO3	**Demonstrate** the preparation of buffer solution and measurement of pH.	Apply	Conceptual & Procedural
CO4	**Assess** quantitative analysis of reducing sugars (DNSA method) and Proteins.	Evaluate	Conceptual & Procedural

Mapping of Course outcomes with Program outcomes CO-POs Matrix

Computer Applications in Pharmacy (BP210P)

Course Code	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11
CO-1	3	3	2	3	-	1	2	2	2	2	3
CO-2	3	3	2	3	-	1	2	2	2	2	3
CO-3	3	3	2	3	-	1	2	2	2	2	3
CO-4	3	3	2	3	-	1	2	2	2	2	3
PO Target	3	2	2	3	-	1	2	2	2	2	3

Signature of Course Coordinator

Signature of Addl. HoD

Signature of HoD

Please Note (Reference: OBE Guidelines wef. Session 2023–24)

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KIET SCHOOL OF PHARMACY

Program Name: B. Pharm	**Academic Session: Even 2024-25**	**Semester: II**
Course name: Computer Applications in Pharmacy	**Course Code: BP210P**	**Faculty: Ms. Surbhi Kamboj**

Tagging COs with BLs & KCs

CO No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	**Demonstrate** the utility of MS office suite to maintain patient record database.	Apply	Conceptual & Procedural
CO2	**Apply** the knowledge of computing fundamentals to pharmaceuticals application for any given requirement	Apply	Factual & Conceptual
CO3	**Analyze** the contemporary IT tools (web technologies and databases) with pharmaceutical activities.	Analyze	Conceptual & Procedural
CO4	**Interpret** the various application of database in pharmacy	Understand	Conceptual and Procedural

Mapping of Course outcomes with Program outcomes CO-POs Matrix

Computer Applications in Pharmacy (BP210P)

Course Code	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11
CO-1	3	2	2	2	-	2	-	3	2	-	3
CO-2	3	2	2	2	-	2	-	3	2	-	3
CO-3	3	2	2	3	2	2	2	-	2	2	3
CO-4	3	-	-	2	-	2	2	2	3	2	3
PO Target	**3.00**	**2.00**	**2.00**	**2.25**	**2.00**	**2.00**	**2**	**2.67**	**2.25**	**2.00**	**3.00**

Signature of Course Coordinator

Signature of Addl. HoD

Signature of HoD

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KIET SCHOOL OF PHARMACY

Program Name: B. Pharm	**Academic Session: Even 2024-25**	**Semester: IV**
Course name: Pharmaceutical Organic Chemistry-III	**Course Code: BP401T**	**Faculty: Ms. Shipra Singhal**

Tagging COs with BLs & KCs

CO No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	**Illustrate** about Stereo isomerism, Optical isomerism.	Apply	Factual & Conceptual
CO2	**Illustrate** about Geometrical isomerism and Conformational isomerism.	Apply	Factual & Conceptual
CO3	**Outline** the nomenclature, classification, synthesis and reaction of some heterocyclic compounds.	Analyze	Factual & Conceptual
CO4	**Explore** the Synthesis, reactions and medicinal uses of some heterocyclic compounds.	Apply	Factual & Conceptual
CO5	**Outline** some important synthetic name reactions.	Analyze	Factual & Conceptual

Mapping of Course outcomes with Program outcomes CO-POs Matrix

Pharmaceutical Organic Chemistry-III (BP401T)

Course Code	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11
CO-1	3	1	2	-	-	-	1	-	-	-	2
CO-2	3	1	2	-	-	-	1	-	-	-	2
CO-3	3	1	2	-	-	-	2	-	2	-	2
CO-4	3	1	2	-	-	-	2	-	2	-	2
CO-5	3	1	2	-	-	-	1	-	2	-	2
PO Target	3	1	2	-	-	-	1.4	-	2	-	2

Signature of Course Coordinator

Signature of Addl. HoD

Signature of HoD

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KIET SCHOOL OF PHARMACY

Program Name: B. Pharm	Academic Session: Even 2024-25	Semester: IV
Course name: Medicinal Chemistry -I Theory	Course Code: BP402T	Faculty: Ms. Surya

Tagging COs with BLs & KCs

CO No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	**Elaborate** basics of medicinal chemistry, physicochemical and stereochemical properties in relation to drug design and drug metabolism.	Understand	Factual & Conceptual
CO2	**Explore** the chemistry of drugs acting on adrenergic system.	Apply	Factual & Conceptual
CO3	**Explore** the chemistry of drugs acting on cholinergic system.	Apply	Factual & Conceptual
CO4	**Illustrate** the chemistry of drugs acting on CNS such as sedative, hypnotics, antipsychotics and anticonvulsants.	Apply	Factual & Conceptual
CO5	**Illustrate** the chemistry of general anesthetics, narcotic & non-narcotic analgesics and anti-inflammatory agents.	Apply	Factual & Conceptual

Mapping of Course outcomes with Program outcomes CO-POs Matrix

Medicinal Chemistry -I Theory (BP402T)

Course Code	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11
CO-1	3	1	3	-	-	2	1	-	2	2	3
CO-2	3	1	3	-	-	2	1	-	2	1	2
CO-3	3	1	3	-	-	2	1	-	2	1	2
CO-4	3	1	3	-	-	2	1	-	2	1	2
CO-5	3	1	3	-	-	2	1	-	2	1	2
PO Target	3	1	3	-	-	2	1	-	2	1.2	2.2

Signature of Course Coordinator

Signature of Addl. HoD

Signature of HoD

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KIET SCHOOL OF PHARMACY

Program Name: B. Pharm	**Academic Session: Even 2024-25**	**Semester: IV**
Course name: Physical Pharmaceutics-II	**Course Code: BP403T**	**Faculty: Mr. Debapracad Ghosn**

Tagging COs with BLs & KCs

CO No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	**Examine** the types, general characteristics, and effect of various factors on Colloidal dispersions.	Apply	Conceptual & Procedural
CO2	**Identify** the rheological behavior of fluids and the principles of deformation of solids.	Analyze	Conceptual & Procedural
CO3	**Analyze** the theories, types, various properties, and stability of Coarse dispersions like suspensions and emulsions.	Analyze	Conceptual & Procedural
CO4	**Analyze** various aspects of micrometrics.	Analyze	Conceptual & Procedural
CO5	**Analyze** the effects of kinetics, degradation factors and common reactions on the stability of drugs including accelerated stability studies and their prevention.	Analyze	Conceptual & Procedural

Mapping of Course outcomes with Program outcomes CO-POs Matrix

Physical Pharmaceutics-II (BP403T)

Course Code	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11
CO-1	3	1	2	3	-	-	-	-	-	-	2
CO-2	3	1	2	3	-	-	-	-	-	-	2
CO-3	3	1	2	3	-	-	-	-	-	-	2
CO-4	3	1	2	3	-	-	-	-	-	-	2
CO-5	3	1	2	3	-	1	1	1	1	1	2
PO Target	3	1	2	3	-	1	1	1	1	1	2

Signature of Course Coordinator

Signature of Addl. HoD

Signature of HoD

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KIET SCHOOL OF PHARMACY

Program Name: B. Pharm	**Academic Session: Even 2024-25**	**Semester: IV**
Course name: Pharmacology-1	**Course Code: BP404T**	**Faculty: Ms. Nidhi**

Tagging COs with BLs & KCs

CO No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	**Acquire** concept of general pharmacology and pharmacokinetics.	Apply	Factual & Conceptual
CO2	**Analyze** the mechanism of action of drugs, related adverse drug reaction, drug-receptor interactions, dose-response relationships, and factors influencing drug action.	Analyze	Factual & Conceptual
CO3	**Apply** the implications of peripheral nervous system in treatment of associated diseases.	Apply	Conceptual & Procedural
CO4	**Apply** the implications of central nervous system in treatment of neurological diseases.	Apply	Factual & Conceptual
CO5	**Audit** the significance of drugs in pharmacotherapy of various diseases and management of adverse effects.	Analyze	Conceptual & Procedural

Mapping of Course outcomes with Program outcomes CO-POs Matrix

Pharmacology-I (BP404T)

Course Code	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11
CO-1	3	-	2	-	-	3	3	-	2	-	3
CO-2	3	-	2	-	-	3	3	2	2	-	3
CO-3	3	-	2	-	-	3	3	-	2	-	3
CO-4	3	-	2	-	-	3	3	-	2	-	3
CO-5	3	-	2	-	-	3	3	2	2	-	3
PO Target	**3**	-	**2**	-	-	**3**	**3**	**2**	**2**	-	**3**

Signature of Course Coordinator **Signature of Addl. HoD** **Signature of HoD**

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KIET SCHOOL OF PHARMACY

Program Name: B. Pharm	**Academic Session: Even 2024-25**	**Semester: IV**
Course name: Pharmacognosy & Phytochemistry I	**Course Code: BP405T**	**Faculty: Dr. Deepti Katiyar**

Tagging COs with BLs & KCs

CO No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	**Appraise** the sources, classification and quality control of herbal drugs.	Evaluate	Conceptual & Procedural
CO2	**Attain** the knowledge of the cultivation & production of crude drugs and conservation of medicinal plants.	Apply	Conceptual & Procedural
CO3	**Illustrate** the concepts of Plant Tissue Culture and to determine properties of edible vaccines.	Apply	Factual & Conceptual
CO4	**Acquire** the knowledge of traditional systems of medicine and to summarize properties of various secondary metabolites.	Apply	Factual & Conceptual
CO5	**Explore** the properties and applications of plant fibers, hallucinogens, carbohydrates, lipids, proteins, enzymes and marine products.	Analyze	Factual & Conceptual

Mapping of Course outcomes with Program outcomes CO-POs Matrix

Pharmacognosy & Phytochemistry I (BP405T)

Course Code	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11
CO-1	3	-	-	2	-	-	-	-	2	-	2
CO-2	3	-	2	-	-	-	2	-	-	2	2
CO-3	3	-	2	-	-	-	-	-	-	2	2
CO-4	3	-	2	-	-	2	-	-	-	-	2
CO-5	3	-	2	1	-	2	-	-	-	-	2
PO Target	**3**	-	**2**	**1.5**	-	**2**	**2**	-	**2**	**2**	**2**

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Signature of Addl. HoD

Signature of HoD

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KIET SCHOOL OF PHARMACY

Program Name: B. Pharm	**Academic Session: Even 2024-25**	**Semester: IV**
Course Name: Medicinal Chemistry-I Practical	**Course Code: BP406P**	**Faculty: Ms Shikha Kaushik**

Tagging COs with BLs & KCs

CO No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	**Illustrate** the synthesis of some heterocyclic drugs or intermediates.	Apply	Conceptual & Procedural
CO2	**Analyze** the purity of some heterocyclic drugs.	Analyze	Conceptual & Procedural
CO3	**Analyze** the partition coefficient of some drugs.	Analyze	Conceptual & Procedural
CO4	**Evaluate** some organic and inorganic compounds through chemical tests.	Evaluate	Conceptual & Procedural

Mapping of Course outcomes with Program outcomes CO-POs Matrix

Medicinal Chemistry-I Practical (BP406P)

Course Code	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11
CO-1	3	2	1	1	-	1	2	2	2	2	3
CO-2	3	2	1	1	-	1	3	2	2	-	3
CO-3	3	2	-	1	-	-	2	2	2	2	2
CO-4	3	2	-	1	-	-	1	-	-	2	2
PO Target	**3**	**2**	**1**	**1**	-	**1**	**2**	**2**	**2**	**2**	**2.5**

Signature of Course Coordinator

Signature of Addl. HoD

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KIET SCHOOL OF PHARMACY

Program Name: B. Pharm	**Academic Session: Even 2024-25**	**Semester: IV**
Course name: Physical Pharmaceutics-II Practical	**Course Code: BP407P**	**Faculty: Dr. Lakshmi**

Tagging COs with BLs & KCs

CO No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	**Evaluate** particle size, particle size distribution, and derived properties of the powder.	Evaluate	Conceptual & Procedural
CO2	**Calculate** the viscosity of viscous samples using different methods.	Apply	Conceptual & Procedural
CO3	**Evaluate** the prepared suspension and emulsion formulations.	Evaluate	Conceptual & Procedural
CO4	**Evaluate** the kinetics of chemical reactions with stability studies.	Evaluate	Conceptual & Procedural

Mapping of Course outcomes with Program outcomes CO-POs Matrix

Physical Pharmaceutics-II Practical (BP407P)

Course Code	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11
CO-1	3	2	2	3	-	-	1	-	1	1	2
CO-2	3	2	2	3	-	-	1	-	1	1	2
CO-3	3	2	2	3	-	-	2	-	1	1	2
CO-4	3	2	2	3	-	-	2	-	1	1	2
PO Target	3	2	2	3	-	-	1.5	-	1	1	2

Signature of Course Coordinator

Signature of Addl. HoD

Signature of HoD

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KIET SCHOOL OF PHARMACY

Program Name: B. Pharm	**Academic Session: Even 2024-25**	**Semester: IV**
Course name: Pharmacology-I Practical	**Course Code: BP408P**	**Faculty: Ms. Nidhi**

Tagging COs with BLs & KCs

CO No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	**Illustrate** the CCSEA guidelines for laboratory animals, including ethical considerations, instrumentation, and essential techniques used in experimental pharmacology.	Apply	Conceptual & Procedural
CO2	**Explore** the different routes of drug administration in mice and rats, along with key laboratory techniques for studying drug effects on physiological functions.	Apply	Conceptual & Procedural
CO3	**Illustrate** the effect of enzyme inducers on sleeping time in mice, drug effects on ciliary motility in frogs, and pharmacological actions on the central and peripheral nervous systems.	Apply	Conceptual & Procedural
CO4	**Apply** the concept of experimental methodologies to assess anticatatonic and anxiolytic activities, as well as the effects of local anesthetic agents in animal models.	Apply	Conceptual & Procedural

Mapping of Course outcomes with Program outcomes CO-POs Matrix

Pharmacology-I Practical (BP408P)

Course Code	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11
CO-1	3	1	2	2	-	2	2	2	1	-	3
CO-2	3	1	2	2	-	2	2	2	1	-	3
CO-3	3	1	2	2	-	2	2	2	1	-	3
CO-4	3	1	2	2	-	2	2	2	1	-	3
PO Target	**3**	**1**	**2**	**2**	**-**	**2**	**2**	**2**	**1**	**-**	**3**

Signature of Course Coordinator

Signature of Addl. HoD

Signature of HoD

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KIET SCHOOL OF PHARMACY

Program Name: B. Pharm	**Academic Session: Even 2024-25**	**Semester: IV**
Course Name: Pharmacognosy I- Practical	**Course Code: BP409P**	**Faculty: Dr. Richa Goel**

Tagging COs with BLs & KCs

CO No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	**Describe** quantitative microscopy for determining the leaf constant.	Apply	Conceptual & Procedural
CO2	**Determine** the size of cellular content by micrometry technique using eyepiece micrometer.	Apply	Conceptual & Procedural
CO3	**Evaluate** the crude drugs on the basis of WHO guidelines.	Evaluate	Conceptual & Procedural
CO4	**Analyze** the crude drugs by chemical tests.	Analyze	Conceptual & Procedural

Mapping of Course outcomes with Program outcomes CO-POs Matrix

Pharmacognosy I- Practical (BP409P)

Course Code	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11
CO-1	2	2	2	2	-	1	-	-	-	-	3
CO-2	2	2	2	2	-	1	-	-	-	-	3
CO-3	3	3	3	3	-	3	3	-	-	-	3
CO-4	3	3	3	3	-	3	-	-	-	-	3
PO Target	2.5	2.5	2.5	2.5	-	2	3	-	-	-	3

Signature of Course Coordinator

Signature of Addl. HoD

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Program Name: B. Pharm	**Academic Session: Even 2024-25**	**Semester: IV**
Course name: Biomedical Waste Management	**Course Code: BPH2 410**	**Faculty: Dr. Shwetakshi Sharma**

Tagging COs with BLs & KCs

CO No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	**Understand** the concept of health care waste.	Understand	Factual & Conceptual,
CO2	**Analyze** the impact of biochemical waste on health.	Analyze	Factual, Conceptual, Procedural
CO3	**Analyze** the WHO guidelines and policies on health care waste management.	Analyze	Factual, Conceptual, Procedural
CO4	**Apply** the different treatment technologies in-site and off-site.	Apply	Factual, Conceptual, Procedural
CO5	**Apply** waste minimization recycling and disposal technologies.	Apply	Factual, Conceptual, Procedural

Mapping of Course outcomes with Program outcomes CO-POs Matrix

Biomedical Waste Management (BPH2 410)

Course Code	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11
CO-1	3	-	3	-	-	3	2	-	2	3	2
CO-2	3	-	3	-	-	3	3	2	1	3	2
CO-3	3	2	3	2	2	3	2	3	2	3	2
CO-4	3	2	3	3	-	3	1	2	1	3	2
CO-5	3	2	3	3	-	3	1	2	1	3	2
PO Target	**3**	**2**	**3**	**2.33**	**2**	**3**	**1.80**	**2.25**	**1.4**	**3**	**2**

Signature of Course Coordinator

Signature of Addl. HoD

Signature of HoD

Please Note (Reference: OBE Guidelines wef. Session 2023–24)

- The courses having credits 3 to 6 should have 5 number of Cos. The courses having credits less than 3 should have 4 number of COs.
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KIET SCHOOL OF PHARMACY

Program Name: B. Pharm	**Academic Session: Even 2024-25**	**Semester: VI**
Course name: Medicinal Chemistry-III	**Course Code: BP601T**	**Faculty: Dr. Garima Kapoor**

Tagging COs with BLs & KCs

CO No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	**Illustrate** classification, nomenclature, mechanism of action, SAR and uses of different classes of antibiotics.	Apply	Factual & Conceptual
CO2	**Illustrate** classification, mechanism of action and SAR of Antimalarials, Anti-tubercular, Urinary tract anti-infective, Antifungal, Anti-protozoal Agents and Anthelmintics.	Apply	Factual & Conceptual
CO3	**Classify** different antiviral agents along with their mechanism of action and SAR.	Apply	Factual & Conceptual
CO4	**Illustrate** classification, mechanism of action and SAR of Sulphonamides and Sulfones, Folate reductase inhibitors.	Apply	Factual & Conceptual
CO5	**Analyze** the concept of Drug Design, and Combinatorial Chemistry.	Analyze	Factual & Conceptual

Mapping of Course outcomes with Program outcomes CO-POs Matrix

Medicinal Chemistry-III (BP601T)

Course Code	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11
CO-1	3	-	2	-	-	-	-	-	1	-	2
CO-2	3	-	2	-	-	-	-	-	1	-	2
CO-3	3	-	2	-	-	-	-	-	1	-	2
CO-4	3	-	2	-	-	-	-	-	1	-	2
CO-5	3	-	3	2	-	2	-	-	1	-	3
PO Target	**3**	-	**2.2**	**2**	-	**2**	-	-	**1**	-	**2.2**

Signature of Course Coordinator **Signature of Addl. HoD** **Signature of HoD**

Please Note (Reference: OBE Guidelines wef. Session 2023–24)

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KIET SCHOOL OF PHARMACY

Program Name: B. Pharm	**Academic Session: Even 2024-25**	**Semester: VI**
Course name: Pharmacology-III	**Course Code: BP602T**	**Faculty: Dr. Shardendu Kumar Mishra**

Tagging COs with BLs & KCs

CO No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	**Understand** the knowledge of pharmacotherapy of respiratory and GIT diseases.	Understand	Factual & Conceptual
CO2	**Analyze** the utility of antimicrobial agents used for curing infections.	Analyze	Factual & Conceptual
CO3	**Illustrate** the various mechanisms by which chemotherapeutic agents act and their applications in infection management.	Analyze	Factual & Conceptual
CO4	**Examine** the pharmacological profiles of anti-microbial agents and immunomodulators.	Apply	Factual & Conceptual
CO5	**Assess** the principles & management of poisoning and chronotherapy.	Evaluate	Factual & Conceptual

Mapping of Course outcomes with Program outcomes CO-POs Matrix

Pharmacology-III (BP602T)

Course Code	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11
CO-1	3	1	2	-	-	1	2	2	3	-	3
CO-2	3	1	2	-	-	1	2	2	3	-	3
CO-3	3	1	2	-	-	1	2	2	3	-	3
CO-4	3	1	2	-	-	1	2	2	3	-	3
CO-5	3	1	2	-	-	1	2	2	3	-	3
PO Target	**3**	**1**	**2**	-	-	**1**	**2**	**2**	**3**	-	**3**

Signature of Course Coordinator **Signature of Addl. HoD** **Signature of HoD**

Please Note (Reference: OBE Guidelines wef. Session 2023–24)

- The courses having credits 3 to 6 should have 5 number of Cos. The courses having credits less than 3 should have 4 number of COs.
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KIET SCHOOL OF PHARMACY

Program Name: B. Pharm	**Academic Session: Even 2024-25**	**Semester: VI**
Course name: Herbal Drug Technology	**Course Code: BP603T**	**Faculty: Mr. Balwan Singh**

Tagging COs with BLs & KCs

CO No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	**Understand** the Indian system of medicines and fundamentals of traditional herbal raw materials from its cultivation to collection with the help of biodynamic agriculture.	Understand	Factual & Conceptual
CO2	**Explore** the demand and need of nutraceuticals in various diseases and their interaction behavior.	Analyze	Factual & Conceptual
CO3	**Investigate** various herbal excipients used in cosmetic formulations.	Analyze	Conceptual & Procedural
CO4	**Apply** the National and International regulatory guidelines for the assessment of herbal drugs and patenting.	Apply	Factual, Conceptual
CO5	**Explore** the Current Good Manufacturing Practices (cGMP) in herbal drug industry.	Analyze	Factual, Conceptual

Mapping of Course outcomes with Program outcomes CO-POs Matrix

Herbal Drug Technology (BP603T)

Course Code	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11
CO-1	3	-	-	-	-	-	-	-	2	2	2
CO-2	3	-	-	-	-	2	-	-	2	2	2
CO-3	3	-	3	3	-	-	-	-	-	2	2
CO-4	3	-	-	-	-	2	2	3	2	2	2
CO-5	3	2	3	-	-	2	2	-	2	2	2
PO Target	**3**	**2**	**3**	**3**	**-**	**2**	**2**	**3**	**2**	**2**	**2**

Signature of Course Coordinator **Signature of Addl. HoD** **Signature of HoD**

Please Note (Reference: OBE Guidelines wef. Session 2023–24)

- The courses having credits 3 to 6 should have 5 number of Cos. The courses having credits less than 3 should have 4 number of COs.
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KIET School of Pharmacy

Program Name: B. Pharm	**Academic Session: Even 2024-25**	**Semester: VI**
Course name: Biopharmaceutics and Pharmacokinetics	**Course Code: BP604T**	**Faculty: Prof. Dr. Ashu Mittal**

Tagging COs with BLs & KCs

CO No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	**Illustrate** the mechanisms and factors of drug absorption and drug distribution.	Apply	Factual & Conceptual
CO2	**Analyze** the processes of drug elimination, bioavailability and bioequivalence.	Analyze	Factual & Conceptual
CO3	**Apply** the principles of pharmacokinetics to different compartment models, non-compartment models, and physiological models, with a focus on the one compartment open model.	Apply	Factual & Conceptual
CO4	**Utilize** the principles of pharmacokinetics to comprehend the concepts related to multicompartment models.	Apply	Factual & Conceptual
CO5	**Demonstrate** a comprehensive understanding of nonlinear pharmacokinetics	Apply	Factual & Conceptual

Mapping of Course outcomes with Program outcomes CO-POs Matrix

Biopharmaceutics and Pharmacokinetics (BP604T)

Course Code	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11
CO-1	3	-	1	---	---	1	1	1	--	1	2
CO-2	3	--	3	2	--	1	--	1	--	--	2
CO-3	3	--	1	2	--	1	--	1	--	--	2
CO-4	3	--	3	2	--	1	--	1	--	--	2
CO-5	3	--	1	2	--	1	1	1	--	1	2
PO Target	**3**	**--**	**1.8**	**2**	**--**	**1**	**1**	**1**	**--**	**1**	**2**

Signature of Course Coordinator **Signature of Addl. HoD** **Signature of HoD**

Please Note (Reference: OBE Guidelines wef. Session 2021 – 22)

- The theory courses/ project having credits 3 to 6 should have 5 number of COs. The laboratory course/ mini project/ seminar/ industrial training having credits less than 3 should have 3 number of COs. The Project having 7 to 12 credits should have 6 to 10 number of COs.
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Program Name: B. Pharm.	**Academic Session: Even 2024-25**	**Semester: VI**
Course name: Pharmaceutical Biotechnology	**Course Code: BP605T**	**Faculty: Mr. Debaprasad Ghosh**

Tagging COs with BLs & KCs

CO No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	**Analyze** the role and the importance of biotechnology in pharmaceuticals with applicable methodologies	Analyze	Conceptual, and Procedural
CO2	**Analyze** the recombinant DNA technology and its application in pharmaceuticals production.	Analyze	Conceptual, and Procedural
CO3	**Demonstrate** immunity and various immunological products and their production methods.	Apply	Conceptual, and Procedural
CO4	**Analyze** various immunoassay techniques for determination of immunological products.	Analyze	Conceptual, and Procedural
CO5	**Apply** different fermentation techniques in production of various fermentation products.	Apply	Conceptual, and Procedural

Mapping of Course outcomes with Program outcomes CO-POs Matrix

Pharmaceutical Biotechnology (BP605T)

Course Code	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11
CO-1	3	1	1	1	1	1	1	1	1	2	2
CO-2	3	1	1	2	1	2	2	1	1	2	3
CO-3	3	1	2	1	1	1	1	1	1	1	2
CO-4	3	1	2	2	1	2	2	1	2	1	2
CO-5	3	1	2	1	1	1	1	1	1	1	2
PO Target	**3**	**1**	**1.6**	**1.4**	**1**	**1.4**	**1.4**	**1**	**1.2**	**1.4**	**2.2**

Signature of Course Coordinator **Signature of Addl. HoD** **Signature of HoD**

Please Note (Reference: OBE Guidelines wef. Session 2023–24)

- The courses having credits 3 to 6 should have 5 number of Cos. The courses having credits less than 3 should have 4 number of COs.
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KIET SCHOOL OF PHARMACY

Program Name: B. Pharm.	**Academic Session: Even 2024-25**	**Semester: VI**
Course name: Quality Assurance	**Course Code: BP606T**	**Faculty: Dr. Lakshmi**

Tagging COs with BLs & KCs

CO No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	**Understand** major guidelines and principles related to Quality Assurance and Quality Management.	Understand	Factual & Conceptual
CO2	**Acquire** knowledge of GMP guidelines in the pharmaceutical industry.	Apply	Factual & Conceptual
CO3	**Assess** procedures for quality control of packing materials and GLP guidelines	Evaluate	Conceptual & Procedural
CO4	**Analyze** various documents relevant to the pharmaceutical Industry.	Analyze	Factual & Conceptual
CO5	**Apply** general principles of analytical method Validation, calibration, and qualification of commonly used equipment	Apply	Factual & Conceptual

Mapping of Course outcomes with Program outcomes CO-POs Matrix

Quality Assurance (BP606T)

Course Code	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11
CO-1	3	2	-	2	1	1	3	1	2	1	2
CO-2	3	2	1	-	1	1	3	2	2	2	2
CO-3	3	2	1	-	1	1	3	1	2	1	2
CO-4	3	2	2	-	1	1	3	1	2	1	2
CO-5	3	2	1	2	1	1	3	1	2	1	2
PO Target	**3**	**2**	**1.25**	**2**	**1**	**1**	**3**	**1.20**	**2**	**1.20**	**2**

Signature of Course Coordinator **Signature of Addl. HoD** **Signature of HoD**

Please Note (Reference: OBE Guidelines wef. Session 2023–24)

- The courses having credits 3 to 6 should have 5 number of Cos. The courses having credits less than 3 should have 4 number of COs.
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Program Name: B. Pharm	**Academic Session: Even 2024-25**	**Semester: VI**
Course name: Medicinal Chemistry -III Practical	**Course Code: BP607P**	**Faculty: Dr. Lalit Mohan Nainwal**

Tagging COs with BLs & KCs

CO No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	**Prepare** intermediate compounds and drugs of medicinal importance.	Create	Conceptual & Procedural
CO2	**Analyze** and determine the purity of drug present in the bulk and dosage forms.	Analyze	Conceptual & Procedural
CO3	**Determine** the physicochemical and druglike properties of drugs using drug design softwares.	Evaluate	Conceptual & Procedural
CO4	**Illustrate** chemical reactions and their mechanisms using ChemDraw software.	Analyze	Conceptual & Procedural

Mapping of Course outcomes with Program outcomes CO-POs Matrix

Medicinal Chemistry -III Practical (BP607P)

Course Code	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11
CO-1	3	2	3	2	-	1	3	1	1	3	3
CO-2	3	2	3	2	-	-	3	3	1	1	1
CO-3	3	3	3	3	-	1	1	1	1	-	3
CO-4	3	3	3	3	-	1	1	2	1	-	3
PO Target	**3**	**2.5**	**3**	**2.5**	**-**	**1**	**2**	**1.75**	**1**	**2**	**2.5**

Signature of Course Coordinator

Signature of Addl. HoD

Signature of HoD

Please Note (Reference: OBE Guidelines wef. Session 2023–24)

- The courses having credits 3 to 6 should have 5 number of Cos. The courses having credits less than 3 should have 4 number of COs.
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KIET SCHOOL OF PHARMACY

Program Name: B. Pharm.	**Academic Session: Even 2024-25**	**Semester: VI**
Course Name: Pharmacology -III Practical	**Course Code: BP608P**	**Faculty: Dr. Abhishek Kumar**

Tagging COs with BLs & KCs

CO No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	**Understand** the methods for dose calculation for experimental animals.	Understand	Conceptual & Procedural
CO2	**Demonstrate** the knowledge of experiment design and bioassay process by experimental pharmacology on living tissue and simulation software.	Apply	Conceptual & Procedural
CO3	**Examine** the method of biochemical, pharmacokinetic analysis of biological samples.	Apply	Conceptual & Procedural
CO4	**Demonstrate** the method of toxicity studies and biostatistical analysis in Experimental Pharmacology.	Apply	Conceptual & Procedural

Mapping of Course outcomes with Program outcomes CO-POs Matrix

Pharmacology-III Practical (BP608P)

Course Code	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11
CO-1	3	1	1	-	-	-	2	1	-	-	3
CO-2	3	1	1	2	-	-	2	1	-	1	3
CO-3	3	1	1	2	-	-	2	1	-	1	3
CO-4	3	1	1	2			2	1		1	3
PO Target	**3**	**1**	**1**	**2**	-	-	**2**	**1**	-	**1**	**3**

Signature of Course Coordinator

Signature of Addl. HoD

Signature of HoD

Please Note (Reference: OBE Guidelines wef. Session 2023–24)

- The courses having credits 3 to 6 should have 5 number of Cos. The courses having credits less than 3 should have 4 number of COs.
- The statement of a CO must be formed considering a proper structure having mandatory and optional parts. The mandatory parts are Action & Knowledge and optional parts are Condition and Criteria.

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KIET SCHOOL OF PHARMACY

Program Name: B Pharm.	**Academic Session: Even 2024-25**	**Semester: VI**
Course name: Herbal Drug Technology-Practical	**Course Code: BP609P**	**Faculty: Dr. Daksh Bhatia**

Tagging COs with BLs & KCs

CO No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	**Analyze** the photocomposition of crude drugs using various chemical tests.	Analyze	Conceptual, Procedural
CO2	**Evaluate** the marketed Ayurvedic/Herbal formulations on various parameters given in pharmacopoeia.	Evaluate	Conceptual, Procedural
CO3	**Develop** the herbal formulation with the help of knowledge of herbs and excipients.	Create	Conceptual, Procedural
CO4	**Evaluate** the analysis and evaluation of crude drugs on the basis of pharmacopeial standards.	Evaluate	Conceptual, Procedural

Mapping of Course outcomes with Program outcomes CO-POs Matrix

Herbal Drug Technology-Practical (BP609P)

Course Code	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11
CO-1	3	2	2	-	-	-	-	-	-	-	2
CO-2	3	2	2	3	-	-	-	-	-	-	2
CO-3	3	2	2	-	-	-	-	-	-	2	2
CO-4	3	2	2	3	-	-	-	-	-		2
PO Target	**3**	**2**	**2**	**3**	**-**	**-**	**-**	**-**	**-**	**2**	**2**

Signature of Course Coordinator **Signature of Addl. HoD** **Signature of HoD**

Please Note (Reference: OBE Guidelines wef. Session 2023–24)

- The courses having credits 3 to 6 should have 5 number of Cos. The courses having credits less than 3 should have 4 number of COs.
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KIET SCHOOL OF PHARMACY

Program Name: B. Pharm	**Academic Session: Even 2024-25**	**Semester: VI**
Course name: Report on Industrial Training-I	**Course Code: BP610P**	**Faculty: Kapil Sachan**

Tagging COs with BLs & KCs

CO No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	**Layout** the functioning of different sections and departments in an Industry or an approved research facility.	Analyze	Factual & Conceptual
CO2	**Observe** the roles and responsibilities of stakeholders in an industry or an approved research facility.	Understand	Factual & Conceptual.
CO3	**Explore** the handling of equipments that are being used inside an industry or an approved research facility.	Apply	Conceptual & Procedural
CO4	**Acquire** knowledge about organizational behavior, methods of official communications inside an organization and its responsibilities towards the environment and the society.	Apply	Factual & Conceptual

Mapping of Course outcomes with Program outcomes CO-POs Matrix

Report on Industrial Training-I (BP610P)

Course Code	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11
CO-1	3	1	-	2	1	2	-	1	3	-	3
CO-2	3	3	-	-	3	3	3	3	3	1	3
CO-3	3	2	-	3	1	1	3	1	3	2	3
CO-4	2	3	-	-	1	3	3	3	3	3	3
PO Target	2.75	2.25	-	1.5	1.5	2.25	3	2	3	2	3

Signature of Course Coordinator

Signature of Addl. HoD

Signature of HoD

Please Note (Reference: OBE Guidelines wef. Session 2023–24)

- The courses having credits 3 to 6 should have 5 number of Cos. The courses having credits less than 3 should have 4 number of COs.
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KIET SCHOOL OF PHARMACY

Program Name: B. Pharm	**Academic Session: Even 2024-25**	**Semester: VIII**
Course Name: Biostatistics & Pesearch Methodology	**Course Code: BP801T**	**Faculty: Dr Neelam Sharma**

Tagging COs with BLs & KCs

CO No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	**Apply** the role of biostatistics, concept of central tendency, dispersion and Correlation coefficient to solve pharmaceutical problems.	Apply	Conceptual & Procedural
CO2	**Examine** the concept of probability and its applications to the problem related to probability distributions along with the statistical method of data samples.	Apply	Conceptual & Procedural
CO3	**Apply** the non-parametric tests in the need of research design of experiment, along with the concept of graphs to designing the methodology.	Apply	Conceptual & Procedural
CO4	**Understand** the concept of Regression Modeling and understand the operation of M.S Excel, SPSS, R and MINITAB, DOE (Design of Experiment).	Understand	Factual & Conceptual
CO5	**Demonstrate** the concept of design, analysis of experiments and apply the optimization techniques in solving the problems.	Apply	Conceptual & Procedural

Mapping of Course outcomes with Program outcomes CO-POs Matrix

Biostatistics & Research Methodology (BP801T)

Course Code	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11
CO-1	2	1	1	1	-	-	-	-	-	-	1
CO-2	2	1	2	1	-	-	-	-	-	-	1
CO-3	1	1	2	1	-	-	-	-	-	-	1
CO-4	2	2	2	2	-	-	-	-	-	-	1
CO-5	2	2	1	2	-	-	-	-	-	-	1
PO Target	**1.8**	**1.4**	**1.6**	**1.4**	**-**	**-**	**-**	**-**	**-**	**-**	**1**

Signature of Course Coordinator **Signature of Addl. HoD** **Signature of HoD**

Please Note (Reference: OBE Guidelines wef. Session 2023–24)

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KIET SCHOOL OF PHARMACY

Program Name: B. Pharm.	**Academic Session: Even 2024-25**	**Semester: VIII**
Course name: Social and Preventive Pharmacy	**Course Code: BP802T**	**Faculty: Ms. Sheena Mehta**

Tagging COs with BLs & KCs

CO No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	**Elaborate** the various concepts of health and diseases with reference to public health	Understand	Factual & Conceptual
CO2	**Acquire** the knowledge of general principles for prevention and control of various diseases in light of social and preventive medicine	Apply	Factual & Conceptual
CO3	**Outline** the important attributes of various National Health Programmes in context with its objectives, functions and outcomes	Analyze	Factual & Conceptual
CO4	**Explore** various National Health Programmes and role of WHO in Indian health program in context with public health	Analyze	Factual & Conceptual
CO5	**Illustrate** the role of community services in rural, urban and school health	Apply	Factual & Conceptual

Mapping of Course outcomes with Program outcomes CO-POs Matrix

Social and Preventive Pharmacy (BP802T)

Course Code	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11
CO-1	3	-	2	-	-	3	3	2	3	-	3
CO-2	3	-	2	-	-	3	3	3	3	-	3
CO-3	3	-	2	-	-	3	3	3	3	-	3
CO-4	3	-	2	-	-	3	3	3	3	-	3
CO-5	3	-	2	-	-	3	3	3	3	-	3
PO Target	3	-	2	-	-	3	3	2.8	3	-	3

Signature of Course Coordinator

Signature of Addl. HoD

Signature of HoD

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KIET SCHOOL OF PHARMACY

Program Name: B. Pharm.	**Academic Session: Even 2024-25**	**Semester: VIII**
Course name: Pharm Marketing Management	**Course Code: BP803ET**	**Faculty: Ms. Snikha Kaushik**

Tagging COs with BLs & KCs

CO No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	**Apply** the basic concepts of marketing and their application in pharmaceutical marketing.	Apply	Factual & Conceptual
CO2	**Illustrate** product management in the pharmaceutical industry.	Apply	Factual & Conceptual
CO3	**Analyze** various promotional techniques for pharmaceutical products.	Analyze	Factual & Conceptual
CO4	**Acquire** knowledge about various pharmaceutical marketing channels.	Apply	Factual & Conceptual
CO5	**Ascertain** the objectives and importance of price management in the pharmaceutical industry.	Apply	Conceptual

Mapping of Course outcomes with Program outcomes CO-POs Matrix

Pharm Marketing Management (BP803ET)

Course Code	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11
CO-1	2	3	3	1	3	3	2	2	3	1	2
CO-2	3	3	2	3	3	3	2	3	3	1	3
CO-3	2	3	3	3	1	3	3	3	3	1	3
CO-4	2	3	3	2	3	2	3	3	3	1	3
CO-5	3	2	3	3	2	3	3	3	3	1	3
PO Target	2.40	2.80	2.80	2.40	2.40	2.80	2.60	2.80	3.00	1	2.80

Signature of Course Coordinator

Signature of Addl. HoD

Signature of HoD

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KIET SCHOOL OF PHARMACY

Program Name: B. Pharm.	**Academic Session: Even 2024-25**	**Semester: VIII**
Course name: Computer Aided Drug Design	**Course Code: BP807ET**	**Faculty: Dr. Garima Kapoor**

Tagging COs with BLs & KCs

CO No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	**Elaborate** the basic concepts of CADD and rational approaches to drug design	Understand	Factual & Conceptual
CO2	**Understand** the concept of QSAR, descriptors and various approaches.	Understand	Factual & Conceptual
CO3	**Acquire** knowledge of virtual screening techniques and molecular docking.	Apply	Factual & Conceptual
CO4	**Explore** about bioinformatics and cheminformatics in pharmaceutical drug discovery	Apply	Factual & Conceptual
CO5	**Explore** objectives and importance of molecular mechanics and quantum mechanics in drug discovery.	Apply	Factual & Conceptual

Mapping of Course outcomes with Program outcomes CO-POs Matrix

Computer Aided Drug Design (BP807ET)

Course Code	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11
CO-1	3	3	3	2	-	2	-	2	2	1	3
CO-2	2	-	2	3	2	2	-	3	2	1	2
CO-3	1	-	-	3	-	1	-	2	-	-	3
CO-4	2	-	3	2	2	2	-	2	-	-	3
CO-5	3	-	3	3	-	-	-	1	-	-	3
PO Target	**2.2**	**3**	**2.75**	**2.6**	**2**	**1.75**	**-**	**2**	**2**	**1**	**2.8**

Signature of Course Coordinator

Signature of Addl. HoD

Signature of HoD

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KIET SCHOOL OF PHARMACY

Program Name: B. Pharm.	**Academic Session: Even 2024-25**	**Semester: VIII**
Course name: Cosmetic Science	**Course Code: BP809ET**	**Faculty: Dr. Monika Kaurav**

Tagging COs with BLs & KCs

CO No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	**Illustrate** the structures of skin, hair, and oral cavity with associated problems and study of basics of cosmetic and cosmeceutical products	Apply	Conceptual & Procedural
CO2	**Illustrate** the principles of formulation and building blocks of skin care & Hair care products	Apply	Conceptual & Procedural
CO3	**Demonstrate** the role of herbs in cosmetics and analytical methods of cosmetics evaluation.	Apply	Factual, Conceptual & Procedural
CO4	**Analyze** the instrumental methods and their principle in cosmetics evaluation.	Analyze	Factual & Conceptual
CO5	**Explore** the cosmetic problems associated with Hair, scalp and skin.	Apply	Factual & Conceptual

Mapping of Course outcomes with Program outcomes CO-POs Matrix

Course Name (Course Code)

Course Code	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11
CO-1	3	-	3	-	3	2	2	-	2	-	3
CO-2	3	-	2	-	2	2	2	-	2	-	2
CO-3	3	-	2	-	-	-	2	-	1	1	1
CO-4	3	-	2	-	-	2	2	-	-	2	2
CO-5	3	-	2	-	2		2	-	2	1	2
PO Target	**3**	**-**	**2.2**	**-**	**2.33**	**2**	**2**	**-**	**1.75**	**1.33**	**2**

Signature of Course Coordinator **Signature of Addl. HoD** **Signature of HoD**

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KIET SCHOOL OF PHARMACY

Program Name: B. Pharm	**Academic Session: Even 2024-25**	**Semester: VIII**
Course name: Project Work on Elective	**Course Code: BP814PW**	**Faculty: Mr. Debaprasad Ghosh**

Tagging COs with BLs & KCs

CO No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	**Acquire** the rationale behind performing project work in a specific elected area of pharmacy and expertise in data mining, literature reviewing, and processing for a particular research area of pharmacy.	Apply	Conceptual & Procedural
CO2	**Analyze** the implementation of available knowledge and technology to cater the needs under consideration.	Analyze	Conceptual & Procedural
CO3	**Evaluate** the potential role of new findings and their conversion into suitable solutions for the current pharmaceutical challenges.	Evaluate	Conceptual & Procedural
CO4	**Develop** novel theories, ideas, products, analytical methods, procedures, and techniques in a specific elected area in pharmacy.	Create	Conceptual & Procedural

Mapping of Course outcomes with Program outcomes CO-POs Matrix

Project Work on Elective (BP814PW)

Course Code	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11
CO-1	3	1	2	-	-	1	1	-	1	-	2
CO-2	3	2	2	3	-	1	1	-	1	-	2
CO-3	3	2	2	1	-	1	1	-	2	-	2
CO-4	3	1	2	2	-	1	1	-	2	-	2
PO Target	**3**	**1.5**	**2**	**2**	-	**1**	**1**	-	**1.5**	-	**2**

Signature of Course Coordinator

Signature of Addl. HoD

Signature of HoD

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KIET SCHOOL OF PHARMACY

Program Name: B. Pharm	**Academic Session: Even 2024-25**	**Semester: VIII**
Course name: Report on Industrial Tour	**Course Code: BP816P**	**Faculty: Ms. Vidhu Saxena**

Tagging COs with BLs & KCs

CO No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	**Observe** the different sections and departments of pharmaceutical industry	Understand	Factual, Conceptual & Procedural
CO2	**Elaborate** the manufacturing process of different formulations in the pharmaceutical industry	Understand	Factual, Conceptual & Procedural
CO3	**Analyze** the rules and regulations related with pharmaceutical industry	Analyze	Factual & Conceptual
CO4	**Acquire** professional ethics and responsibilities towards the environment and the society.	Apply	Conceptual

Mapping of Course outcomes with Program outcomes CO-POs Matrix

Report on Industrial Tour (BP816P)

Course Code	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11
CO-1	3	1	1	3	-	1	-	1	1	1	3
CO-2	3	1	1	3	-	1	-	1	1	1	3
CO-3	3	1	-	-	-	3	-	3	1	1	2
CO-4	1	1	-	-	3	1	3	-	1	3	3
PO Target	**2.5**	**1**	**1**	**3**	**3**	**1.5**	**3**	**1.67**	**1**	**1.5**	**2.75**

Signature of Course Coordinator **Signature of Addl. HoD** **Signature of HoD**

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KIET SCHOOL OF PHARMACY

Program Name: M. Pharm (Pharmaceutics)	**Academic Session: Even 2024-25**	**Semester: II**
Course name: Molecular Pharmaceutics	**Course Code: MPH201T**	**Faculty: Prof. (Dr.) NGR RAO**

Tagging COs with BLs & KCs

CO No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	**Elaborate** the concept, factors influencing & biological approaches in Targeted drug delivery systems, Tumor targeting and Brain specific drug delivery systems.	Understand	Factual & Conceptual
CO2	**Assess** the formulation, and evaluation of Nanoparticles and Liposomes.	Evaluate	Conceptual & Procedural
CO3	**Explore** the methods for formulation, preparation and applications of Monoclonal antibodies, Microspheres, Niosomes, Aquasomes, Phytosomes and Electrosomes.	Apply	Conceptual & Procedural
CO4	**Illustrate** the recent advancement in Pulmonary drug delivery systems and Intra nasal route of drug delivery systems.	Apply	Conceptual & Procedural
CO5	**Apply** the concept of Nucleic acid based therapeutic drug delivery.	Apply	Conceptual & Procedural

Mapping of Course outcomes with Program outcomes CO-POs Matrix

Molecular Pharmaceutics (MPH201T)

Course Code	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6
CO-1	3	2	1	3	-	1
CO-2	3	2	2	2	3	1
CO-3	3	2	2	2	2	1
CO-4	3	2	2	1	2	1
CO-5	3	2	2	3	3	1
PO Target	**3**	**2**	**1.8**	**2.2**	**2.5**	**1**

Signature of Course Coordinator

Signature of Addl. HoD

Signature of HoD

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KIET SCHOOL OF PHARMACY

Program Name: M. Pharm Pharmaceutics	**Academic Session: Even 2024-25**	**Semester: II**
Course name: Advanced Biopharmaceutics and Pharmacokinetics	**Course Code: MPH202T**	**Faculty: Prof. (Dr.) Ashu Mittal**

Tagging COs with BLs & KCs

CO No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	**Acquire** the mechanisms and factors involved in drug absorption and drug dissolutions.	Apply	Factual & Conceptual
CO2	**Analyze** the biopharmaceutical factors, including drug bioavailability and absorption rate, formulation characteristics, dissolution testing methods, and in vitro-in vivo correlation, to optimize drug product performance.	Analyze	Factual & Conceptual
CO3	**Apply** the pharmacokinetic models of compartmentalization, non-linear kinetics, and drug interactions to predict and optimize drug behavior and its effects on therapeutic outcomes.	Apply	Conceptual & Procedural
CO4	**Analyze** the bioequivalence of drug products.	Analyze	Factual & Conceptual
CO5	**Apply** pharmacokinetic principles to the understanding of modified-release drug products, targeted drug delivery systems, and biotechnological products.	Apply	Factual & Conceptual

Mapping of Course outcomes with Program outcomes CO-POs Matrix

Advanced Biopharmaceutics and Pharmacokinetics (MPH202T)

Course Code	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6
CO-1	1	-	1	-	-	-
CO-2	3	1	2	2	-	-
CO-3	3	1	3	2	1	-
CO-4	3	1	3	2	1	-
CO-5	3	1	3	2	1	-
PO Target	2.6	1	2.4	2	1	-

Signature of Course Coordinator Signature of Addl. HoD Signature of HoD

Please Note (Reference: OBE Guidelines wef. Session 2021 – 22)

- The theory courses/ project having credits 3 to 6 should have 5 number of COs. The laboratory course/ mini project/ seminar/ industrial training having credits less than 3 should have 3 number of COs. The Project having 7 to 12 credits should have 6 to 10 number of COs.
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KIET SCHOOL OF PHARMACY

Program Name: M. Pharm Pharmaceutics	**Academic Session: Even 2024-25**	**Semester: II**
Course name: Computer Aided Drug Delivery Systems	**Course Code: MPH203T**	**Faculty: Dr. Lakshmi**

Tagging COs with BLs & KCs

CO No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	**Elaborate** the concepts of Computers in Pharmaceutical Research and Development; Quality-by-Design in Pharmaceutical Development with its applications.	Understand	Factual & Conceptual
CO2	**Apply** the principles and techniques of Computational Modeling of Drug Disposition.	Apply	Factual & Conceptual
CO3	**Analyze** the various aspects of Computer-Aided Formulation Development with special reference to emulsion and micro-emulsions.	Analyze	Conceptual & Procedural
CO4	**Illustrate** the concept of Computer-Aided Biopharmaceutical Characterization, Computers in Clinical Development and Computer Simulations in Pharmacokinetics and Pharmacodynamics.	Apply	Factual & Conceptual
CO5	**Interpret** the components of Artificial Intelligence (AI), Robotics and Computational Fluid Dynamics.	Understand	Factual & Conceptual

Mapping of Course outcomes with Program outcomes CO-POs Matrix
Computer Aided Drug Delivery Systems (MPH203T)

Course Code	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6
CO-1	3	-	3	3	-	-
CO-2	3	-	3	3	-	-
CO-3	3	-	3	3	-	-
CO-4	3	2	3	3	1	-
CO-5	3	-	3	3	2	-
PO Target	3	2	3	3	1.5	-

Lakshmi
Signature of Course Coordinator

Signature of Addl. HoD

Signature of HoD

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KIET SCHOOL OF PHARMACY

Program Name: M. Pharm Pharmaceutics	**Academic Session: Even 2024-25**	**Semester: II**
Course name: Cosmetics and Cosmeceuticals	**Course Code: MPH204T**	**Faculty: Dr. Anu Pathak**

Tagging COs with BLs & KCs

CO No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	**Apply** the Indian regulatory requirements for labeling of cosmetics Regulatory provisions relating to import and manufacturing of cosmetics.	Apply	Conceptual & Procedural
CO2	**Analyze** the skin, Hair & other body parts (oral cavity, face, eye lids, lips, hands, feet, nail, scalp, neck, body) related problems.	Analyze	Conceptual & Procedural
CO3	**Apply** the building blocks for the development of different product formulations of cosmetics/cosmeceuticals.	Apply	Conceptual & Procedural
CO4	**Analyze** the Design of cosmeceutical products.	Analyze	Conceptual & Procedural
CO5	**Apply** the herbal ingredients for the development of Hair care, skin care and oral care herbal cosmetics.	Apply	Conceptual & Procedural

Mapping of Course outcomes with Program outcomes CO-POs Matrix
Cosmetics and Cosmeceuticals (MPH204T)

Course Code	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6
CO-1	3	1	1	-	2	1
CO-2	3	1	2	2	-	1
CO-3	3	1	1	1	-	1
CO-4	3	1	2	1	1	1
CO-5	3	1	1	1	1	1
PO Target	3	1	1.4	1.25	1.33	1

Signature of Course Coordinator

Signature of Addl. HoD

Signature of HoD

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KIET School of Pharmacy (KSOP)

Program Name: M. Pharm Pharmaceutics	**Academic Session: Even 2024-25**	**Semester: II**
Course name : Pharmaceutics Practicals – II	**Course Code: MPH205P**	**Faculty : Dr. Snigdha Bhardwaj**

Tagging COs with BLs & KCs

CO No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	**Explore** experiments on formulation and evaluation of novel drug delivery systems	Analyze	Conceptual & procedural
CO2	**Assess** the formulation using quality by design approach and regression analysis of the data	Evaluate	Conceptual & Procedural
CO3	**Develop** the herbal and conventional cosmetics for skin care purpose	Create	Conceptual & Procedural

Mapping of Course outcomes with Program outcomes CO-POs Matrix
Pharmaceutics Practicals – II (MPH205P)

Course Code	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6
CO-1	3	2	3	3	3	1
CO-2	3	2	3	3	3	1
CO-3	3	2	3	3	3	1
PO Target	**3**	**2**	**3**	**3**	**3**	**1**

Signature of Course Coordinator **Signature of Addl. HoD** **Signature of HoD**

Please Note (Reference: OBE Guidelines wef. Session 2021 – 22)

- The theory courses/ project having credits 3 to 6 should have 5 number of COs. The laboratory course/ mini project/ seminar/ industrial training having credits less than 3 should have 3 number of COs. The Project having 7 to 12 credits should have 6 to 10 number of COs.
- The statement of a CO must be formed considering a proper structure having mandatory and optional parts. The mandatory parts are Action & Knowledge and optional parts are Condition and Criteria.

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KIET SCHOOL OF PHARMACY

Program Name: M. Pharm Pharmaceutics	**Academic Session: Even 2024-25**	**Semester: II**
Course Name: Seminar	**Course Code: MPH206S**	**Faculty: Mr. Balwan Singh**

Tagging COs with BLs & KCs

CO No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	**Discuss** the effective technical and regulatory aspects of pharmaceutical industries through presentations and discussions.	Understand	Conceptual & Procedural
CO2	**Apply** innovative solutions and methodologies in pharmaceutics through collaborative discussions for enhanced learning.	Apply	Conceptual & Procedural
CO3	**Develop** structured, well-documented reports demonstrating research and analytical skills.	Create	Conceptual & Procedural
CO4	**Apply** problem-solving skills by applying theoretical knowledge to practical scenarios and case studies in pharmaceutical industries.	Apply	Conceptual & Procedural

Mapping of Course outcomes with Program outcomes CO-POs Matrix

Seminar (MPH206S)

Course Code	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6
CO-1	-	3	-	2	-	3
CO-2	2	3	2	2	-	3
CO-3	-	3	2	2	-	3
CO-4	2	3	2	2	-	3
PO Target	**2**	**3**	**2**	**2**	-	**3**

Signature of Course Coordinator **Signature of Addl. HoD** **Signature of HoD**

Please Note (Reference: OBE Guidelines wef. Session 2023–24)

- The courses having credits 3 to 6 should have 5 number of Cos. The courses having credits less than 3 should have 4 number of COs.
- The statement of a CO must be formed considering a proper structure having mandatory and optional parts. The mandatory parts are Action & Knowledge and optional parts are Condition and Criteria.

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KIET SCHOOL OF PHARMACY

Program Name: M. Pharm Pharmaceutics	Academic Session: Even 2024-25	Semester: IV
Course Name: Journal Club	Course Code: MPH401T	Faculty: Mr. Balwan Singh

Tagging COs with BLs & KCs

CO No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	**Analyze** the methodology and experimental designs presented in peer-reviewed journal articles related to advancements in pharmaceutics to identify their strengths and limitations.	Analyze	Conceptual, Procedural
CO2	**Evaluate** the significance and applicability of published research in pharmaceutics to address challenges in drug formulation and delivery systems.	Evaluate	Conceptual, Procedural
CO3	**Apply** knowledge gained from journal articles to propose innovative approaches for solving pharmaceutical problems, fostering critical thinking and research skills.	Apply	Conceptual, Procedural

Mapping of Course outcomes with Program outcomes CO-POs Matrix

Course Name (Course Code)						
Course Code	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6
CO-1	3	3	3	3	3	2
CO-2	3	3	3	3	3	2
CO-3	3	3	3	3	3	2
PO Target	3.00	3.00	3.00	3.00	3.00	2.00

Signature of Course Coordinator

Signature of Addl. HoD

Signature of HoD

Please Note (Reference: OBE Guidelines wef. Session 2023–24)

- The courses having credits 3 to 6 should have 5 number of Cos. The courses having credits less than 3 should have 4 number of COs.
- The statement of a CO must be formed considering a proper structure having mandatory and optional parts. The mandatory parts are Action & Knowledge and optional parts are Condition and Criteria.

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KIET SCHOOL OF PHARMACY

Program Name: M. Pharm Pharmaceutics	**Academic Session: Even 2024-25**	**Semester: IV**
Course name: Discussion/Presentation (Proposal Presentation)	**Course Code: MRM402P**	**Faculty: Dr. Snigdha Bhardwaj**

Tagging COs with BLs & KCs

CO No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	Identify significant pharmaceutics research problems, formulate clear and achievable objectives.	Apply	Conceptual & Procedural
CO2	Explore innovative solutions to address gaps in developing effective drug delivery systems.	Analyze	Conceptual & Procedural
CO3	Draw a robust developmental strategy, including preformulation approaches, formulation, advanced evaluation techniques, and statistical tools, to ensure the feasibility and scientific validity of the proposed research work.	Evaluate	Conceptual & Procedural
CO4	Defend the research proposal coherently with scientific evidence, and discussions.	Evaluate	Conceptual

Mapping of Course outcomes with Program outcomes CO-POs Matrix

Discussion/Presentation (Proposal Presentation) (MRM402P)

Course Code	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6
CO-1	3	-	3	3	3	-
CO-2	3	2	3	3	3	-
CO-3	3	2	3	3	3	-
CO-4	3	2	3	3	3	2
PO Target	3	2	3	3	3	2

Signature of Course Coordinator

Signature of Addl. HoD

Signature of HoD

Please Note (Reference: OBE Guidelines wef. Session 2023–24)

- The courses having credits 3 to 6 should have 5 number of Cos. The courses having credits less than 3 should have 4 number of COs.
- The statement of a CO must be formed considering a proper structure having mandatory and optional parts. The mandatory parts are Action & Knowledge and optional parts are Condition and Criteria.

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KIET SCHOOL OF PHARMACY

Program Name: M. Pharm Pharmaceutics	**Academic Session: Even 2024-25**	**Semester: IV**
Course name: Research work and Colloquium	**Course Code: MRM403P**	**Faculty: Dr. Snigdha Bhardwaj**

Tagging COs with BLs & KCs

CO No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	Acquire the ability to design and execute pharmaceutical delivery independently, utilizing appropriate advanced analytical tools, and ethical practices crucial for developing drug delivery systems.	Apply	Conceptual & Procedural
CO2	Explore various *in vitro* and *in vivo* models for and evaluating drug delivery systems.	Evaluate	Conceptual & Procedural
CO3	Assess experimental data using statistical and computational tools, identifying trends, solving complex pharmaceutical problems, and drawing meaningful conclusions that contribute to drug development.	Evaluate	Conceptual & Procedural
CO4	Document the research findings in the form of reports or manuscripts, and submission of research reports.	Evaluate	Conceptual

Mapping of Course outcomes with Program outcomes CO-POs Matrix

Discussion/Presentation (Proposal Presentation) (MRM402P)

Course Code	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6
CO-1	3	-	3	3	2	-
CO-2	3	2	3	3	2	-
CO-3	3	2	3	3	2	-
CO-4	3	2	3	3	2	2
PO Target	**3**	**2**	**3**	**3**	**2**	**2**

Signature of Course Coordinator **Signature of Addl. HoD** **Signature of HoD**

Please Note (Reference: OBE Guidelines wef. Session 2023–24)

- The courses having credits 3 to 6 should have 5 number of Cos. The courses having credits less than 3 should have 4 number of COs.
- The statement of a CO must be formed considering a proper structure having mandatory and optional parts. The mandatory parts are Action & Knowledge and optional parts are Condition and Criteria.

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KIET SCHOOL OF PHARMACY

Program Name: M. Pharm Pharmacology	**Academic Session: Even 2024-25**	**Semester: II**
Course Name: Advanced Pharmacology-II	**Course Code: MPL201T**	**Faculty: Dr. Shardendu Kumar Mishra**

Tagging COs with BLs & KCs

CO No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	**Elaborate** the molecular and cellular mechanisms of hormone action, pharmacological interventions in endocrine disorders, including diabetes and thyroid dysfunction.	Understand	Factual & Conceptual
CO2	**Explore** strategic approaches to overcome antimicrobial resistance by applying the cellular and molecular mechanisms of action of antimicrobial agents.	Apply	Conceptual & Procedural
CO3	**Analyze** evidence-based therapeutic regimens for protozoal and helminthic infections, cancer chemotherapy, and immunomodulation by integrating knowledge of immunopharmacology and inflammatory mediators.	Analyze	Factual & Conceptual
CO4	**Evaluate** chronopharmacological principles with disease pathophysiology to optimize treatment strategies for conditions like cardiovascular diseases, diabetes, asthma, and peptic ulcers.	Evaluate	Factual & Conceptual
CO5	**Blueprint** the novel antioxidant-based therapeutic approaches through free radical generation, oxidative stress-related pathologies, and recent advancements in treating neurodegenerative disorders and cancer.	Analyze	Factual & Conceptual

Mapping of Course outcomes with Program outcomes CO-POs Matrix

Advanced Pharmacology-II (MPL201T)

Course Code	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6
CO-1	1	1	1	2	2	-
CO-2	1	1	1	2	2	-
CO-3	1	1	1	2	2	-
CO-4	1	1	1	2	2	-
CO-5	1	1	1	2	2	-
PO Target	1	1	1	2	2	-

Signature of Course Coordinator

Signature of Addl. HoD

Signature of HoD

Please Note (Reference: OBE Guidelines wef. Session 2023-24)

- The courses having credits 3 to 6 should have 5 number of Cos. The courses having credits less than 3 should have 4 number of COs.
- The statement of a CO must be formed considering a proper structure having mandatory and optional parts. The mandatory parts are Action & Knowledge and optional parts are Condition and Criteria.

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KIET SCHOOL OF PHARMACY

Program Name: M. Pharm Pharmacology	**Academic Session: Even 2024-25**	**Semester: II**
Course Name: Pharmacological and Toxicological Screening Methods-II	**Course Code: MPL 202T**	**Faculty: Dr. Abhishek Kumar**

Tagging COs with BLs & KCs

CO No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	**Apply** the basics and regulatory guidelines for conducting toxicity studies.	Apply	Conceptual & Procedural
CO2	**Illustrare** OECD Guidelines for Acute, sub-acute and chronic- oral, dermal and inhalational studies.	Apply	Conceptual & Procedural
CO3	**Examine** the concepts of reproductive toxicity and genotoxicity.	Apply	Conceptual & Procedural
CO4	**Explore** the IND enabling studies and safety pharmacological studies.	Apply	Conceptual & Procedural
CO5	**Evaluate** the toxicokinetic assessments in various studies and alternatives to animal testing.	Evaluate	Conceptual & Procedural

Mapping of Course outcomes with Program outcomes CO-POs Matrix

Pharmacological and Toxicological Screening Methods-II (MPL202T)

Course Code	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6
CO-1	3	-	1	-	3	-
CO-2	3	-	1	-	3	-
CO-3	3	-	1	-	3	-
CO-4	3	-	1	1	3	-
CO-5	3	-	1	1	3	-
PO Target	3	-	1	1	3	-

16/09/2024

Signature of Course Coordinator

Signature of Addl. HoD

Signature of HoD

Please Note (Reference: OBE Guidelines wef. Session 2023–24)

- The courses having credits 3 to 6 should have 5 number of Cos. The courses having credits less than 3 should have 4 number of COs.
- The statement of a CO must be formed considering a proper structure having mandatory and optional parts. The mandatory parts are Action & Knowledge and optional parts are Condition and Criteria.

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KIET SCHOOL OF PHARMACY

Program Name: M. Pharm Pharmacology	**Academic Session: Even 2024-25**	**Semester: II**
Course Name: Principles of Drug Discovery	**Course Code: MPL203T**	**Faculty: Dr. K. Nagarajan**

Tagging COs with BLs & KCs

CO No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	**Apply** combinatorial chemistry, high-throughput screening, and in silico techniques for lead identification and optimization in drug discovery.	Apply	Conceptual & Procedural
CO2	**Examine** the role of genomics, proteomics, and bioinformatics in target identification and validation to understand their impact on drug discovery.	Analyze	Conceptual & Procedural
CO3	**Assess** the effectiveness of rational drug design approaches, including structure-based and pharmacophore-based methods, in developing potential drug candidates.	Evaluate	Conceptual & Procedural
CO4	**Compare** various molecular docking techniques, such as rigid, flexible, and manual docking, to determine their relevance in virtual screening.	Evaluate	Conceptual & Procedural
CO5	**Evaluate** QSAR models and prodrug strategies to improve drug solubility, bioavailability, and targeted delivery for enhanced therapeutic efficacy.	Evaluate	Conceptual & Procedural

Mapping of Course outcomes with Program outcomes CO-POs Matrix

Principles of Drug Discovery (MPL203T)

Course Code	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6
CO-1	3	-	1	-	3	-
CO-2	3	-	1	-	3	-
CO-3	3	-	1	-	3	-
CO-4	3	-	1	1	3	-
CO-5	3	-	1	1	3	-
PO Target	3	-	1	1	3	-

Signature of Course Coordinator **Signature of Addl. HoD** **Signature of HoD**

Please Note (Reference: OBE Guidelines wef. Session 2023–24)

- The courses having credits 3 to 6 should have 5 number of Cos. The courses having credits less than 3 should have 4 number of COs.
- The statement of a CO must be formed considering a proper structure having mandatory and optional parts. The mandatory parts are Action & Knowledge and optional parts are Condition and Criteria.

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KIET SCHOOL OF PHARMACY

Program Name: M. Pharm Pharmacology	**Academic Session: Even 2024-25**	**Semester: II**
Course name: Clinical Research and Pharmacovigilance	**Course Code: MPL204T**	**Faculty: Dr. Roma Ghai**

Tagging COs with BLs & KCs

CO No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	**Elaborate** the regulatory perspectives of Clinical trials.	Understand	Factual & Conceptual
CO2	**Explore** the types of Clinical Trial designs and the roles of stakeholders involved in Clinical trials.	Analyze	Factual & Conceptual
CO3	**Apply** the various guidelines for preparation of regulatory documents of Clinical trials and management of adverse drug reactions.	Apply	Factual & Conceptual
CO4	**Illustrate** the establishment and scope of Pharmacovigilance in India and global with emphasis on WHO International Drug Monitoring Programme.	Apply	Factual & Conceptual
CO5	**Analyze** various ADR reporting systems and the concepts of Pharmacoepidemiology, Pharmacoeconomics and Safety Pharmacology	Analyze	Factual & Conceptual

Mapping of Course outcomes with Program outcomes CO-POs Matrix

Clinical Research and Pharmacovigilance (MPL204T)

Course Code	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6
CO-1	1	1	2	-	3	1
CO-2	1	1	2	-	3	1
CO-3	1	1	2	-	3	1
CO-4	1	1	2	-	3	1
CO-5	1	1	2	2	3	1
PO Target	**1**	**1**	**2**	**2**	**3**	**1**

Signature of Course Coordinator **Signature of Addl. HoD** **Signature of HoD**

Please Note (Reference: OBE Guidelines wef. Session 2023–24)

- The courses having credits 3 to 6 should have 5 number of Cos. The courses having credits less than 3 should have 4 number of COs.
- The statement of a CO must be formed considering a proper structure having mandatory and optional parts. The mandatory parts are Action & Knowledge and optional parts are Condition and Criteria.

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Program Name: M. Pharm Pharmacology	**Academic Session: Even 2024-25**	**Semester: II**
Course name: Pharmacological Practical II	**Course Code: MPL205P**	**Faculty: Dr. Roma Ghai**

Tagging COs with BLs & KCs

CO No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	**Evaluate** the potency of test compounds using various bioassay procedures.	Evaluate	Conceptual & Procedural
CO2	**Demonstrate** the technique of recording Blood Pressure, Heart rate and ECG in rats	Apply	Conceptual & Procedural
CO3	**Demonstrate** toxicity studies as a part of preclinical evaluation in drug discovery and development.	Apply	Conceptual & Procedural
CO4	**Design** protocols for clinical trial and Adverse Drug Reaction (ADR) monitoring.	Create	Conceptual & Procedural

Mapping of Course outcomes with Program outcomes CO-POs Matrix

Pharmacological Practical II (MPL205P)

Course Code	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6
CO-1	3	2	3	2	1	1
CO-2	3	2	3	2	1	1
CO-3	2	3	3	2	3	1
CO-4	3	2	3	2	3	1
PO Target	2.75	2.25	3	2	2	1

Signature of Course Coordinator

Signature of Addl. HoD

Signature of HoD

Please Note (Reference: OBE Guidelines wef. Session 2023–24)

- The courses having credits 3 to 6 should have 5 number of Cos. The courses having credits less than 3 should have 4 number of COs.
- The statement of a CO must be formed considering a proper structure having mandatory and optional parts. The mandatory parts are Action & Knowledge and optional parts are Condition and Criteria.

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KIET SCHOOL OF PHARMACY

Program Name: M. Pharm Pharmacology	**Academic Session: Even 2024-25**	**Semester: II**
Course name: Seminar	**Course Code: MPL206S**	**Faculty: Dr. Shardendu K Mishra**

Tagging COs with BLs & KCs

CO No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	**Evaluate** the ability to perform systematic literature searches using scientific databases and critically evaluate recent advancements in pharmacology.	Evaluate	Conceptual & Procedural
CO2	**Compose** proficiency in scientific writing, data interpretation, and oral presentation to effectively communicate research findings to peers and professionals.	Create	Conceptual & Procedural
CO3	**Apply** ethical considerations, research integrity, and problem-solving skills in pharmacological research and experimental design.	Apply	Conceptual & Procedural
CO4	**Analyze** cutting-edge developments in pharmacology, including novel drug targets, therapeutic strategies, and clinical applications.	Analyze	Conceptual & Procedural

Mapping of Course outcomes with Program outcomes CO-POs Matrix

Seminar (MPL206S)						
Course Code	**PO-1**	**PO-2**	**PO-3**	**PO-4**	**PO-5**	**PO-6**
CO-1	3	2	2	2	2	1
CO-2	3	2	2	2	2	1
CO-3	3	2	2	2	3	1
CO-4	3	2	2	2	2	1
PO Target	**3**	**2**	**2**	**2**	**2.25**	**1**

Signature of Course Coordinator **Signature of Addl. HoD** **Signature of HoD**

Please Note (Reference: OBE Guidelines wef. Session 2023–24)

- The courses having credits 3 to 6 should have 5 number of Cos. The courses having credits less than 3 should have 4 number of COs.
- The statement of a CO must be formed considering a proper structure having mandatory and optional parts. The mandatory parts are Action & Knowledge and optional parts are Condition and Criteria.

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Program Name: M. Pharm Pharmacology	**Academic Session: Even 2024-25**	**Semester: IV**
Course name: Journal Club	**Course Code: MRM401T**	**Faculty: Dr. Shardendu K Mishra**

Tagging COs with BLs & KCs

CO No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	**Apply** critically appraise scientific literature to understand advancements and challenges in Pharmacology.	Apply	Conceptual, Procedural
CO2	**Analyze** research data to assess its relevance to experimental pharmacology.	Analyze	Conceptual, Procedural
CO3	**Enhance** collaborative learning through discussions on innovative solutions and methodologies in pharmacology.	Create	Conceptual, Procedural
CO4	**Develop** skills in scientific reading, critical analysis, and effective presentation of research papers.	Create	Conceptual, Procedural

Mapping of Course outcomes with Program outcomes CO-POs Matrix

Journal Club (MRM401T)

Course Code	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6
CO1	-	3	3	3	3	2
CO2	3	3	3	3	3	2
CO3	3	3	3	3	3	2
CO4	3	3	3	3	3	2
PO Target	3.00	3.00	3.00	3.00	3.00	2.00

Signature of Course Coordinator

Signature of Addl. HoD

Signature of HoD

Please Note (Reference: OBE Guidelines wef. Session 2023–24)

- The courses having credits 3 to 6 should have 5 number of Cos. The courses having credits less than 3 should have 4 number of COs.
- The statement of a CO must be formed considering a proper structure having mandatory and optional parts. The mandatory parts are Action & Knowledge and optional parts are Condition and Criteria.

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Program Name: M. Pharm Pharmacology	**Academic Session: Even 2024-25**	**Semester: IV**
Course name: Discussion/Presentation (Proposal Presentation)	**Course Code: MRM402P**	**Faculty: Dr. Roma Gilai**

Tagging COs with BLs & KCs

CO No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to:			
CO1	**Identify** significant pharmacological research problems, formulate clear and achievable objectives and propose innovative solutions to address gaps in pharmacology field.	Analyze	Conceptual & Procedural
CO2	**Draw** robust experimental methodologies including preclinical studies with the help of in-depth literature review.	Apply	Conceptual & Procedural
CO3	**Apply** advanced estimation techniques, and statistical tools, to ensure the feasibility and scientific validity of the proposed research work.	Apply	Conceptual & Procedural
CO4	**Defend** the research proposal coherently with scientific evidence, and discussions.	Evaluate	Conceptual & Procedural

Mapping of Course outcomes with Program outcomes CO-POs Matrix

Discussion/Presentation (Proposal Presentation) (MRM402P)

Course Code	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6
CO-1	3	-	3	3	3	-
CO-2	3	2	3	3	3	-
CO-3	3	3	3	3	3	2
CO-4	-	3	-	3	3	2
PO Target	3	2.66	3	3	3	2

Signature of Course Coordinator

Signature of Addl. HoD

Signature of HoD

Please Note (Reference: OBE Guidelines wef. Session 2023–24)

- The courses having credits 3 to 6 should have 5 number of Cos. The courses having credits less than 3 should have 4 number of COs.
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Program Name: M. Pharm Pharmacology	**Academic Session: Even 2024-25**	**Semester: IV**
Course name: Research work and Colloquium	**Course Code: MRM403P**	**Faculty: Dr. Roma Ghai**

Tagging COs with BLs & KCs

CO No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	**Acquire** the ability to design and execute pharmacological experiments independently, utilizing advanced in-vitro and in-vivo models, advanced analytical tools and ethical practices to investigate drug efficacy, safety and mechanism of action.	Apply	Conceptual & Procedural
CO2	**Evaluate** research methodology integrating experimental design, data analysis using statistical tools and computational tools.	Evaluate	Conceptual & Procedural
CO3	**Document** the research findings in the form of reports or manuscripts, and submission of research reports.	Analyze	Conceptual & Procedural
CO4	Summarize a research framework adherence to ethical principles, maintains data integrity, and avoiding plagiarism.	Evaluate	Conceptual & Procedural

Mapping of Course outcomes with Program outcomes CO-POs Matrix

Research work and Colloquium (MRM403P)

Course Code	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6
CO-1	3	2	3	3	3	2
CO-2	3	2	3	3	3	-
CO-3	3	3	3	3	3	2
CO-4	3	3	3	3	3	2
PO Target	3	2.5	3	3	3	2

Signature of Course Coordinator **Signature of Addl. HoD** **Signature of HoD**

Please Note (Reference: OBE Guidelines wef. Session 2023–24)

- The courses having credits 3 to 6 should have 5 number of Cos. The courses having credits less than 3 should have 4 number of COs.
- The statement of a CO must be formed considering a proper structure having mandatory and optional parts. The mandatory parts are Action & Knowledge and optional parts are Condition and Criteria.

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KIET SCHOOL OF PHARMACY

Program Name: M. Pharm PQA	**Academic Session: Even 2024-25**	**Semester: II**
Course name: Hazard and Safety Management	**Course Code: MQA201T**	**Faculty: Dr. Abhay Bhardwaj**

Tagging COs with BLs & KCs

CO No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	**Illustrate** the multidisciplinary nature of environmental studies and ecosystem.	Apply	Conceptual & Procedural
CO2	**Explore** the air-based hazards.	Apply	Conceptual & Procedural
CO3	**Demonstrate** the chemical-based hazards.	Apply	Conceptual & Procedural
CO4	**Illustrate** the fire and explosion.	Analyze	Conceptual & Procedural
CO5	**Review** the hazard and risk Management.	Understand	Conceptual & Procedural

Mapping of Course outcomes with Program outcomes CO-POs Matrix

Hazard and Safety Management (MQA201T)

Course Code	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6
CO-1	2	2	2	3	2	2
CO-2	2	2	2	3	2	2
CO-3	2	2	2	3	2	2
CO-4	2	2	2	3	2	2
CO-5	2	2	2	3	2	2
PO Target	2	2	2	3	2	2

Signature of Course Coordinator

Signature of Addl. HoD

Signature of HoD

Please Note (Reference: OBE Guidelines wef. Session 2023–24)

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KIET SCHOOL OF PHARMACY

Program Name: M. Pharm PQA	**Academic Session: Even 2024-25**	**Semester: II**
Course name: Pharmaceutical Validation	**Course Code: MQA702T**	**Faculty: Ms. Surbhi Kamboj**

Tagging COs with BLs & KCs

CO No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	**Apply** the concept of pharmaceutical validation, calibration, qualification and its related aspects including VMP.	Apply	Conceptual & Procedural
CO2	**Analyze** the qualification of various manufacturing equipments.	Analyze	Conceptual & Procedural
CO3	**Analyze** the qualification of various laboratory equipments.	Analyze	Conceptual & Procedural
CO4	**Evaluate** the concept, process & documentation of process validation and analytical method validation, & computerized system validation.	Evaluate	Conceptual & Procedural
CO5	**Evaluate** the cleaning method development, & validation of analytical method used in cleaning.	Evaluate	Conceptual & Procedural
CO6	**Portray** the concepts of Intellectual Property Right.	Create	Procedural & Metacognitive

Mapping of Course outcomes with Program outcomes CO-POs Matrix
Pharmaceutical Validation (MQA202T)

Course Code	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6
CO-1	-	3	3	2	3	2
CO-2	-	3	3	2	-	2
CO-3	-	3	3	2	-	2
CO-4	3	3	3	3	3	2
CO-5	3	3	3	3	3	2
CO-6	3	3	3	3	3	3
PO Target	3	3	3	2.5	3	2.16

Signature of Course Coordinator

Signature of Addl. HoD

Signature of HoD

Please Note (Reference: OBE Guidelines wef. Session 2023-24)

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Program Name: M. Pharm PQA	**Academic Session: Even 2024-25**	**Semester: II**
Course name: Audits and Regulatory Compliance	**Corse Code: MQA203T**	**Faculty: Dr. Smriti Sahu**

Tagging COs with BLs & KCs

CO No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	**Elaborate** concepts & objectives, management of audit, responsibilities, planning process, information gathering, administration, classifications of deficiencies.	Understand	Conceptual & Procedural
CO2	**Analyze** role of Quality Systems and audits in Pharmaceutical Manufacturing Environment cGMP Regulations, Quality assurance functions, Quality systems approach, Management responsibilities, Resource, Manufacturing operations, Evaluation activities, Transitioning to quality system approach, Audit checklist for drug industries.	Analyze	Conceptual & Procedural
CO3	**Document** bulk pharmaceutical chemicals and packaging material vendor audit, warehouse and weighing, dry production: Granulation, tableting, coating, capsules, sterile production and packaging.	Analyze	Conceptual & Procedural
CO4	**Audit** the manufacturing process, product and process information, general areas of interest in the building raw materials, water, packaging materials.	Analyze	Conceptual & Procedural
CO5	**Validate** Quality Assurance and Engineering Department & Quality assurance maintenance, critical systems.	Evaluate	Conceptual & Procedural

Mapping of Course outcomes with Program outcomes CO-POs Matrix

Audits and Regulatory Compliance (MQA203T)						
Course Code	**PO-1**	**PO-2**	**PO-3**	**PO-4**	**PO-5**	**PO-6**
CO-1	3	2	3	1	1	-
CO-2	3	2	3	2	1	-
CO-3	3	2	3	2	1	-
CO-4	3	2	3	3	1	-
CO-5	3	2	3	2	1	-
PO Target	**3**	**2**	**3**	**2**	**1**	-

Signature of Course Coordinator

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KIET School of Pharmacy (KSOP)

Program Name : M.Pharm PQA	**Academic Session: 2024-25**	**Semester: II**
Course name : Pharmaceutical Manufacturing Technology	**Course Code: MQA204T**	**Faculty : Dr. Snigdha Bhardwaj**

Tagging COs with BLs & KCs

CO No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	**Elaborate** common practice in the pharmaceutical industry developments, plant layout and production planning.	Understand	Factual & Conceptual
CO2	**Acquire** the knowledge of practices of aseptic process technology, sterile manufacturing technology	Apply	Conceptual & Procedural
CO3	**Acquire** the knowledge of practices of non-sterile manufacturing technology and coating technology	Apply	Conceptual & Procedural
CO4	**Elaborate** the practices of packaging technology	Understand	Conceptual & Procedural
CO5	**Analyze** quality by design (QbD) and process analytical technology (PAT) in pharmaceutical manufacturing	Analyze	Conceptual & Procedural

Mapping of Course outcomes with Program outcomes CO-POs Matrix
Pharmaceutical Manufacturing Technology (MQA204T)

Course Code	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6
CO-1	2	2	3	2	3	2
CO-2	2	2	3	2	3	2
CO-3	2	2	3	2	3	2
CO-4	1	-	3	-	2	1
CO-5	3	2	3	3	3	1
PO Target	2	2	3	1.8	2.8	1.6

Signature of Course Coordinator **Signature of Addl. HoD** **Signature of HoD**

Please Note (Reference: OBE Guidelines wef. Session 2021 – 22)

- The theory courses/ project having credits 3 to 6 should have 5 number of COs. The laboratory course/ mini project/ seminar/ industrial training having credits less than 3 should have 3 number of COs. The Project having 7 to 12 credits should have 6 to 10 number of COs.
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Program Name: M. Pharm PQA	**Academic Session: Even 2024-25**	**Semester: II**
Course name: Quality Assurance Practical-I	**Course Code: MQA205P**	**Faculty: Dr. Shwetakshi Sharma**

Tagging COs with BLs & KCs

CO No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	**Explore** and analyze the pre-formulation studies of various dosage form	Apply	Conceptual & Procedural
CO2	**Assess** the quality control test on analytical instrument	Evaluate	Conceptual & Procedural
CO3	**Generalize** the case studies on TQM, OOS, OOT, CAPA	Create	Conceptual & Procedural
CO4	**Handle** various types of analytical instruments used in quality assurance	Apply	Conceptual & Procedural

Mapping of Course outcomes with Program outcomes CO-POs Matrix

Quality Assurance Practical-I (MQA205P)

Course Code	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6
CO-1	3	3	3	3	3	2
CO-2	3	2	3	2	3	2
CO-3	-	2	2	3	3	2
CO-4	2	3	3	2	3	2
PO Target	2.66	2.5	2.75	2.5	3	2

Signature of Course Coordinator

Signature of Addl. HoD

Signature of HoD

Please Note (Reference: OBE Guidelines wef. Session 2023–24)

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Program Name: M. Pharm PQA	**Academic Session: Even 2024-25**	**Semester: II**
Course name: Seminar/ Assignment	**Course Code: MQA206S**	**Faculty: Ms. Surbhi Kamboj**

Tagging COs with BLs & KCs

CO No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	**Elaborate** the effective technical and regulatory aspects of quality assurance through presentations and discussions.	Understand	Conceptual & Procedural
CO2	**Apply** innovative solutions and methodologies in Quality Assurance through collaborative discussions for enhanced learning.	Apply	Conceptual & Procedural
CO3	**Develop** structured, well-documented reports demonstrating research and analytical skills.	Create	Conceptual & Procedural
CO4	**Develop** problem-solving skills by applying theoretical knowledge to practical QA scenarios and case studies.	Create	Conceptual & Procedural

Mapping of Course outcomes with Program outcomes CO-POs Matrix

Seminar/ Assignment (MQA206P)

Course Code	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6
CO-1	-	3	1	2	1	3
CO-2	2	3	2	2	1	3
CO-3	-	3	2	2	1	3
CO-4	-	3	2	2	1	3
PO Target	**2**	**3**	**1.75**	**2**	**1**	**3**

Signature of Course Coordinator

Signature of Addl. HoD

Signature of HoD

Please Note (Reference: OBE Guidelines wef. Session 2023–24)

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Program Name: M. Pharm PQA	**Academic Session: Even 2024-25**	**Semester: IV**
Course name: Journal Club	**Course Code: MRM401T**	**Faculty: Ms. Surbhi Kamboj**

Tagging COs with BLs & KCs

CO No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	**Apply** critically appraise scientific literature to understand advancements and challenges in pharmaceutical Quality Assurance.	Apply	Conceptual, Procedural
CO2	**Analyze** research data to assess its relevance to Quality Assurance practices and regulatory standards.	Analyze	Conceptual, Procedural
CO3	**Enhance** collaborative learning through discussions on innovative solutions and methodologies in Quality Assurance.	Create	Conceptual, Procedural
CO4	**Develop** skills in scientific reading, critical analysis, and effective presentation of research papers.	Create	Conceptual, Procedural

Mapping of Course outcomes with Program outcomes CO-POs Matrix
Journal Club (MRM401T)

Course Code	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6
CO-1	-	3	3	3	3	2
CO-2	3	3	3	3	3	2
CO-3	3	3	3	3	3	2
CO-4	3	3	3	3	3	2
PO Target	3.00	3.00	3.00	3.00	3.00	2.00

Signature of Course Coordinator

Signature of Addl. HoD

Signature of HoD

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Program Name: M. Pharm PQA	**Academic Session: Even 2024-25**	**Semester: IV**
Course name: Discussion/Presentation (Proposal Presentation)	**Course Code: MRM402P**	**Faculty: Ms. Surbhi Kamboj**

Tagging COs with BLs & KCs

CO No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	**Identify** and articulate relevant research problems in the field of quality assurance, define clear objectives, and propose innovative approaches to address the identified challenges in pharmaceutical quality management.	Analyze	Conceptual
CO2	**Acquire** a comprehensive research methodology, including experimental design, analytical techniques, and regulatory frameworks, while assessing the feasibility and practical implications of the proposed study.	Apply	Conceptual
CO3	**Explain** the research proposal effectively using visual aids, logical arguments, and scientific evidence, and confidently defend the proposed work during discussions, demonstrating in-depth subject knowledge and critical thinking.	Evaluate	Conceptual
CO4	**Develop** innovative solutions through collaborative discussions on pharmaceutical quality assurance challenges.	Create	Conceptual & Procedural

Mapping of Course outcomes with Program outcomes CO-POs Matrix

Discussion/Presentation (Proposal Presentation) (MRM402P)

Course Code	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6
CO-1	3	-	3	3	3	-
CO-2	3	2	3	3	3	-
CO-3	3	3	3	3	3	2
CO-4	-	3	-	3	3	2
PO Target	3	2.66	3	3	3	2

Signature of Course Coordinator

Signature of Addl. HoD

Signature of HoD

Please Note (Reference: OBE Guidelines wef. Session 2023–24)

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KIET SCHOOL OF PHARMACY

Program Name: M. Pharm PQA	**Academic Session: Even 2024-25**	**Semester: IV**
Course name: Research work and Colloquium	**Course Code: MRM403P**	**Faculty: Ms. Surbhi Kamboj**

Tagging COs with BLs & KCs

CO No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	**Acquire** the ability to design and execute quality assurance experiments independently, utilizing advanced analytical tools, and develop innovative solutions for quality-related challenges in pharmaceutical formulations and processes.	Apply	Conceptual & Procedural
CO2	**Evaluate** experimental data using statistical tools and advanced validation techniques to ensure accuracy and compliance. Develop a research methodology integrating design, analytical techniques, and regulatory frameworks while assessing feasibility and practical implications.	Evaluate	Conceptual & Procedural
CO3	**Document** the research findings in the form of reports or manuscripts, and submission of research reports.	Analyze	Conceptual
CO4	**Develop** a research framework that ensures adherence to ethical principles, maintains data integrity, and complies with regulatory guidelines.	Create	Conceptual & Procedural

Mapping of Course outcomes with Program outcomes CO-POs Matrix

Research work and Colloquium (MRM403P)

Course Code	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6
CO-1	3	-	3	3	3	-
CO-2	3	2	3	3	3	-
CO-3	3	3	3	3	3	2
CO-4	3	3	3	3	3	2
PO Target	**3**	**2.66**	**3**	**3**	**3**	**2**

Signature of Course Coordinator | Signature of Addl. HoD | Signature of HoD

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