

GURU NANAK INSTITUTE OF PHARMACEUTICAL SCIENCE AND TECHNOLOGY

Attainment of Programme Outcomes and Course Outcomes as evaluated by the institution

COURSE OUTCOMES

RMACEUTICAL UBJECT	CO LABEL	CO STATEMENT
	COPT101.1	Recall various terminologies and stoichiometric calculations involved in Pharmaceutical Analysis.
Pharmaceut	COPT101.2	Illustrate the role of pharmaceutical analyst in the profession
ical analysis	COPT101.3	Distinguish the various principles of conventional techniques.
(PT101)	COPT101.4	Evaluate the various techniques and tools available for the analysis of any chemical substance.
	CO.PT215.1	Explain the gross morphology, structure and functions of various organs of the human body.
Human	CO.PT215.2	Describe the various homeostatic mechanisms and their imbalances.
Physiology (PT215)	CO.PT215.3	Identify the various tissues and organs of different systems of human body
(1 1213)	CO.PT215.4	Appreciate coordinated working pattern of different organs of each system
	COPT317.1	To understand the various unit operations used in pharmaceutical industries.
DI	COPT317.2	To interpret different material handling technique.
Pharmaceut ical	COPT317.3	To Explain different processes in pharmaceutical Manufacturing Industry.
Engineerin	COPT317.4	To elaborate different unit operations in pharmaceutical industry.
g (PT317)	COPT317.5	To appraise various preventive methods used for corrosion control in pharmaceutical industry/
	COPT413.01	Develop knowledge regarding Pharmaceutical dosage form development
Industrial	COPT413.02	Interpret different techniques of pharmaceutical dosage forms manufacturing
Pharmacy (PT413)	COPT413.03	Analyze different quality control parameters of pharmaceutical dosage forms.
(2 2 . 23)	COPT413.04	Formulate different cosmeceuticals.



COURSE OUTCOMES

SUBJECT	CO LABEL	CO STATEMENT
	COPT516.1	Awareness and Recognize about the Legislation related to Pharmacy & Pharmaceutical Sciences
	COPT516.2	To Understand and Judge the Ethics, Pharmacy Act of India, Drugs & Cosmetics Act of India 1940 and Rules 1945
Pharmaceut ical Jurispruden	COPT516.3	Awareness to the Responsibility towards Medicinal & Toiletries Preparation Act, Narcotics Drugs & Psychotropic Substances Act and finally Drug Price Controlling Authority norms.
ce (PT516)	COPT516.4	To Judge, be Aware and to Appraise the wrongs of Drugs & Magic Remedies Act, MTP Act, Awareness of CPCSEA, to Understand the Shop, Factory & Patent Act.
	COPT516.5	To understand the value of law and jurisdiction in the field of pharmaceutical sciences.
	COPT616.1	Explain the basic concepts of biopharmaceutics and pharmacokinetics .
Biopharma ceutics &	COPT616.2	Evaluate the pharmacokinetic parameters to describe the kinetics of drug ADME
Pharmacok inetics	COPT616.3	Distinguish the concepts of bioavailability and bioequivalence study of drug products and their significance
(PT616)	COPT616.4	Apply the knowledge of pharmacokinetic drug interactions in combination therapy

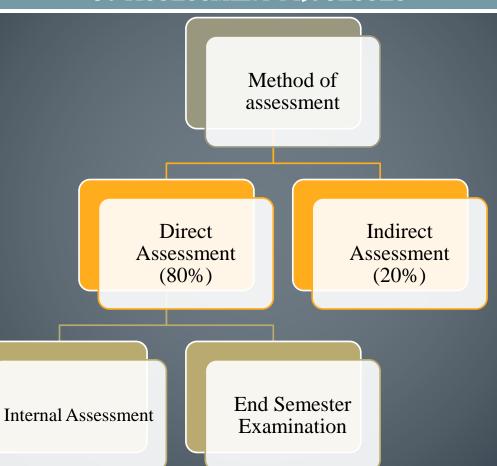


COURSE OUTCOMES

SUBJECT	CO LABEL	CO STATEMENT
	COPT 711.1	Understand the electromagnetic spectrum and its interaction with matter and apply this knowledge for drug analysis
Instrument	COPT 711.2	Explain and analyze the principle, instrumentation, applications of UV, IR and Atomic Absorption Spectroscopy, Fluorimetry, Flame photometry
al method of analysis (PT711)	COPT 711.3	Understand the chromatographic separation and analyse the drugs using these techniques instruments.
	COPT 711.4	Explain the principle and instrumentation of GC and HPLC and design their application in pharmacy
	COPT 711.5	Develop the knowledge for various quantitative & qualitative analysis of drugs
	COPT812.1	Understand the basic statistics related to designing of experiments and representation of data
Biostatistic s and	COPT812.2	Design the experiments on the basis of statistical principles.
Research Methodolo	COPT812.3	Analyze experimental results using different statistical software packages like Design Expert, SPSS, Minitab and R.
gyPT812	COPT812.4	Understand the quality policies for biomedical research as per regulatory guidelines.



CO ASSESSMENT PROCESSES





DIRECT ASSESSMENT METHODS

Internal Assessment

Assignments

Online class tests

Seminars

Theory and practical end Semester Exams

Projects



INDIRECT ASSESSMENT TOOLS



Alumni Feedback



Students Placement & Position Record



Student Research Record



Employers Assessment



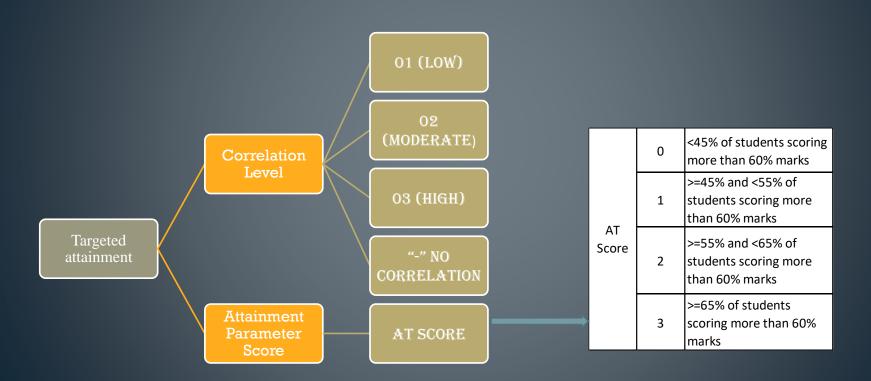
Industry Interaction and Feedback



Industrial Advisory body Feedback



CO-PO ATTAINMENT CRITERIA





GRADE POINT (GP)

Qualification	Grade	Score on 100 percentage Points	Point
Outstanding	'O'	100 to 90	10
Excellent	'Е'	89 to 80	9
Very Good	'A'	79 to 70	8
Good	'B'	69 to 60	7
Fair	'С'	59 to 50	6
Below Average	'D'	49 to 40	5
Failed	'F'	Below 40	2

Credit Point (CrP)= GP X Credits for the course

CREDIT INDEX =
$$\Sigma$$
CREDIT POINT

GRADE POINT AVERAGE = CREDIT INDEX/ Σ CREDITS

SGPA = = $\frac{CREDIT\ INDEX}{\Sigma\ CREDITS}$:

N.B. Grade 'C' shall be considered as average grade.

Grade Point Average (GPA):

YGPA=
$$= \frac{CREDIT \text{ INDEX of Autumn Sem} + CREDIT \text{ INDEX of Spring Sem}}{\sum CREDITS \text{ of Autumn Sem} + \sum CREDITS \text{ of Spring Sem}}$$

$$K=n$$

 Σ CREDIT INDEX OF Kth SEMESTER

CUMULATIVE GRADE POINT AVERAGE (CGPA)=
$$\Sigma$$
K=1 = $\frac{K=1}{K=n}$ Σ CREDIT OF Kth SEMESTER $K=1$



SUBJECT	CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CODE												
	COPT101.1	3	3	3	2	1	1	-	1	2	2	3
	COPT101.2	3	3	2	1	1	1	3	3	3	3	3
	COPT101.3	3	3	2	2	1	1	1	1	3	1	3
PT101	COPT101.4	3	3	3	3	3	1	-	1	3	1	3
P1101	COPT101.5	3	3	3	3	2	1	-	1	3	1	3
	Avg											
	COPT101	3	3	2.6	2.2	1.6	1	0.8	1.4	2.8	1.6	3
	80% of Avg	2.4	2.4	2.08	1.67	1.28	0.8	0.64	1.12	2.24	1.28	2.4
	CO.PT215.1	3	2	3	2	2	1	1	1	1	1	1
	CO.PT215.2	3	3	3	2	2	1	1	1	1	1	1
	CO.PT215.3	3	2	2	2	2	1	1	1	1	1	1
PT215	CO.PT215.4	3	3	3	3	3	1	1	1	1	1	1
	Avg											
	CO.PT215	3	2.5	2.75	2.25	2.25	1	1	1	1	1	1
	80% of Avg	2.4	2	2.2	1.8	1.8	0.8	0.8	0.8	0.8	0.8	0.8



SUBJECT CODE	СО	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
	COPT317.1	2	3	2	-	-	1	-	-	-	2	3
	COPT317.2	3	3	1	-	-	2	2	-	2	2	2
	COPT317.3	3	3	3	2	3	2	1	2	-	3	3
PT317	COPT317.4	2	3	2	3	3	2	2	2	3	2	1
	COPT317.5	3	3	2	2	2	2	2	2	2	1	2
	Avg											
	COPT317	2.6	3	2	1.4	1.6	1.8	1.4	1.2	1.4	2	2.2
	80% Avg	2.08	2.4	1.6	1.12	1.28	1.44	1.12	0.96	1.12	1.6	1.76
	COPT413.01	3	3	3	3	2	2	1	3	2	2	1
	COPT413.02	3	3	3	3	3	2	1	3	2	2	3
DTI 412	COPT413.03	3	3	2	3	2	2	1	3	2	3	3
PT413	COPT413.04	3	3	2	3	2	2	1	3	2	2	3
	COPT413	3	3	2.5	3	2.25	2	1	3	2	2.25	2.5
	80% of Avg	2.4	2.4	2	2.4	1.8	1.6	0.8	2.4	1.6	1.8	2



SUBJECT	CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CODE												
	COPT516.1	2	1	2	2	2	3	2	1	2	2	2
	COPT516.2	3	2	3	2		2	3	2	3	2	2
	COPT516.3	2	2	2	1	3	1	2	3	_	1	3
DT516	COPT516.4	2	1	1		3	2	2	1			3
PT516	COPT516.5	2	1	3	2	2	_	2	1	3	2	2
	AVG. COPT516 80% OF	2.2	1.4	2.2	1.75	2.5	2	2.2	1.6	2.67	1.75	2.4
	AVG	2.2	1.4	2.2	1.75	2.5	2	2.2	1.6	2.67	1.75	2.4
	COPT616.1	3	1	2	1	2	1	1	1	2	2	3
	COPT616.2	3	3	2	2	3	3	2	2	2	3	3
	COPT616.3	3	3	2	1	2	2	1	2	2	3	3
PT616	COPT616.4	3	3	2	3	3	3	2	3	2	3	3
	AVG. COPT616	3	2.5	2	1.75	2.5	2.25	1.5	2	2	2.75	3
	80% OF AVG	2.4	2	1.6	1.4	2	1.8	1.2	1.6	1.6	2.2	2.4



SUBJECT CODE	СО	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
	COPT711.1	3	1	2	_	3	2	3	1	2	2	3
	COPT711.2	3	2	1	2	2	2	1	1	2	1	3
	COPT711.3	3	3	1	1	2	2	2	1	2	1	3
PT 711	COPT711.4	3	1	2	2	2	2	2	1	2	1	_
F1 /11	COPT711.5	3	2	2	2	2	2	2	1	2	1	3
	AVG COPT711	3	1.8	1.6	1.75	2.2	2	2	1	2	1.2	3
	80% OF AVG	2.4	1.44	1.28	1.4	1.76	1.6	1.6	0.8	1.6	0.96	2.4
	COPT812.1	3	3	3	1	1	3	1	3	2	2	1
	COPT812.2	3	3	3	1	1	3	1	3	2	2	3
	COPT812.3	3	3	2	1	1	3	1	3	2	3	3
PT812	COPT812.4	3	3	2	1	1	3	1	3	2	2	3
	AVG COPT812	3	3	2.5	1	1	3	1	3	2	2.25	2.5
	80% OF AVG	2.4	2.4	2	0.8	0.8	2.4	0.8	2.4	1.6	1.8	2



CO-PO MATRICES TARGETED FOR ALL FOUR YEARS OF STUDY

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
DTI4.04											
PT101	2.4	2.4	2.08	1.67	1.28	0.8	0.64	1.12	2.24	1.28	2.4
PT215											
	2.4	2	2.2	1.8	1.8	0.8	0.8	0.8	0.8	0.8	0.8
PT317											
	2.08	2.4	1.6	1.12	1.28	1.44	1.12	0.96	1.12	1.6	1.76
PT413											
1 1 7 1 3	2.4	2.4	2	2.4	1.8	1.6	0.8	2.4	1.6	1.8	2
PT516											
	2.2	1.4	2.2	1.75	2.5	2	2.2	1.6	2.67	1.75	2.4
PT616											
11010	3	2.5	2	1.75	2.5	2.25	1.5	2	2	2.75	3
PT 711											
11/11	2.4	1.44	1.28	1.4	1.76	1.6	1.6	0.8	1.6	0.96	2.4
PT812											
1 1012	2.4	2.4	2	0.8	0.8	2.4	0.8	2.4	1.6	1.8	2
Overall attainment											
targeted	2.41	2.18	1.92	1.585	1.71	1.61	1.18	1.51	1.70	1.59	2.09



CO-PO MATRICES REACHED FOR ALL FOUR YEARS OF STUDY

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
PT101	2.4	2.4	2.08	1.67	1.28	0.8	0.64	1.12	2.24	1.28	2.4
PT215	2.8	2.4	2.6	2.2	2.05	1.2	1.3	1.05	1.1	1.14	1.3
PT317	2.2	2.5	1.8	2	2.08	1.65	1.7	1.58	1.93	1.73	2.04
PT413	2.8	2.8	2.4	2.8	2.05	2	1.3	2.65	1.9	2.14	2.5
PT516	2.98	1.96	2.77	2.44	2.96	2.77	2.65	2.22	2.14	2.17	2.02
PT616	2.4	2.07	1.7	1.57	1.87	1.9	1.5	1.5	1.6	2.17	2.5
PT 711	2.8	1.84	1.68	1.8	1.96	2	2.1	1	1.9	1.46	2.9
PT812	2.8	2.8	2.4	1.2	1.05	2.8	1.3	2.65	1.9	2.13	2.5
Overall attainment											
reached	2.64	2.34	2.17	1.96	1.91	1.89	1.56	1.72	1.83	1.77	2.27



ATAINMENT CALCULATION

Course Name: Instrumental method of analysis, PT 711, Year of Study: 2020-2021;

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OVERALL ATTAINTMENT

OVERALL ATTAINTMENT ACADEMIC SESSION 2017-2021



PO LABEL	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
Overall Attaintment Reached	2.6475	2.34625	2.17875	1.96	1.9125	1.89	1.56125	1.72125	1.83875	1.7775	2.27
Overall Attaintment Targated	2.41	2.1175	1.92	1.58625	1.715	1.61125	1.1825	1.51	1.70375	1.5925	2.095
DECISION ON ATTAINTMENT	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes



ACTION TO BE TAKEN

• Modification in Assessment tools

• Increasing the degree of difficulty "AT SCORE" Level

• Increasing the target level





THANK YOU