



# AVANTHI INSTITUTE OF PHARMACEUTICAL SCIENCES

(Approved by PCI, AICTE & Affiliated to JNTUH)

Gunthapally (V), Abdullapurmet (M), R.R. Dist., Near Rameji Filmcity, Hyderabad - 501 512.



Regulation:PCI ,(R08) Subject:Remedial Mathematics Year : I

Faculty: T. Bhargavi Assistant Professor.

### Course Outcomes

CO106.1	Apply mathematical concepts and principles to perform computations for Pharmaceutical Sciences.
CO106.2	Create, use and analyze mathematical representations and mathematical relationships
CO106.3	Communicate mathematical knowledge and understanding to help in the field of Clinical Pharmacy
CO106.4	Perform abstract mathematical reasoning

### CO-PO Mapping

CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PSO 1	PSO 2	PSO 3
CO106.1	3	0	3	3	0	0	0	1	0	1	1	1	0	1
CO106.2	3	1	1	2	0	0	0	2	0	0	1	1	2	0
CO106.3	2	0	3	2	0	0	0	2	1	1	1	1	0	1
CO106.4	3	3	3	3	0	0	0	2	0	0	1	1	3	1
CO AVG	2.75	1	2.5	2.5	0	0	0	1.75	0.25	0.5	1	1	1.25	0.75

*Bhargavi*  
Faculty

*Marjula.B*  
HOD





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Gunthapally (V), Abdullapurmet (M), R.R. Dist., Near Ramoji Filmcity, Hyderabad - 501 512.



Regulation:PCI ,(R08) Subject:Pharmaceutical Organic  
Chemistry Year : I

Faculty: G Swapna, Assistant Professor.

## Course Outcomes

CO104.1	To be able to give systematic names to simple organic compounds and poly functional group.
CO104.2	To achieve an understanding of the behavior of organic compounds and to establish a foundation for studies into natural and synthetic products of pharmaceutical interest.
CO104.3	To acquire the knowledge and understanding of the basic experimental principles of pharmaceutical organic chemistry.
CO104.4	To draw the structures and synthesize simple pharmaceutically active organic compounds.

## CO-PO Mapping

CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PSO 1	PSO 2	PSO 3
CO104.1	1	1	1	1	1	0	0	1	1	1	1	2	1	1
CO104.2	1	1	1	1	1	0	0	1	1	1	1	2	1	1
CO104.3	1	1	1	1	1	0	0	1	1	1	1	3	3	2
CO104.4	1	1	1	1	1	0	0	1	1	1	1	3	3	2
CO AVG	1	1	1	1	1	0	0	1	1	1	1	2.5	2	1.5

*G. Swapna*  
Faculty

*Mangula B.*  
HOD





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Gunthapally (V), Abdullapurmet (M), R.R. Dist., Near Ramoji Filmcity, Hyderabad - 501 512.



Regulation:PCI ,(R08) Subject :Pharmaceutics Year : I

Faculty: B. Manjula, Associate Professor

### Course Outcomes

CO102.1	Outline the classification of dosage forms, handling of prescription and summarize the importance of posology.
CO102.2	Solve the pharmaceutical calculations involved in design of dosage form.
CO102.3	Understand the formulation of powders, granules & monophasic dosage forms.
CO102.4	Identify the types incompatibilities in dosage forms & avoid the incompatibilities during dispensing.

### CO-PO Mapping

CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PSO 1	PSO 2	PSO 3
CO102.1	2	0	2	1	0	1	3	0	1	0	0	2	1	1
CO102.2	3	0	3	3	0	2	1	0	1	0	0	2	1	1
CO102.3	3	0	3	3	0	2	1	0	2	0	0	2	1	1
CO102.4	3	0	3	3	0	2	1	0	2	0	0	2	1	1
CO AVG	2.75	0	2.75	2.5	0	1.75	1.5	0	1.5	0	0	2	1	1

*Manjula.B*  
Faculty

*Manjula.B*  
HOD





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Gunthapally (V), Abdullapurmet (M), R.R. Dist., Near Ramoji Filmcity, Hyderabad - 501 512.



Regulation:PCI ,(R08) Subject :Human Anatomy And Physiology Year : I

Faculty: Dr. P. Swathi Patel Assistant Professor

## Course Outcomes

- CO101.1 They would have learnt the gross anatomy, histology and physiology of various organs of the human body.
- CO101.2 They would identify the various tissues and organs associated with the different organ systems with help of charts and specimens.
- CO101.3 They would have studied the coordination in functioning of different organs of each system.
- CO101.4 They would have understood the several physiological homeostatic mechanisms and their imbalances in human body.

## CO-PO Mapping

CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PSO 1	PSO 2	PSO 3
CO101.1	3	2	2	3	1	0	2	2	0	0	1	3	0	1
CO101.2	2	0	1	0	0	0	0	0	0	2	2	2	1	1
CO101.3	3	2	2	2	0	2	1	0	0	0	2	1	2	2
CO101.4	2	2	0	0	1	0	1	0	0	1	2	3	2	2
CO AVG	2.5	1.5	1.25	1.25	0.5	0.5	1	0.5	0	0.75	1.75	2.25	1.25	1.5

*Swathi Patel*  
Faculty

*Mangurka B*  
HOD





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Gunthapally (V), Abdullapurmet (M), R.R. Dist., Near Ramoji Filmcity, Hyderabad - 501 512.



Regulation: PCI, (R08) Subject: Pharmaceutical Inorganic  
Chemistry Year : I

Faculty: S. Swathi, Assistant Professor.

### Course Outcomes

CO105.1	Well acquainted with the principles of limit tests
CO105.2	Understand the principles and procedures of analysis of drugs and also regarding the application of inorganic pharmaceutical
CO105.3	Knowledge about the sources of impurities and methods to determine the impurities in inorganic drugs and pharmaceuticals
CO105.4	Appreciate the importance of inorganic pharmaceuticals in preventing and curing the disease.

### CO-PO Mapping

CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PSO 1	PSO 2	PSO 3
CO105.1	0	0	0	1	1	0	0	1	0	1	1	3	0	1
CO105.2	0	0	0	1	1	0	0	1	0	1	1	3	0	0
CO105.3	0	0	0	1	1	0	0	1	0	1	1	3	0	1
CO105.4	3	2	2	1	2	0	0	3	0	2	2	3	1	0
CO AVG	0.75	0.5	0.5	1	1.25	0	0	1.5	0	1.25	1.25	3	0.25	0.5

  
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Gunthapally (V), Abdullapurmet (M), R.R. Dist., Near Ramoji Filmcity, Hyderabad - 501 512.



Regulation: PCI, (R08) Subject: Medicinal Biochemistry Year : I

Faculty: O. Venkateshwara Rao, Associate Professor

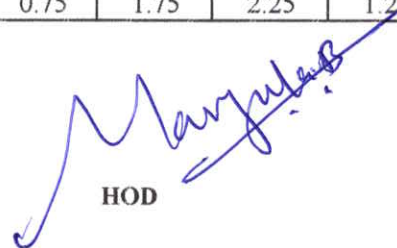
### Course Outcomes

CO103.1	To understand the importance of metabolism of substrates.
CO103.2	Will acquire chemistry and biological importance of biological macromolecules
CO103.3	They would acquire knowledge in qualitative and quantitative estimation of the biological macromolecules.
CO103.4	To know the interpretation of data emanating from a Clinical Test Lab.

### CO-PO Mapping

CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PSO 1	PSO 2	PSO 3
CO103.1	3	2	2	3	1	0	2	2	0	0	1	3	0	1
CO103.2	2	0	1	0	0	0	0	0	0	2	2	2	1	1
CO103.3	3	2	2	2	0	2	1	0	0	0	2	1	2	1
CO103.4	2	2	0	0	1	0	1	0	0	1	2	3	2	1
CO AVG	2.5	1.5	1.25	1.25	0.5	0.5	1	0.5	0	0.75	1.75	2.25	1.25	1

  
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Gunthapally (V), Abdullapurmet (M), R.R. Dist., Near Rameji Filmcity, Hyderabad - 501 512.



Regulation:PCI, (R08) Subject:Pathophysiology Year : II

Faculty: Dr.K. Anusha, Assistant Professor

## Course Outcomes


CO201.1	Describe the etiology of the selected disease states.
CO201.2	Describe the Pathogenesis of the selected diseased states.
CO201.3	Name the signs and symptoms of the diseases.
CO201.4	Mention the complications of the diseases.

## CO-PO Mapping

CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PSO 1	PSO 2	PSO 3
CO201.1	3	1	1	2	1	0	0	3	0	1	0	2	1	1
CO201.2	3	1	1	2	1	0	0	3	0	1	0	2	1	1
CO201.3	3	1	2	2	1	0	0	3	0	1	1	2	1	1
CO201.4	3	1	1	1	1	0	0	2	0	1	1	2	1	1
CO AVG	3	1	1.25	1.75	1	0	0	2.75	0	1	0.5	2	1	1

  
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Regulation: PCI ,(R08) Subject: Pharmacotherapeutics-I Year : II

Faculty: Dr. MD. Abdul Azeem Assistant Professor/ Associate Professor.

### Course Outcomes

CO206.1	The Pathophysiology of selected disease states and the rationale for drug therapy and therapeutic approach to management of these diseases.
CO206.2	Describe the Pathophysiology of selected disease states and explain the rationale for drug therapy
CO206.3	The controversies in drug therapy; The importance of preparation of individualised therapeutic plans based on diagnosis
CO206.4	Summarise the therapeutic approach to management of these diseases including reference to the latest available evidence; discuss the controversies in drug therapy.

### CO-PO Mapping

CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PSO 1	PSO 2	PSO 3
CO206.1	3	3	3	3	3	3	2	3	2	3	3	3	2	3
CO206.2	3	3	3	3	3	3	2	3	2	3	3	3	2	3
CO206.3	3	3	3	3	3	3	1	3	3	3	3	3	2	3
CO206.4	3	3	3	3	3	2	2	3	2	3	3	3	2	3
CO AVG	3	3	3	3	3	2.75	1.75	3	2.25	3	3	3	2	3

*Abdul Azeem*  
Faculty



*Maryjula B*  
HOD





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Regulation: PCI ,(R08) Subject: Pharmaceutical Microbiology Year : II

Faculty: T. Madhuri, Assistant Professor.

The Mapping of CO and PO on 3 point scale{high-3,Medium-2,Low-1} is:

	CO Attainment Level	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO202.1	2.3	1	2	2	3	1	0	0	2	0	0	1	1	0	1
CO202.2	2	1	2	2	3	1	0	0	2	0	0	1	1	0	1
CO202.3	2.3	3	2	2	3	1	0	0	2	0	0	1	1	0	1
CO202.4	2.3	1	2	2	2	1	0	0	1	0	0	1	1	0	1
PO/PSO Weightage		6	8	8	11	4	0	0	7	0	0	4	4	0	4
PO/PSO Co-relation weightage all Cos(1-4)		13.5	17.8	17.8	24.4	8.9	0	0	15.5	0	0	8.9	8.9	0	8.9
PO/PSO Attainment Level		2.25	2.23	2.23	2.22	2.23	-	-	2.21	-	-	2.23	2.23	-	2.23

*Madhuri*  
Faculty



*Manjula B*  
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Gunthapally (V), Abdullapurmet (M), R.R. Dist., Near Ramoji Filmcity, Hyderabad - 501 512.



Regulation:PCI ,(R08) Subject:Community Pharmacy Year : II

Faculty: D. Uma Sankar Assistant Professor.

### Course Outcomes

CO205.1 To be able to understand the disease status.

CO205.2 Able to dispense the medication.

CO205.3 Able to understand the drug therapy.

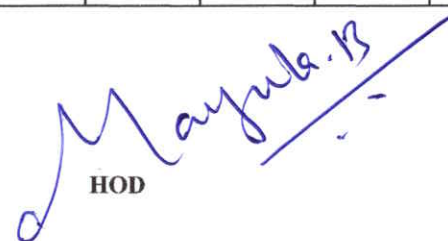
CO205.4 Able to give patient counseling

### CO-PO Mapping

CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PSO 1	PSO 2	PSO 3
CO205.1	3	3	3	3	3	1	0	3	1	3	3	3	2	1
CO205.2	2	1	3	3	3	0	2	3	3	3	2	2	1	1
CO205.3	3	3	3	3	3	0	0	3	1	3	2	3	1	1
CO205.4	2	2	3	3	3	3	3	3	2	3	1	2	1	2
CO AVG	2.5	2.25	3	3	3	1	1.25	3	1.75	3	2	2.5	1.25	1.25

  
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Gunthapally (V), Abdullapurmet (M), R.R. Dist., Near Rameji Filmcity, Hyderabad - 501 512.



Regulation: PCI, (R08) Subject: Pharmacognosy & Phytopharmaceuticals Year : II

Faculty: R. Ashok Kumar Assistant Professor

### Course Outcomes

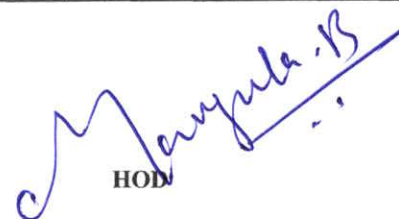
CO203.1	To understand cell wall constituents and cell inclusion
CO203.2	To understand morphology, microscopy and powder characteristics of crude drugs
CO203.3	To be able to determine the quality of lipids
CO203.4	To be able to identify unorganized drugs by chemical methods

### CO-PO Mapping

CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PSO 1	PSO 2	PSO 3
CO203.1	0	0	0	0	0	0	0	0	0	0	1	2	0	1
CO203.2	0	1	0	0	1	1	0	0	1	0	0	3	0	1
CO203.3	1	1	0	2	1	0	0	0	0	1	0	2	0	1
CO203.4	0	2	0	2	0	0	0	0	0	1	1	1	1	1
CO AVG	0.25	1	0	1	0.5	0.25	0	0	0.25	0.5	0.5	2	0.25	1

  
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Gunthapally (V), Abdullapurmet (M), R.R. Dist., Near Ramoji Filmcity, Hyderabad - 501 512.



Regulation: PCI ,(R08) Subject: Pharmacology-I Year : II

Faculty: Dr. Santosh Kumar Panda, Professor.

**Course Outcomes**

- CO204.1 Understand the pharmacological aspects of drugs falling under the above mentioned chapters.
- CO204.2 Handle and carry out the animal experiments. Correlate and apply the knowledge therapeutically.
- CO204.3 Appreciate the importance of pharmacology subject as basis of therapeutics.
- CO204.4 Correlate and apply the knowledge therapeutically.

**CO-PO Mapping**

CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PSO 1	PSO 2	PSO 3
CO204.1	3	3	3	3	3	2	1	3	1	2	3	3	2	2
CO204.2	2	1	2	3	2	1	2	3	1	2	3	3	2	2
CO204.3	2	1	2	3	2	1	2	3	1	2	3	3	2	2
CO204.4	3	2	3	3	2	1	1	3	1	2	3	2	3	2
CO AVG	2.5	1.75	2.5	3	2.25	1.25	1.5	3	1	2	3	2.75	2.25	2

*Santosh*  
Faculty



*Manjula.B*  
HOD



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Gunthapally (V), Abdullapurmet (M), R.R. Dist., Near Rameji Filmcity, Hyderabad - 501 512.



Regulation:PCI, (R08) Subject :Pharmacology-II Year : III

Faculty: P. Nagaraju, Associate Professor

### Course Outcomes


CO301.1	To study various routes of drug administration, use of anesthetics in laboratory animals and their handling
CO301.2	To learn the composition of physiological salt solutions and basic instruments used in experimental pharmacology
CO301.3	To perform isolated experiments using various isolated preparation and the effect of different drugs on the concentration response curves
CO301.4	To study the preclinical screening of various drugs

### CO-PO Mapping

CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PSO 1	PSO 2	PSO 3
CO301.1	3	0	2	2	0	0	1	1	0	1	0	1	2	1
CO301.2	3	0	2	2	0	0	1	1	0	1	0	2	2	1
CO301.3	3	0	2	2	0	0	2	2	0	1	0	2	3	1
CO301.4	3	0	2	2	0	0	1	2	0	1	0	1	2	1
CO AVG	3	0	2	2	0	0	1.25	1.5	0	1	0	1.5	2.25	1

  
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Gunthapally (V), Abdullapurmet (M), R.R. Dist., Near Rameji Filmcity, Hyderabad - 501 512.



Regulation: PCI, (R08) Subject : Pharmaceutical Formulations Year: III

Faculty: T. Madhuri, Assistant Professor

### Course Outcomes

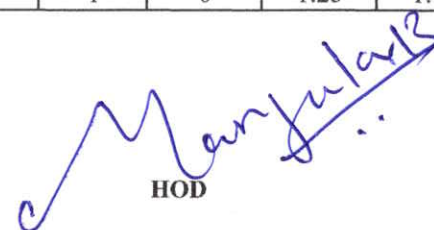
CO306.1	Understand classification, mechanism of action, structure activity relationship, synthesis, nomenclature and side effects of the drugs acting as antineoplastic agents
CO306.2	To prepare various pharmaceutical formulation
CO306.3	To perform evaluation of pharmaceutical dosage forms
CO306.4	To understand and appreciate the concept of bioavailability and bioequivalence, their role in clinical situations

### CO-PO Mapping

CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PSO 1	PSO 2	PSO 3
CO306.1	3	0	2	2	0	0	0	2	1	1	0	1	1	0
CO306.2	3	0	2	3	0	0	0	1	1	1	0	1	2	0
CO306.3	3	0	2	2	0	0	0	1	1	1	0	1	2	0
CO306.4	3	0	2	3	0	0	0	1	1	1	0	2	2	0
CO AVG	3	0	2	2.5	0	0	0	1.25	1	1	0	1.25	1.75	0

  
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Gunthapally (V), Abdullapurmet (M), R.R. Dist., Near Rameji Filmcity, Hyderabad - 501 512.



Regulation:PCI, (R08) Subject :Pharmaceutical Jurisprudence Year: III

Faculty: K. Lavanya, Assistant Professor

### Course Outcomes

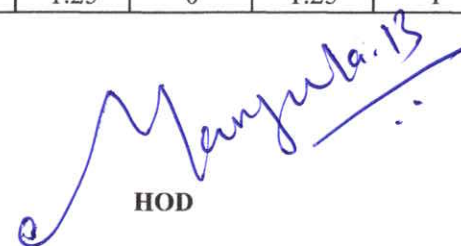
CO304.1	To appreciate study Pharmaceutical Legislation, relevance and significance of jurisprudence to Pharmaceutical Sciences.
CO304.2	To know fundamentals of legislation to regulate import manufacture, distribution and sales of drug and cosmetics.
CO304.3	To know the various parameters in the Drug and Cosmetic Act and rules, Drug policy, Drug Price Control Order, Patent and Design act.
CO304.4	To understand the concepts of Narcotic Drugs and Psychotropic substances, Pharmacy Act and Excise duties Act

### CO-PO Mapping

CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PSO 1	PSO 2	PSO 3
CO304.1	2	0	1	0	0	2	1	0	3	1	0	1	1	0
CO304.2	2	0	1	0	0	2	1	0	3	2	0	1	1	0
CO304.3	2	0	1	0	0	3	2	0	2	1	0	1	1	0
CO304.4	2	0	1	0	0	2	1	0	2	1	0	2	1	0
CO AVG	2	0	1	0	0	2.25	1.25	0	2.5	1.25	0	1.25	1	0

  
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Regulation: PCI, (R08) Subject : Pharmacotherapeutics-II Year : III

Faculty: Dr.P.Swathi Patel, Assistant Professor

### Course Outcomes

CO303.1	To understand therapeutic goals of the drugs used in different diseases
CO303.2	To check & analyze drug interactions, adverse drug reactions
CO303.3	To understand dose and frequency of the medications.
CO303.4	Able to prepare individualized therapeutic plans & suggest lifestyle modifications based on diagnosis

### CO-PO Mapping

CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PSO 1	PSO 2	PSO 3
CO303.1	3	0	3	2	2	0	0	2	0	0	1	2	1	1
CO303.2	3	1	2	2	2	0	0	1	0	1	0	3	2	1
CO303.3	3	0	2	2	2	0	0	2	0	0	0	2	0	1
CO303.4	3	0	2	2	2	0	0	1	1	0	0	2	0	2
CO AVG	3	0.25	2.25	2	2	0	0	1.5	0.25	0.25	0.25	2.25	0.75	1.25

*Swathi Patel*  
Faculty



*Mangula B*  
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Gunthapally (V), Abdullapurmet (M), R.R. Dist., Near Ramoji Filmcity, Hyderabad - 501 512.



Regulation:PCI ,(R08) Subject :Medicinal Chemistry Year : III

Faculty: Dr. Ravi Nayak, Assistant Professor

## Course Outcomes

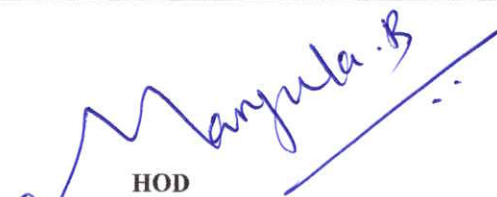
CO305.1	Understand modern concept of rational drug design.
CO305.2	Learn development of the anti- infective drugs including structure activity relationship, mechanism of action, synthesis, chemical nomenclature, brand names and side effects of important compounds.
CO305.3	Effectively assess and manage ethical aspects of conduct of antineoplastic agents
CO305.4	Understand classification, mechanism of action, structure activity relationship, synthesis, nomenclature and side effects of the drugs acting as Cardiovascular agents, Hypoglycemic agents, Diuretics, Steroidal Hormones and Adrenocorticoids etc

## CO-PO Mapping

CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PSO 1	PSO 2	PSO 3
CO305.1	3	0	2	3	0	0	0	1	2	0	0	1	1	1
CO305.2	3	0	2	3	0	0	0	1	3	0	0	2	1	1
CO305.3	3	0	2	3	0	0	0	1	3	0	0	2	1	2
CO305.4	3	0	3	3	0	0	0	1	3	0	0	2	1	2
CO AVG	3	0	2.25	3	0	0	0	1	2.75	0	0	1.75	1	1.5

  
Faculty



  
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Gunthapally (V), Abdullapurmet (M), R.R. Dist., Near Rameji Filmcity, Hyderabad - 501 512.



Regulation:PCI ,(R08) Subject :Pharmaceutical Analysis Year : III

Faculty: Dr. Sai Keshava Reddy, Assistant Professor

### Course Outcomes

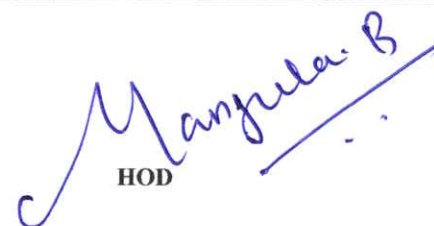
CO302.1	To understand validation of analytical instruments & methods as per ICH/ USP guidelines, concept of quality assurance and quality control techniques.
CO302.2	To understand principles, instrumentation and application of various chromatographic techniques employed for the analysis of APIs and formulation.
CO302.3	To understand principle, instrumentation and application of various Electrometric methods
CO302.4	To Understand principle, instrumentation and application of UV- Vis, Atomic Absorption and Emission Spectroscopy, Flame Photometry, NMR, Massspectroscopy, Flourimetry, Thermal, X ray diffraction techniques.

### CO-PO Mapping

CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PSO 1	PSO 2	PSO 3
CO302.1	3	0	3	0	0	1	0	0	1	0	0	1	2	0
CO302.2	3	0	2	3	0	2	0	0	2	0	0	1	1	0
CO302.3	3	0	2	3	0	2	0	0	2	0	0	1	1	0
CO302.4	3	0	3	2	0	2	0	0	1	0	0	1	1	0
CO AVG	3	0	2.5	2	0	1.75	0	0	1.5	0	0	1	1.25	0

  
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Regulation:PCI ,(R08) Subject: Clinical Toxicology, Year :IV

Faculty: P.Nagaraju, Associate Professor

## Course Outcomes

CO406.1	Developing general working knowledge of the principles and practice of clinical toxicology
CO406.2	Demonstrating an understanding the health implications of toxic exposures and commonly involved chemicals for toxicity
CO406.3	Demonstrating and applying and understanding of general toxicology principles and clinical management practice
CO406.4	Demonstrating and applying an understanding of the history, assessment, and therapy considerations associated with the management of a toxic exposure

## CO-PO Mapping

CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PSO 1	PSO 2	PSO 3
CO406.1	3	1	3	2	1	0	1	3	1	3	0	3	1	3
CO406.2	3	1	3	2	1	0	1	3	1	3	0	3	1	3
CO406.3	3	1	3	2	1	0	1	3	1	3	0	3	1	3
CO406.4	3	1	3	2	1	0	1	3	1	3	0	3	1	3
CO AVG	3	1	3	2	1	0	1	3	1	3	0	3	1	3

*P.N.R.*  
Faculty

*Mangula .B*  
HOD





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Regulation : PCI (R08) Subject :Pharmacotherapeutics III,Year : IV

Faculty: K. Anusha, Assistant Professor

## Course Outcomes

- CO401.1 Describe the pathophysiology and management of diseases
- CO401.2 Develop the patient case based assessment Skills
- CO401.3 Describe the quality use of medicines issues surrounding the therapeutic agents in the treatment of these diseases
- CO401.4 Develop clinical skills in the therapeutic management of these conditions

### CO-PO Mapping

CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PSO 1	PSO 2	PSO 3
CO401.1	3	1	3	2	1	0	1	3	1	3	0	3	1	1
CO401.2	3	1	3	2	1	0	1	3	1	3	0	3	1	1
CO401.3	3	1	3	2	1	0	1	3	1	3	0	3	1	1
CO401.4	3	1	3	2	1	0	1	3	1	3	0	3	1	1
CO AVG	3	1	3	2	1	0	1	3	1	3	0	3	1	1

*K. Anusha*  
Faculty



*Manjula.B*  
HOD



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Regulation : PCI (R08) Subject : Biopharmaceutics & Pharmacokinetics ,Year : IV

Faculty: P. Srilatha, Assistant Professor

## Course Outcomes

CO405.1	Broader understanding about the Pharmacokinetics concepts of biopharmaceutics pharmacokinetics.
CO405.2	Ability to calculate various pharmacokinetic parameters by using various mathematical models
CO405.3	Ability to design a basic protocol for the conduct of BA/BE study and the interpretation of the BA/BE data
CO405.4	Preparedness to use the concepts of pharmacokinetic principles in the clinical contexts.

## CO-PO Mapping

CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PSO 1	PSO 2	PSO 3
CO403.1	3	3	3	3	2	2	3	3	2	2	3	3	3	3
CO403.2	3	3	3	3	3	3	2	3	3	3	3	3	3	2
CO403.3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
CO403.4	3	3	3	3	2	3	3	3	3	3	3	3	3	3
CO AVG	3	3	3	3	2.5	2.75	2.75	3	2.75	2.75	3	3	3	2.75

*Srilatha*  
Faculty



*Mangula B*  
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Regulation:PCI ,(R08) Subject: Biostatistics &Research Methodology Year :IV

Faculty:Dr. Md. Abdul Azeem,Associate Professor

## Course Outcomes

CO404.1	Know the various statistical Methodology methods to solve different types of problems
CO404.2	Operate various statistical software packages
CO404.3	Appreciate the importance of Computer in hospital and Community Pharmacy
CO404.4	Appreciate the statistical technique in solving the pharmaceutical problems

## CO-PO Mapping

CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PSO 1	PSO 2	PSO 3
CO404.1	3	1	3	2	1	0	1	3	1	3	0	3	1	1
CO404.2	3	1	3	2	1	0	1	3	1	3	0	3	1	2
CO404.3	3	1	3	2	1	0	1	3	1	3	0	3	1	1
CO404.4	3	1	3	2	1	0	1	3	1	3	0	3	1	2
CO AVG	3	1	3	2	1	0	1	3	1	3	0	3	1	1.5

*Abdy*  
Faculty



*Mangula B*  
HOD



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Regulation:PCI ,(R08) Subject: Hospital Pharmacy Year :IV

Faculty: R Ashok Kumar, Associate Professor

## Course Outcomes

CO402.1	To know various drug distribution methods
CO402.2	Know the professional practice management skills ion hospital pharmacies
CO402.3	Provide unbiased drug information to the doctors
CO402.4	Know The Manufacturing Practices Of Various Formulations In Hospital Set up.

## CO-PO Mapping

CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PSO 1	PSO 2	PSO 3
CO402.1	3	3	3	2	3	0	3	3	3	3	1	2	2	2
CO402.2	3	3	3	2	3	0	3	3	3	3	1	1	3	2
CO402.3	3	3	3	2	3	0	3	3	3	3	1	2	3	3
CO402.4	3	2	2	2	3	0	3	3	3	3	1	3	3	1
CO AVG	3	2.75	2.75	2	3	0	3	3	3	3	1	2	2.75	2

*R Ashok Kumar*  
Faculty



*Mangula B*  
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Regulation : PCI (R08) Subject : Clinical Pharmacy, Year : IV

Faculty: Dr.V. Dharma Sai, Assistant Professor

### Course Outcomes

CO403.1 Monitor drug therapy of patient through medication chart review and clinical review

CO403.2 Obtain medication history interview and counsel the patients.

CO403.3 Identify and resolve drug related problems

CO403.4 Detect, assess and monitor adverse drug reaction.

### CO-PO Mapping

CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PSO 1	PSO 2	PSO 3
CO403.1	3	3	3	3	2	2	3	3	2	2	3	3	3	3
CO403.2	3	3	3	3	3	3	2	3	3	3	3	3	3	2
CO403.3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
CO403.4	3	3	3	3	2	3	3	3	3	3	3	3	3	3
CO AVG	3	3	3	3	2.5	2.75	2.75	3	2.75	2.75	3	3	3	2.75

*Dharm*  
Faculty



*Mangub.B*  
HOD





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## CO-PO/PSO mapping for Pharm D subjects of PCI (R08) regulation

Year	Number of Theory subjects	Number of Practical Subjects	Other Subjects	PG. No.
I	6	6	1	1-67
II	6	3	-	68-131
III	6	5	-	132-198
IV	6	4	-	199-263
V	3	1	PROJECT	264-296
VI	INTERNSHIP			
<b>Total</b>	<b>27</b>	<b>19</b>	<b>01</b>	

CO statements and CO-PO/PSO mapping for each Pharm D subject is listed below:

### CO Assessment and Attainment Process:

Direct attainment of COs is determined from the performance of students in Internal Examination (IE) and External Examination (EE). The proportional weightages of IE: EE set in the ratio 30:70 for both university and non-university examinations.

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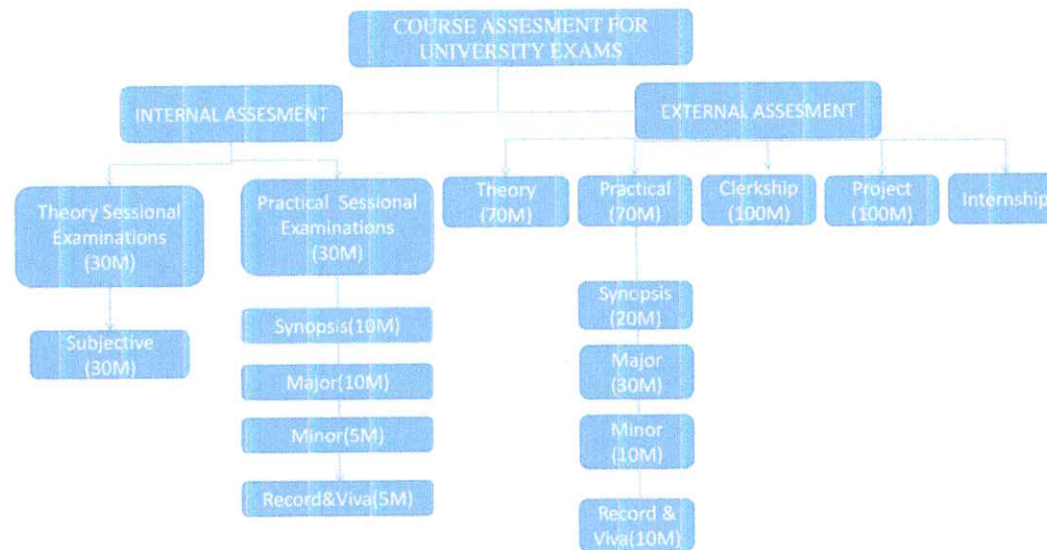
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## CO Assessment for Pharm D university Examinations



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- For each theory course, they are two internal examinations and the division of COs is listed below.

Theory Course	CO described
Mid Examination - I	CO1
	CO2
Mid Examination - II	CO2
	CO3
Mid Examination - III	CO3
	CO4

- For each practical course, they are two internal examinations and the division of COs is listed below.

Practical Course	CO described
Mid Examination - I	CO1
	CO2
Mid Examination - II	CO2
	CO3
Mid Examination - III	CO3
	CO4

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- Course assessment process starts with the marks secured by the students from internal and external examination. The CO attainment levels are measured based on the results of the average of two internal examinations and End examination conducted by the university or the college.
- The finalized CO-PO articulation matrix was taken and Set Attainment level (Target) for each course. The Target will be fixed by considering the class average marks obtained in End examination of previous batch or analyzing the nature of the course by distinguishing whether it belongs to Analytical / Theory / Problematic course or Targets are approximately given into certain levels.
- If a course is newly introduced in the curriculum, then the Target will be fixed as 70% by the concern faculty handling the course. Each CO is assessed with the tools chosen by the course coordinators. Each tool will represent the scores secured by the individual student and the attainment level for each CO is calculated by measuring the percentage of students scored equal or more than the Target fixed for that course.
- **For measuring the attainments of COs of a theory or practical course, the targets for the attainment are fixed as indicated below:**

Course	Target
<b>Theory Internal Examinations</b>	
Subjective (30 M)	70% of maximum marks (22.5 marks out of 30)
<b>Practical Internal Examinations</b>	
Lab internal Exam	70 % of maximum marks (22.5 marks out of 30)
<b>External Examination</b>	
Both Theory and Lab courses	60% of marks obtained
Project	75 % of maximum marks

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- The attainment levels are set as given below

Attainment Level	Theory Subjects	Practical Subjects
Level 1	0-59 % of Students scored the set attainment level	0-59% of Students scored the set attainment level
Level 2	60-79 % of Students scored the set attainment level	60-79 % of Students scored the set attainment level
Level 3	>=80 % of Students scored the set attainment level	>=80 % of Students scored the set attainment level

- As per the regulation PCI, the normalization percentage will be considered for measuring the final attainment of each COs of a course. For theory courses 30% of internal and 70% of External assessment will be calculated. For Laboratory courses 30% of internal and 70% of External assessment will be calculated.
- The CO attainment for the course will be calculated by taking the average of all CO's final attainment value. If the Final Attainment of the Course outcomes are equal to the target, then all the course outcomes are attained else not attained. If a course failed to attain the set attainment target, then action to be taken for continuous improvement will be suggested by the course handling faculty.

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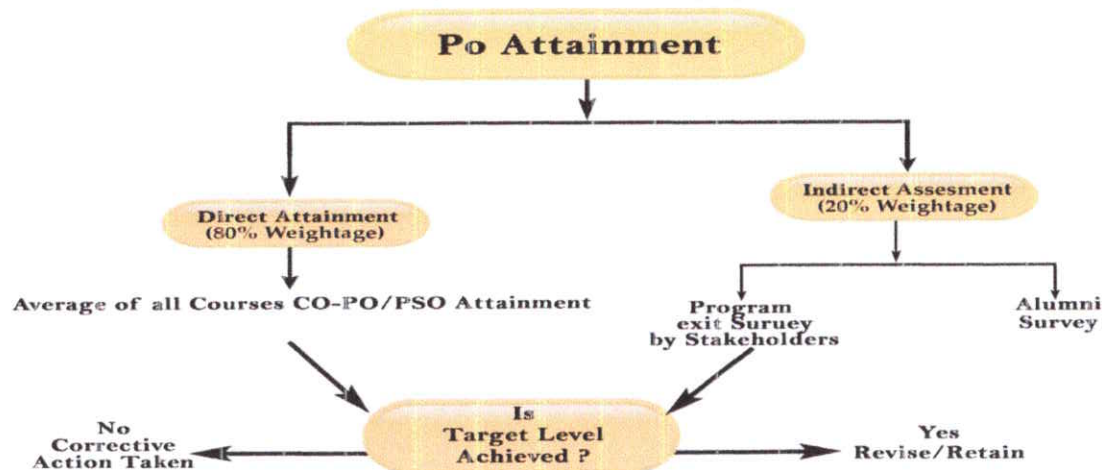
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## PO/PSO Assessment and Attainment process:

Program outcomes are narrower statements that describe what students are expected to be able to do by the time of graduation. POs are expected to be aligned closely with Graduate Attributes. Programme Specific Outcomes are what the students should be able to do at the time of graduation with reference to a specific discipline.



PO/PSO Assessment and Attainment process

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## Direct Method:

Once the overall attainment percentage of each COs is calculated, the PO and PSO attainment is calculated by taking the cumulative average of all the course's CO attainment which contributes to the specific Program Outcomes and Program Specific Outcomes. The overall CO attainment values are calculated for all the direct assessment tools. For theory and practical courses,

$$\text{Overall CO attainment} = 0.30 * \text{Internal Exams attainments} + 0.70 * \text{External Exams attainments}$$

## Indirect Method:

**Indirect methods** such as surveys and interviews ask the stakeholders to reflect on student learning. They assess opinions or thoughts about the graduate's knowledge or skills and their valued contributions to different stakeholders. An indirect assessment is used to measure certain implicit qualities of student learning, such as values, perceptions, and attitudes from a variety of perspectives. The stakeholders include students, alumni, faculty, employers, and parents.

$$\text{Indirect PO Attainment} = 10\% \text{ of Alumni Feedback} + 10\% \text{ Employer Feedback}$$

## Overall Attainment of PO

$$\text{Overall PO attainment} = 80\% \text{ of Direct PO Attainment} + 20\% \text{ of Indirect PO Attainment}$$

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