

FINAL YEAR B.PHARMACY COURSE OUTCOMES (2019 PCI Pattern)

Subject Code	Subject	Course Outcome Number	Course Outcome
BP701T	Instrumental Methods of Analysis – Theory	The students will be able to	
		1	Correlate the principles of Ultraviolet, Infrared spectroscopy, Fluorimetry, Flame Photometry, Nephalo turbidimetry, AAS to analyze the drug products.
		2	Explore the appropriate chromatographic separation technique for separation and purification of Drugs
		3	Implement the designed analytical methods for performing quantitative & qualitative analysis of drugs
BP702T	Industrial Pharmacy-II – Theory	The students will be able to	
		1	Understand the process of pilot plant scale up of pharmaceutical dosage forms
		2	Understand the process of technology transfer from lab scale to commercial batch
		3	Know different Laws and Acts that regulates pharmaceutical industry
		4	Understand the approval process and regulatory requirements for drug products
BP703T	Pharmacy Practice – The	The students will be able to	
		1	Understand various drug distribution methods in a hospitals, pharmacy stores management and inventory control.
		2	Understand Adverse drug reactions and community pharmacy, drug monitoring, effect of drug on humans.
		3	Understand regulation of pharmacy, different committees, management and drug distribution system.
		4	Understand about clinical pharmacy, preparation and implementation of budget and over the counter medication.
		5	Understand drug store management and inventory control, interpretation of clinical laboratory tests and Investigational use of drugs.
		The students will be able to	
		2	Describe, classify and select appropriate Polymers for formulating novel drug delivery system.

BP704T	Novel Drug Delivery System – Theory	<table border="1"> <tr> <td data-bbox="698 149 765 212">3</td><td data-bbox="765 149 1758 212">Explicate the merits, demerits, formulation technique and applications of microcapsules, mucosal and implantable drug delivery system.</td></tr> <tr> <td data-bbox="698 212 765 276">4</td><td data-bbox="765 212 1758 276">Describe the principle and formulation approaches of Transdermal drug delivery system.</td></tr> <tr> <td data-bbox="698 276 765 339">5</td><td data-bbox="765 276 1758 339">Describe the advantages, disadvantages and approaches for Gastroretentive and Nasopulmonary drug delivery system.</td></tr> <tr> <td data-bbox="698 339 765 441">6</td><td data-bbox="765 339 1758 441">Describe the basic concepts approaches, advantages and disadvantages of targeted, ocular and intrauterine drug delivery system.</td></tr> </table>	3	Explicate the merits, demerits, formulation technique and applications of microcapsules, mucosal and implantable drug delivery system.	4	Describe the principle and formulation approaches of Transdermal drug delivery system.	5	Describe the advantages, disadvantages and approaches for Gastroretentive and Nasopulmonary drug delivery system.	6	Describe the basic concepts approaches, advantages and disadvantages of targeted, ocular and intrauterine drug delivery system.
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BP705P	Instrumental Methods of Analysis – Practical	<p style="text-align: center;">The students will be able to</p> <table border="1"> <tr> <td data-bbox="698 489 765 552">1</td><td data-bbox="765 489 1758 552">Independently operate spectrometric and chromatographic instruments for identification, separation and analysis of pharmaceuticals.</td></tr> <tr> <td data-bbox="698 552 765 616">2</td><td data-bbox="765 552 1758 616">Analyze test samples, Active Pharmaceutical Ingredients (APIs) and formulations using spectrometric and chromatographic instruments.</td></tr> <tr> <td data-bbox="698 679 765 743">3</td><td data-bbox="765 679 1758 743">Independently process, interpret the data obtained through experimentation and report the results as per regulatory requirements.</td></tr> </table>	1	Independently operate spectrometric and chromatographic instruments for identification, separation and analysis of pharmaceuticals.	2	Analyze test samples, Active Pharmaceutical Ingredients (APIs) and formulations using spectrometric and chromatographic instruments.	3	Independently process, interpret the data obtained through experimentation and report the results as per regulatory requirements.		
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BP706 PS	Practice school	<p style="text-align: center;">The students will be able to</p> <table border="1"> <tr> <td data-bbox="698 859 765 890">1</td><td data-bbox="765 859 1758 890">Handle and operate various sophisticated instruments used in Pharmacy</td></tr> <tr> <td data-bbox="698 890 765 938">2</td><td data-bbox="765 890 1758 938">Formulate and analyze the quality of conventional & novel drug delivery system and herbal formualtions</td></tr> <tr> <td data-bbox="698 954 765 986">3</td><td data-bbox="765 954 1758 986">Synthesize characterize and analyze the crude drugs and their intermediates</td></tr> <tr> <td data-bbox="698 1002 765 1033">4</td><td data-bbox="765 1002 1758 1033"></td></tr> </table>	1	Handle and operate various sophisticated instruments used in Pharmacy	2	Formulate and analyze the quality of conventional & novel drug delivery system and herbal formualtions	3	Synthesize characterize and analyze the crude drugs and their intermediates	4	
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BP801T	Biostatistics and Research Methodology – Theory	<p style="text-align: center;">The students will be able to</p> <table border="1"> <tr> <td data-bbox="698 1097 765 1160">1</td><td data-bbox="765 1097 1758 1160">Explain various statistical techniques & its calculations like measures of central tendency, measures of dispersion & correlation.</td></tr> <tr> <td data-bbox="698 1160 765 1208">2</td><td data-bbox="765 1160 1758 1208">Demonstrate calculation of Regression, probability & parametric test.</td></tr> <tr> <td data-bbox="698 1224 765 1287">3</td><td data-bbox="765 1224 1758 1287">Explain Non Parametric tests, research process, graphical presentations & designing the methodology for research.</td></tr> <tr> <td data-bbox="698 1303 765 1351">4</td><td data-bbox="765 1303 1758 1351">Explain Regression modeling, practical components of Industrial and clinical trials problems</td></tr> </table>	1	Explain various statistical techniques & its calculations like measures of central tendency, measures of dispersion & correlation.	2	Demonstrate calculation of Regression, probability & parametric test.	3	Explain Non Parametric tests, research process, graphical presentations & designing the methodology for research.	4	Explain Regression modeling, practical components of Industrial and clinical trials problems
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		5	Explain Statistical Analysis Using Excel, SPSS, MINITAB®, DESIGN OF EXPERIMENTS, R - Online Statistical Software's to Industrial and Clinical trial approach.		
		6	Explain experiments using factorial design & response surface methodology.		
		The students will be able to			
	BP802T Social and Preventive Pharmacy – Theory	1	Overview concept of Social and health education		
		2	Study principles of Prevention and control of various diseases based on current healthcare development		
		3	Facilitate information about various National health programmes, its objectives, functioning and outcome.		
		4	Alternative ways of solving problems related to social health and hygiene.		
		5	To perform Community services in rural, urban and school health		
		The students will be able to			
	BP809ET Cosmetic Science – Theory	1	Explain the concept of cosmeceuticals, history, difference between cosmetics & cosmeceuticals & cosmeceuticals agents.		
		2	Know different Laws and Acts that regulate cosmetics		
		3	Understand the concepts of cosmetics; anatomy of skin v/s hair, general excipients used in Cosmetics.		
		4	Understand the formulation principles of skin care, hair care, oral care products, sun protection and herbal products.		
		5	Describe various analytical test for evaluation of cosmetic products		
		The students will be able to			
	BP811ET Advanced Instrumentation Techniques – Theory	1	Elucidate the principle involved in operation of advanced analytical instruments and their applications in Pharmaceutical research, quality control of APIs & formulations.		
		2	Calibrate the various analytical instruments used for analysis of pharmaceutical dosage forms		
		3	Analyze and interpret the structures of analytes present in pharmaceutical dosage form		
	BP 813 PW Project work	The students will			
		1	Acquire practical knowledge and skills for performing research projects in laboratory and conducting surveys in the field of pharmaceutical sciences		