

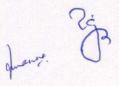
Takshashila Campus, Khandwa Road (Ring Road) Indore-452001, India Phone 91-731 2100605, E-mail: sopdavv@gmail.com Site: www.dauniv.ac.in, www.pharmacy.dauniv.ac.in



#### **COURSE OUTCOMES**

M.Pharm. (Pharmaceutical Chemistry): PCI SCHEME(2016-2017)

S. No.	Name of the Course	Course Code/Sem.	Course Outcome
1	Modern Pharmaceutical Analytical Techniques	MPC 101T First sem.	<ul> <li>After completion of course student is able to know</li> <li>The analysis of various drugs in single and combination dosag forms.</li> <li>Theoretical and practical skills of the instruments such as UV, IR NMR, Mass, spectroflourimetry, flame emission spectroscopy and atomic absorption spectroscopy.</li> <li>Student will able to understand theoretical concepts of chromatographic methods such Thin Layer Chromatography, High Performance Thin Layer Chromatography, Ion Exchange Chromatography, Column Chromatography, Gas Chromatography High Performance Liquid Chromatography, Affinity Chromatography and Gel Chromatography.</li> <li>Student will also able to understand concepts of electrophoresis, x-ray diffraction and different thermal techniques and their applications in the field of Pharmacy.</li> </ul>
2	Advanced Organic Chemistry - I	MPC 102T First sem.	<ul> <li>The student shall be able to understand</li> <li>The principles and applications of retrosynthesis</li> <li>The mechanism &amp; applications of various named reactions</li> <li>The concept of disconnection to develop synthetic routes for small target molecule.</li> <li>The various catalysts used in organic reactions</li> </ul>
	Advanced Medicinal Chemistry	MPC 103 T First sem.	<ul> <li>The chemistry of heterocyclic compounds</li> <li>The student shall be able to understand</li> <li>Different stages of drug discovery</li> <li>Role of medicinal chemistry in drug research</li> <li>Different techniques for drug discovery</li> <li>Various strategies to design and develop new drug like molecules for biological targets</li> <li>Peptidomimetics</li> </ul>

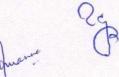




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4	Chemistry of Natural	MPC 104T	The student shall be able to understand
	Products		• Different types of natural compounds and their chemistry and
		First sem.	medicinal importance
			• The importance of natural compounds as lead molecules for new
			drug discovery
			The concept of rDNA technology tool for new drug discovery
			General methods of structural elucidation of compounds of natural
			origin
			• Isolation, purification and characterization of simple chemical
			constituents from natural source
5	Pharmaceutical	MPC 105P	• The student is expected to learn practical skills for the development
	Chemistry Practical I		of analytical methods for simultaneous estimation of two and more
		First sem.	than two drugs using UV and HPLC.
			Interpretation of UV and IR spectra.
			• Practical skills for the determination of melting point, thin layer and
			column chromatography.
			Identification of organic compounds using various functional group
			tests.
			• Application of different organic reaction for the synthesis of
			medicinally important compounds.
6			• Purification of organic solvents and isolation of plant constituents.
0	Seminar	First sem.	Improve Oral and written communication skills.
			• Explore an appreciation of the self in relation to its larger diverse
			social and academic contexts.
			<ul> <li>Understand and discuss current and real-world issues.</li> </ul>
7	Assignments	First sem.	• Introduce students to different to C. I. I.
		a not sent.	<ul> <li>Introduce students to different types of scholarly sources and how to access them</li> </ul>
			Provide students with preliminary skills to do further research in
			the field of international relations
			Teach students to break down a piece of writing into its component
			parts and analyze the arguments.
			Give students the opportunity to read in depth on a topic
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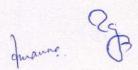




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Analysis  Second Seem.  Second Student will learn the various hyphenated analytical it techniques  Second Seem.  Second Student will deal with different analytical data from principle instrument.  The fellow student will gain the interpretation skills Student will expose to different analytical data like Low MS, ATR-IR, DSC etc. theoretically and practically.  Fellow student will be able to handle different analytical data like Low MS, ATR-IR, DSC etc. theoretically and practically.  Fellow student will be able to handle different analytical data like Low MS, ATR-IR, DSC etc. theoretically and practically.  Fellow student will be able to handle different analytical data from principle instrument.  Second will expose to different analytical data from principle instrument.  Fellow student will gain the interpretation skills  Student will deal with different analytical data from principle instrument.  The fellow student will gain the interpretation skills  Student will deal with different analytical data from principle instruments.  The fellow student will gain the interpretation skills  Student will deal with different analytical data from principle instruments.  The fellow student will gain the interpretation skills  Student will expose to different analytical data from principle instruments.  Fellow student will gain the interpretation skills  Student will expose to different analytical data from principle instruments.  Fellow student will gain the interpretation skills  Student will expose to different analytical data from principle instruments.  Fellow student will gain the interpretation skills  Student will expose to different analytical data from principle instruments.  Fellow student will gain the interpretation skills  Student will expose to different analytical data from principle instruments.  Fellow student will gain the interpretation skills  Student will expose to different analytical data from principle instruments.	
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MS, ATR-IR, DSC etc. theoretically and practically.  • Fellow student will be able to handle different analytic predict the unknown structures  • At the end of the course student should know how different hyphenated instruments data  9 Advanced Organic MPC 202T   Chemistry – II    Second   Second   Second   Second   Application of catalysis in single and multistep manufacturing of drugs and drug intermediates	
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predict the unknown structures  • At the end of the course student should know how different hyphenated instruments data  9 Advanced Organic MPC 202T   Chemistry – II    Second   Second   • Application of catalysis in single and multistep manufacturing of drugs and drug intermediates	
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Second  • Application of catalysis in single and multistep manufacturing of drugs and drug intermediates	e effective
sem. manufacturing of drugs and drug intermediates	
	process in
Synthesis of novel peptidomimetics using peptide chemi	A STATE OF THE PARTY OF THE PAR
Stereo-chemical features including conformation a	
electronic effects; reaction dynamics, and photochemical  Computer Aided Drug MPC 203T  Role of CADD in drug discovery	reactions
De la constant de la	
2 Sinterent CABB techniques and their applications	
• Various strategies to design and develop new drug like m • Working with molecular modeling softwares to design	
molecules molecular modeling softwares to design	new drug
The in silico virtual screening protocols	
11 Pharmaceutical Process MPC 204T • Exposure to develop safe, cost-effective, environmental	v friendly
Chemistry and efficient synthetic routes.	y menary,
Second  • It would impart knowledge on the development and opting	nization of
sem. a synthetic route/s.	
• The pilot plant procedure for the manufacture	
Pharmaceutical Ingredients and new chemical entities for	r the drug
development phase.	
Exposure on different separation procedures.	
Prediction of the outcome of organic reactions usin	
understanding of the general reactivity of functional g mechanism.	MARKET SHEET OF
• The principles and applications of modern	roups and
instrumentation, experimental design, and data analysis.	chemical





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12	Pharmaceutical	MPC 205P	Interpretation of UV, IR, NMR and Mass spectra
	Chemistry Practicals – II	Second sem.	<ul> <li>Practical knowledge for the selection of most appropriate synthetic route for the synthesis of medicinally important compounds.</li> <li>Direct and indirect approaches of drug design.</li> <li>Exposure to different molecular modelling softwares.</li> </ul>
13	Seminar	Second sem.	<ul> <li>Improve Oral and written communication skills.</li> <li>Explore an appreciation of the self in relation to its larger diverse social and academic contexts.</li> <li>Understand and discuss current and real-world issues.</li> </ul>
14	Assignments	Second sem.	<ul> <li>Introduce students to different types of scholarly sources and how to access them</li> <li>Provide students with preliminary skills to do further research in the field of international relations</li> <li>Teach students to break down a piece of writing into its component parts and analyze the arguments.</li> <li>Give students the opportunity to read in depth on a topic</li> </ul>
15	Research Methodology & Biostatistics	MPC 301T Third Sem.	<ul> <li>Students should be able to distinguish a purpose statement, a research question or hypothesis, and a research objective.</li> <li>Students should be able to design a good quantitative purpose statement and good quantitative research questions and hypotheses.</li> <li>Students should be familiar with the steps involved in identifying and selecting a good instrument to use in a study.</li> <li>Students should be familiar with conducting a literature review for a scholarly educational study:</li> <li>Study of different parametric and non-parametric test would help in proper use of these test</li> <li>Ethical aspects of medical research</li> <li>Complete knowledge of CPCSEA guidelines.</li> </ul>

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