DEVI AHILYA VISHWAVIDYALAYA, INDORE

SCHOOL OF PHARMACY

PROGRAMME CODE : PY7A

PROGRAMME TITLE : MASTER OF PHARMACY (M. Pharm.) (PHARMACEUTICAL CHEMISTRY)

OBJECTIVES:

The programme has been developed to provide high quality education for professional positions in business, industry, academic and government. The programme helps an individual to develop the quality, talent and skills as successful professionals and to develop research skills. The curriculum is designed to enhance and provide updated information of theoretical as well as practical aspects of the pharmacy profession at postgraduate level and inculcate research aptitude.

Eligibility:

B. Pharm from an Indian University established by law in India from an institution approved by Pharmacy Council of India and has scored not less than 55 % of the maximum marks (aggregate of 4 years of B. Pharm.)

Every student, selected for admission to post graduate pharmacy program in any PCI approved institution should have obtained registration with the State Pharmacy Council or should obtain the same within one month from the date of his/her admission, failing which the admission of the candidate shall be cancelled.

ADMISSION PROCEDURE:

GPAT qualified candidates

The admission to M. Pharm (Pharmaceutical Chemistry) programme (First Semester) shall be carried out on merit basis for GPAT score/rank.

GPAT non-qualified candidates

The admission to M. Pharm (Pharmaceutical Chemistry) programme (First Semester) shall be carried out by Common Entrance Test (Group F3) conducted by Devi Ahilya Vishwavidyalaya, Indore. The Common Entrance Test will be conducted through Computer based examination.

<u>SEATS:</u> 15 (Fifteen) (Reservation as per Government rules).

DURATION: 02 Years (Four Semesters)

AGE LIMIT: As per the directives of Government of Madhya Pradesh, there is no upper age limit for admission in the programme.

Sem.	Academic Fee (Rs.)	Development & Maintenance Fee (Rs.)	Student Services Fee (Rs.)		Exam Fee (Rs.)	Total Fee (Rs.)	
			Boys	Girls		Boys	Girls
First	29,500	15,000	3300	3111	2,500	50,300	50,111
Second	29,500	15,000	2911	2722	2,500	49,911	49,722
Third	29,500	15,000	3300	3111	2,500	50,300	50,111
Fourth	29,500	15,000	2911	2722	2,500	49,911	49,722

Fee Structure (2020-2022)

- Caution money (Refundable) of Rs. 4,000/- will be charged additionally in the First semester.
- Alumni Fee of Rs. 500/- will be charged extra in the first semester.
- If a student repeats a paper(s) in a semester, an additional fee of Rs. 500/- per paper shall be payable.
- For NRI/FN/PIO candidates, a fee of US\$ 3500 per annum shall be payable on yearly basis. They will have to pay a refundable deposit US\$ 500 once at the time of admission.
- Hostel fee and central library fee will be extra.

PROGRAMME STRUCTURE:

The minimum credit points required for the award of M. Pharm. degree is 95. However based on the credit points earned by the students under the head of co-curricular activities, a student shall earn a maximum of 100 credit points. These credits are divided into Theory courses, Practical, Seminars, Assignments, Research work, Discussions with the supervisor, Journal club and Co-Curricular activities over the duration of four semesters.

Course code	Course	Credit hours	Credit points
MPC 101 T	Modern Pharmaceutical Analytical Techniques	4	4
MPC 102 T	Advanced Organic Chemistry-I	4	4
MPC 103 T	Advanced Medicinal Chemistry	4	4
MPC 104 T	Chemistry of Natural Products	4	4
MPC 105 P	Pharmaceutical Chemistry Practical I	12	6
-	Seminar/Assignment	7	4

First Semester:

DEVI AHILYA VISHWAVIDYALAYA, INDORE

Total 35 26

Second Semester:

Course code	Course	Credit hours	Credit points
MPC 201 T	Advanced Spectral Analysis	4	4
MPC 202 T	Advanced Organic Chemistry-II	4	4
MPC 203 T	Computer Aided Drug Design	4	4
MPC 204 T	Pharmaceutical Process Chemistry	4	4
MPC 205 P	Pharmaceutical Chemistry Practical II	12	6
-	Seminar/Assignment	7	4
	Total	35	26

Third Semester:

Course code	Course	Credit hours	Credit points
MRM 301 T	Research Methodology and Biostatistics	4	4
-	Journal Club	1	1
-	Research Work	28	14
-	Discussion/Presentation (Proposal Presentation)	2	2
	Total	35	21

Fourth Semester:

Course code	Course	Credit hours	Credit points
-	Journal Club	1	1
-	Research Work	31	16
-	Discussion/ Final Presentation	3	3
	Total	35	20

Programme Outcomes:

Drug discovery/synthesis: Provide basic knowledge and understanding of the principles in drug discovery, chemistry and structure of drugs, organic reactions, and mechanism of action, identification and analytical chemistry.

Advanced Technical Skills: Provides in depth knowledge on usage of various equipments and different kinds of simulation software to perform experiments on synthesis, drug design and interpretation of analytical data generated from LC-MS, GC-MS, ATR-IR, DSC etc. theoretically and practically.

Research and Development: Provides an in depth knowledge to identifying a problem, critical thinking, analysis and provide rational solutions in design and development of medicinal compounds.

Learning Aptitude: Inculcate an aptitude for continuous learning and professional development with ability to engage in research and development.

Scientific Writing: Enables effective oral and written communication on research and development and other analytical issues.

Ethics: Follow the code of ethics and commit to professional values and responsibilities and norms of the Pharmacy practice.

Programme Specific Outcomes:

- 1. Understanding of basic principles of organic Chemistry, medicinal chemistry, natural products and their related synthesis and analysis.
- 2. Understanding of the mechanisms for various reactions in order to carry out an organic reaction, including isolating, purifying, and characterizing the product.
- 3. Understanding of the processes involved in the design, development and discovery of medicinal compounds and mechanism of action of various drug molecules.
- 4. Understanding of different types of natural products, their occurrence, structure, biosynthesis, their properties and the use of natural products as starting materials.
- 5. Understanding to apply various organic reactions in single & multistep process in manufacturing of drugs and drug intermediates
- 6. Understanding of various molecular modeling software in the design of novel drug-like molecules and to apply the various software for physico-chemical property prediction.
- 7. To predict the outcome of organic reactions using a basic understanding of the general reactivity of functional groups and mechanism.