



**MPHARM PHARMACOGNOSY**

**PQA-MPB101T: MODERN PHARMACEUTICAL  
ANALYTICAL TECHNIQUES**

**After completion of the course, a student will be able to understand:**

1. The theory and working of sophisticated analytical instruments for quality control of drugs and pharmaceuticals.
2. The analysis of various drugs in single and combination dosage forms.
3. Applications of various analytical techniques for drug analysis.

**PCO-MPG102T: ADVANCED PHARMACOGNOSY I**

**Upon completion of this course the student should be able to:**

1. Describe advances in the cultivation and production of drugs
2. Understand the drugs of marine origin
3. Explain the various nutraceuticals/herbs and their health benefits
4. Discuss the various phytopharmaceuticals and their source, its utilization and medicinal value
5. Understand pharmacovigilance of drugs of natural origin

**PCO-MPG103T: PHYTOCHEMISTRY**

**Upon completion of the course, the student shall be able to know the,**

1. Different classes of phytoconstituents, their biosynthetic pathways, isolation, purification and characterization
2. Information about the herbal drug discovery and development
3. Various conventional / advanced extraction methods, separation and chromatographic techniques for herbal drugs
4. Phytochemical fingerprinting for phytoconstituents
5. Various spectroscopic techniques for structure elucidation of phytoconstituents

**PCO-MPG104T: INDUSTRIAL  
PHARMACOGNOSTICAL TECHNOLOGY**

**At completion of this course it is expected that students will be able to understand-**

1. The requirements for setting up the herbal drug industry
2. The guidelines for quality of natural drugs and regulatory issues
3. The use of monographs / Guidelines in accessing the quality of herbal products
4. The testing protocols for herbal medicines
5. The IPR of natural drugs and trade of raw and finished materials

**PCO-MPG105P: PHARMACOGNOSY PRACTICAL I**

**Upon completion of this course the student should be able to:**

1. Gain the knowledge on various extraction, phytochemical screening methods for identification of phytoconstituents
2. Understand the various spectroscopic and chromatographic techniques for the analysis of crude drugs and phytoconstituents
3. Learn Understand the effective use of monographs in standardization of herbal drugs and formulations

**PCO-MPG106S: SEMINAR IN PHARMACOGNOSY**

**Upon completion of the course the student shall be able to:**

1. Develop skills to gather, organize, deliver information, and defend a given topic in herbal research.
2. Learn to utilize audio-visual aids for effective deliverance of the topic.
3. Acquire communication and presentation skills.
4. Effectively respond to the questions raised by peers and stand scientific scrutiny.
5. Develop a write-up on the subject of seminar presentation.
6. Cultivate a sense of up gradation of knowledge through self and continuous learning.





**MPHARM PHARMACOGNOSY**

**PCO-MPG201T: MEDICINAL PLANT  
BIOTECHNOLOGY**

**At Upon completion of the course, the student shall be able to**

1. Understand development of plant biotechnology and its application in pharmacy
2. Gain the knowledge in different tissue culture techniques in depth
3. Understand the biotechnological techniques for obtaining and improving the quality of natural products
4. Know the process like genetic engineering in medicinal plants for higher yield of phytopharmaceuticals.
5. Understand fermentation technology and their applications in pharmacy.

**PCO-MPG202T: ADVANCED PHARMACOGNOSY II**

**Upon completion of this course the student shall be able to**

1. Know the validation of herbal remedies
2. Know the methods of detection of adulteration, evaluation technique for the herbal drugs
3. Understand the role of ethnobotany and ethnopharmacology in drug discovery.
4. Gain knowledge on various analytical profile for herbal drugs
5. Gain knowledge on methods of screening of herbals for various biological properties

**PCO-MPG203T: INDIAN SYSTEMS OF MEDICINE**

**After the completion of the course the students will be able to understand the**

1. Basic principles of various Indian Systems of Medicine.
2. Importance of Naturopathy, Yoga and Aroma therapy in health care system
3. Preparation and standardization of various AYUSH formulations.
4. Regulatory guidelines in setting herbal industry.
5. Clinical research of traditional medicines and the institutes involved in the same

**PCO-MPG204T: HERBAL COSMETICS**

**After completion of the course the students will be able to understand the**

1. Economic aspects and Regulatory provisions relation to manufacture of cosmetics
2. Various raw material, additives, compatibility studies and interactions between chemicals and herbs in the cosmetic formulations
3. Physiology of skin, lips, nails, hairs and preparation of various herbal cosmetics and its standardization.
4. Various cosmeceuticals of natural origin and its applications
5. Various toxicity screening and quality control studies for cosmetics as per D & C Act.

**PCO-MPG205P: PHARMACOGNOSY PRACTICAL II**

**Upon completion of this course the student should be able to:**

1. Demonstrate the practical skills in establishment of various plant tissue culture techniques.
2. Gain experience on estimation of various secondary plant metabolites.
3. Gain the knowledge to formulate and standardize various AYUSH and cosmetic preparations for the intended use.

**PCO-MPG206S: SEMINAR IN PHARMACOGNOSY**

**Upon completion of the course the student shall be able to:**

1. Develop skills to gather, organize, deliver information, and defend a given topic in herbal drug research.
2. Learn to utilize audio-visual aids for effective deliverance of the topic.
3. Acquire communication and presentation skills.
4. Effectively respond to the questions raised by peers and stand scientific scrutiny.
5. Develop a write-up on the subject of seminar presentation.
6. Cultivate a sense of upgradation of knowledge through self and continuous learning





**MPHARM PHARMACOGNOSY**

**PHA-MRM301T: RESEARCH METHODOLOGY AND BIOSTATISTICS**

**Upon completion of the course the student shall be able to**

1. Know the various components of research design and methodology.
2. Appreciate advanced statistical techniques in solving the research problems.

**MJC302P: JOURNAL CLUB IN PHARMACOGNOSY**

**Upon completion of the course the student shall be able to:**

1. Learn to organize complex research concepts using audio-visual aids.
2. Acquire communication and presentation skills.
3. Effectively respond to the questions raised by peers and stand scientific scrutiny.
4. Cultivate a sense of upgradation of knowledge through self and continuous learning

**MPHARM – CHOICE BASED INTERDISCIPLINARY COURSES**

**The following electives are offered by the department to provide pharmaceutical research and development oriented knowledge in various topics such as**

- ▶ PCO-001E: NUTRACEUTICALS
- ▶ PCO-002E: EXTRACTION, SEPARATION AND PURIFICATION OF PHYTOCONSTITUENTS
- ▶ PCO-003E: NANOPHYTOPHARMACEUTICALS
- ▶ PCO-004E: HERBAL MONOGRAPHS

