

Jai Mahakali Shikshan Sanstha's  
**Agnihotri College of Pharmacy,**  
Bapuji Wadi, Ramnagar, Sindi (Meghe), Wardha, (MS)

**Criterion 1.2.1**  
**Value Added courses**  
**offered by the Institution**



*Agnihotri*  
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Agnihotri College of Pharmacy  
WARDHA

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Value added course on

**Insights of Intellectual Property Rights**

Course Co-ordinator - Mr. Prasad P. Jumade

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**“Insights of Intellectual Property Rights”**

Title of the course: “Insights of Intellectual Property Rights”

Title of the Certificate Course: Value added Course on “Insights of Intellectual Property Rights”

Course Coordinator: Dr. Prasad Jumade

Training Period: 6 days x 5 hours

Course Schedule and content

Day 1: Introduction to intellectual property and its concept

Day 2: Intellectual property Protection and Intellectual Property Rights Economic Importance

Day 3: Concept of Copyright, works covered by copyright, Copyright of books, music, paintings, sculpture, and films, to computer programs, databases, advertisements, maps, and technical drawings.

Day 4: Trademark concept, Need, Registration, Protection and Opposition.

Day 5: Patent: Patent Act, Its amendments, Subject matter, Criteria, Patent Application forms and guidelines for filing a patent, Application types.

Day 6: PCT, International patenting requirements, Cost and Process, Significance of TOT, Patent ethics, Negative and positive aspects of IPP, Applications of IPR.

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Value added course on

**Training course on Flame photometer and  
Nephelometer**

Course Co-ordinator - Ms. Khushbu B. Vyas

### **Training course on Flame photometer and Nephelometer**

Title of the course: Training course on Flame photometer and Nephelometer

Title of the Certificate Course: Value added Course on “Training course on Flame photometer and Nephelometer”

Course Coordinator : Ms. Khushbu Vyas

Training Period: 6 days x 5 hours

Course Schedule and content

Day 1: Theoretical concepts of flame emission and nephelo - turbidometry. Understanding of techniques of both methods

Day 2: Various interferences and application in FES in various industries and biological field.

Day 3: Design Qualification, Installation qualification, and Calibration of the flame photometer and Nephelometer.

Day 4: Practical training for analysis of samples, Calibration Curve Plot Analysis of various Laboratory samples including limits of Metallic elements, chlorides and sulphates in various pharmaceutical products.

Day 5: Training on analysis of marketed formulations. Self-practice sessions.

Day 6: Interpretation of results, Calculations of concentrations and discussions regarding difficulties occurring during the operation.

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Value added course on

**Self Defense and Personal Safety in Day to Day Life**

Course Co-ordinator - Ms. Khushbu B. Vyas

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**“Self Defense and Personal Safety in Day to Day Life”**

Title of the course: “Self Defense and Personal Safety in Day to Day Life”

Title of the Certificate Course: Value added Course on “Self Defense and Personal Safety in Day to Day Life”

Course Coordinator: Ms. Khushbu Vyas

Training Period: 7 days x 5 hours

Course Schedule and content

Day 1: Introduction to self-defense and personal safety.

- Importance of self-defense skills in everyday life
- Identifying common safety risks and situations
- Developing a preemptive mindset for personal safety.

Day 2: Fundamental Self Defense Techniques

- Learning basic physical self-defense techniques for escapes and blocks.
- Practicing stance, posture, and body positioning for effective self-defense
- Identifying susceptible points on the human body for self-protection

Day 3: Situational Awareness and Escaping Strategies

- Developing keen situational awareness to prevent potential threats
- Applying strategies for recognizing and avoiding dangerous situations
- Enhancing communication and boldness skills to frighten potential attackers

Day 4: Self-Defense in Specific Circumstances

- Adapting self-defense techniques for various scenarios, such as indoor and outdoor settings, close quarters, and open spaces
- Addressing specific risks, such as bullying, harassment, and potential snatching

Day 5: Effective Use of Personal Items for Self-Defense

- Employing everyday objects as improvised tools for self-defense



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- Understanding legal and ethical deliberations when using personal items for protection
- Practicing techniques with common objects like keys, bags, and umbrellas

Day 6: Self-Defense against Common Attacks

- Defending against common physical attacks, such as grabs, holds, and strikes
- Discovering techniques to counter physical aggression and create escape opportunities
- Understanding when to involve and uncouple from conflicts

Day 7: Mock Setups and Practical Drills

- Applying learned self-defense techniques in well-ordered mock scenarios
- Partaking in practical drills to reinforce muscle memory and decision-making skills
- Getting feedback and guidance from instructors to improve performance

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Value added course on

**Holistic Yoga-Meditation Health Retreat**

Course Co-ordinator - Mr. Bandu Kadu

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**“Holistic Yoga-Meditation Health Retreat”**

Title of the course: “Holistic Yoga-Meditation Health Retreat”

Title of the Certificate Course: Value added Course on “Holistic Yoga-Meditation Health Retreat”

Course Coordinator: Mr. Bandu Kadu

Training Period: 6 days x 5 hours

Course Schedule and content

Day 1: Introduction to yoga and meditation

- Lectures on introduction to yoga sadhana, meditation and spiritual insights.
- Advantages and health benefits
- Basic introduction to various types of yoga and meditation techniques
- Yoga philosophy, four classical yoga path
- Eight limbs of yoga and Jan yoga

Day 2: Hatha Yoga

- Theory of Hatha yoga, the astral body
- The nadis (energy channels) and chakras (energy centers)
- Basic yoga postures
- Sun Salutations
- Yoga Asanas

Day 3: Hatha yoga

- Deep relaxation and release of blocked energy
- Pranayama theory
- Basic types of Pranayama
- Pranayama techniques.

Day 4: Pranayama and yoga Asana Practice

- Sun salutation
- 12 basic Yoga postures
- 125 Asana variations, from intermediate level to advanced
- Postural alignment

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- Anatomy and Physiology
- The effects of hatha yoga on major body systems
- Yogic diet and Nutrition

Day 5: Meditation

- Theoretical Background and philosophy
- Twelve guidelines for meditation
- Techniques of meditation
- Concentration and positive thinking development techniques
- Mechanics of mind

Day 6:

- Ethical, Health and Spiritual reasons for vegetarianism
- Bhagavad Gita Study.
- Positive emotional effects of chanting
- Correct pronunciation and mental attitude
- Mantra and sound healing
- Practice of opening of the heart to the divine

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Value added course on

**Interpretation and Application of ECG in Clinical  
Practice**

Course Co-ordinator – Akash Kapse

### **Interpretation and Application of ECG in Clinical Practice**

Title of Course: Interpretation and Application of ECG in Clinical Practice.

Title of Certificate Course: Value added course on " Interpretation and Application of ECG in Clinical Practice."

Course Coordinator: Mr. Akash Kapse

- ECG with Myocardial Infraction (MI)
- ECG without MI
- Premature heartbeats

Day 4: Interpretation for types of Arrhythmia

- Bradycardia
- Supraventricular Tachycardia
- Wide Complex Tachycardia

Day 5: Analyzing and summarizing the interpretation for

- MI
- Arrhythmia
- Flutter
- Enlargement of heart chambers
- Electrolyte imbalance
- Correlation with Medical and Genetic history

Day 6: Knowledge Check of the students with respect to the above topics.

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Value added course on

**Research Methods in Health Promotion**

Course Co-ordinator - Mr. Akash Kapse

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**Research Methods in Health Promotion**

Title of Course: Research Methods in Health Promotion

Title of certificate course: Value added course in "Research Methods in Health Promotion"

Course Coordinator: Mr. Akash Kapse

Training Period: 6 days x 5 hours

Course Schedule and content:

Day 1: Key steps in health promotion, Key steps in Research

Day 2: Ethical issues in health promotion research

Day 2: Choosing a research Design

Day3: Observational research and Randomized controlled trails

Day 4: Qualitative research strategies and Health promotion measurements

Day 5: Evaluation by statistical Analysis

Day 6: Interpretation and compilation of data for future strategies planning to enhance health promotion.



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Value added course on

**CPR, First Aid, Medical Equipment handling**

**(Vital Signs)**

Course Co-ordinator - Mr. Akash Kapse

### **CPR, First Aid, Medical Equipment handling (Vital Signs)**

Title of Course: CPR, First Aid, Medical Equipment handling (Vital Signs)

Title of certificate course: Value Added courses in CPR, First Aid, and Medical Equipment handling (Vital Signs)

Course Coordinator: Mr. Akash Kapse

Training Period: 6 days x 5 hours

Course Schedule and content:

Day 1: Cardio pulmonary resuscitation

- Introduction
- Steps to perform the CPR

Day 2: First Aid treatment in any condition

- Snake bite first aid treatment
- First step in treatment of poisoning
- First aid measures for a road traffic accident victim
- Epilepsy
- Unconsciousness
- Dog bite
- Asthma Attack

Day 3: Medical equipment handling for vital signs

- Thermometer
- Stethoscopes
- Sphygmomanometer
- Pulse Oximetry
- Glucometer
- Penlights

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- Weight machine
- Nebulizer
- Sterlizers
- Dialyser
- Catheter
- Otoscope
- Proctoscope
- Suction device
- Ventilator
- Stopwatch
- Tuning fork

Day 4: How to lower blood pressure instantly in an emergency?

Day 5: First Aid treatment for broken bone

Day 6: Treatment for stroke.

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Value added course on

**Animal handling and various routes of administration**

Course Co-ordinator - Mr. Jawed Ali Quazi

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**Animal handling and various routes of administration**

Title of Course: Animal handling and various routes of administration

Title of certificate course: Value Added courses in Animal handling and various routes of administration

Course Coordinator: Mr. Jawed Ali Quazi

Training Period: 7 days x 5 hours

Course Schedule and content:

Day 1: Introduction to Animals used for different experimental work.

Day 2: Animal handling

Day 3: Importance of safety signals

Day 4: Processes and challenges

Day 5: Introduction to route of administration

Day 6: Principle of administration

Day 7: Site of administration, preparation solubility and safety of solutions (Dosing), volume and frequency of administration, Route of administration.

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Value added course on

**Protocols and Guidelines of CPCSEA in Animal  
studies**

Course Co-ordinator - Mr. Akash Kapse

### **Protocols and Guidelines of CPCSEA in Animal studies**

Title of Course: Protocols and Guidelines of CPCSEA in Animal studies.

Title of certificate course: Protocols and Guidelines of CPCSEA in Animal studies.

Course Coordinator: Mr. Akash Kapse

Training Period: 6 days x 5 hours

Course Schedule and content:

Day 1: Animal Welfare

- Definition of Animal welfare
- Principles
- Animal Welfare vs Animal Rights
- Animal welfare in India(Animal Welfare Board of India)

Day 2: Introduction to CPCSEA, Mandates of CPCSEA, Ethical principles of CPCSEA

Day 3: Animal experimentation in India-Rules and regulations

Day 4: CPCSEA guidelines for laboratory Animal facility

Day 5: Reasons why animals are used in experimental research, points to be taken care of while using animals in research.

Day 6: knowledge check and doubts solving session.

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Value added course on

**Practical Conduct of Clinical Trials in Hospitals**

Course Co-ordinator - Mr. Akash Kapse



## **Practical Conduct of Clinical Trials in Hospitals**

Title of Course: Practical Conduct of Clinical Trials in Hospital.

Title of certificate course: Value Added courses in "Practical Conduct of clinical trials in hospitals".

Course Coordinator: Mr. Akash Kapse

Training Period: 7 days x 5 hours

Course Schedule and content:

Day 1: Introduction to synopsis of clinical trials, Trial design, Feasibility Questionnaire

Day 2: Scrutiny of feasibility as per subject requirements, Pre-site selection visit (PSSV) documentation.

Day 3: Site selection visit documentation, Institutional ethics committee/Institutional review board (IEC/IRB) submission, Presentation of trial protocol in IEC/IRB meeting.

Day 4: Site Initiation visit (SIV), Patient screening, Inclusion/Exclusion criteria of trial.

Day 5: Patient Enrollment, Patient Recruitment, Visit plans and counselling of patients.

Day 6: Various logs like subject visit logs, monitor visit logs, Drug accountability logs etc, Follow up visit of subjects.

Day 7: Drug accountability, eCRF compilation and submission, Study close out visit (SCOV), Archival of documents.

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Value added course on

**Spray Drying and Automization of Formulations**

Course Co-ordinator - Mr. Prashant Wake

## **Spray Drying and Automization of Formulations**

Title of the course: Training course on Spray Drying and Automization of Formulations

Title of the Certificate Course: Value added Course on “Spray Drying and Automization of Formulations”

Course Coordinator: Mr. Prashant Wake

Training Period: 6 days x 5 hours

Course Schedule and content

Day 1: Introduction to spray drying, how it compares with other drying techniques, mechanisms and impact of the formulation on process

Day 2: Spray Drying and Automization Basics

Day 3: Industrial Formulation Case Studies.

Day 4: Scale up of spray drying processes

Day 5: Hands-on Laboratory Demonstrations

Day 6 : Hands-on Laboratory Demonstrations

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Value added course on

**Training course on Fluidized Bed Coater & its  
applications**

Course Co-ordinator - Ms. Dipali D. Kamble

## **Fluidized Bed Coater & its Application**

Title of the course: Training course on Fluidized Bed Coater & its applications.

Title of the Certificate Course: "Training Course on Working and applications of Fluidized Bed Coater

Course Coordinator: Ms. Dipali D. Kamble

Training Period: 5days x 6 hours

Course Schedule and content

Day 1: Introduction to coating of formulation, Different types of coatings, coating materials, and techniques

Day 2: Principle, Design, Installation and operation of Fluidized bed coater for variety of coating formulation.

Day 3: Industrial Formulation Case Studies.

Day 4: Pilot plant Scale up of Fluidized bed coating.

Day 5: Hands-on Laboratory Demonstrations, Coating of various types of formulation using Fluidized Bed Coater.

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Value added course on

**Ethics and Responsible Conduct of Research**

Course Co-ordinator - Mr. Ankit Kedia

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**“Ethics and Responsible Conduct of Research”**

Title of the course: Ethics and Responsible Conduct of Research

Title of the Certificate Course: Value added Course on “Ethics and Responsible Conduct of Research”

Course Coordinator: Mr. Ankit Kedia

Training Period: 6 days x 5 hours

Course Schedule and content

**Day 1: Introduction to Research Ethics**

- Definition of research ethics
- Historical context and development
- Key ethical principles (e.g., integrity, honesty, transparency)

**Day 2: Ethical Guidelines and Regulations**

- Overview of ethical guidelines (e.g., Institutional Review Boards)
- Understanding regulatory bodies (e.g., NIH, NSF)
- Case studies illustrating ethical dilemmas in research

**Day 3: Data Handling and Management**

- Ethical considerations in data collection and storage
- Data sharing and privacy
- Data fabrication and falsification

**Day 4: Authorship and Publication Ethics**

- Authorship criteria and responsibilities
- Plagiarism and proper citation practices
- Ethical issues in peer review and publication

**Day 5: Human and Animal Research Ethics**

- Informed consent and participant protection
- Ethical considerations in animal research
- Balancing scientific goals with ethical responsibilities

**Day 6: Responsible Conduct in Research Workshops**

- Interactive ethical decision-making exercises
- Discussion of real-world ethical dilemmas
- Strategies for addressing ethical challenges in research

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Value added course on

**Patent Drafting for Beginners**

Course Co-ordinator - Ms. Monali B. Wawre



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## **Patent Drafting for Beginners**

Title of the course: Patent Drafting for Beginners

Title of the Certificate Course: Value added Course on "Patent Drafting for Beginners"

Course Coordinator: Ms. Monali B. Wawre

Training Period: 5days x 6 hours

Course Schedule and content

Day 1: Introduction of Invention, Field of Invention, Prior art and Patent classification.

Day 2: Problem solution statement, Problem solution to claim and structure of claim.

Day 3: Preamble, Transition and Body.

Day 4: Types of Claims, Claim drafting best practices.

Day 5: Detailed description, Parts of the specification and parts of the application.

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Value added course on

**Roadmap for Patent Creation**

Course Co-ordinator - Ms. Monali B. Wawre

## **Roadmap for Patent Creation**

Title of the course: Roadmap for Patent Creation

Title of the Certificate Course: Value added Course on “Roadmap for Patent Creation”

Course Coordinator: Ms. Monali B. Wawre

Training Period: 6 days x 5 hours

Course Schedule and content

Day 1: Introduction of Roadmap for patent creation, Property and IP, IPR and future areas.

Day 2: Patent searching and analysis, Novelty and Industrial application.

Day 3: Parts of the patent document.

Day 4: IP identification tool, Patentability tool, Patent timelines-India and PCT.

Day 5: Detailed description, Parts of the specification and parts of the application.

Day 6: When to publish and when to patent, Procedure for patent filling.

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Value added course on

**Pharmacogenomics and Personalized Medicine**

Course Co-ordinator - Mr. Dhananjay G. Sawarkar

## **“Pharmacogenomics and Personalized Medicine”.**

Title of the Course: “Pharmacogenomics and Personalized Medicine”.

Title on the Certificate Course: Value added course on “Pharmacogenomics and Personalized Medicine”.

Course Co-ordinator : Mr. Dhananjay G. Sawarkar

Training Period: 6 days X 5 Hours

### **Day 1: Introduction to Pharmacogenomics**

#### **Morning Session:**

- Overview of Pharmacogenomics and its significance in healthcare.
- Historical perspective and key milestones.

#### **Afternoon Session:**

- Human genetics basics relevant to pharmacogenomics.
- Pharmacogenetic vs. pharmacogenomic terminology.

### **Day 2: Genetic Variation and Drug Response**

#### **Morning Session:**

- Types of genetic variations (SNPs, CNVs, etc.).
- How genetic variation influences drug response.

#### **Afternoon Session:**

- Case studies illustrating genetic variations affecting drug metabolism and efficacy.

### **Day 3: Pharmacogenomic Testing and Implementation**

#### **Morning Session:**

- Overview of pharmacogenomic testing methods (genotyping, sequencing, etc.).
- Clinical applications and challenges.

#### **Afternoon Session:**

- Ethical and regulatory considerations in pharmacogenomic testing.

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**Day 4: Personalized Medicine in Specific Therapeutic Areas**

**Morning Session:**

- Personalized oncology and targeted therapies.
- Cardiovascular medicine and genetic risk factors.

**Afternoon Session:**

- Neuropharmacology and individualized psychiatric treatments.
- Infectious diseases and genetic susceptibility.

**Day 5: Pharmacogenomics in Clinical Practice**

**Morning Session:**

- Role of pharmacists and healthcare providers in pharmacogenomic-guided therapy.
- Case-based discussions and role-playing scenarios.

**Afternoon Session:**

- Practical considerations for integrating pharmacogenomics into clinical workflows.
- Real-world examples of healthcare institutions implementing personalized medicine.

**Day 6: Future Trends and Emerging Technologies**

**Morning Session:**

- Emerging technologies in pharmacogenomics (CRISPR, single-cell sequencing, etc.).
- Predictive modeling and AI in personalized medicine.

**Afternoon Session:**

- Group discussions on research opportunities and challenges.
- Closing remarks and certificate distribution.

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Value added course on

**Wellness and Mental Health Awareness**

Course Co-ordinator - Ms. Komal Jabalpure

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**“Wellness and Mental Health Awareness”**

Title of the course: Wellness and Mental Health Awareness

Title of the Certificate Course: Value added Course on “Wellness and Mental Health Awareness”

Course Coordinator: Ms. Komal Jabalpure

Training Period: 6 days x 5 hours

Course Schedule and content

**Day 1: Introduction to Mental Health and Well-being**

- Understanding the concept of mental health
- Importance of mental health in daily life
- Common misconceptions and stigmas

**Day 2: Stress Management Techniques**

- Identifying stressors
- Stress management strategies
- Relaxation techniques (e.g., deep breathing, mindfulness)

**Day 3: Building Resilience**

- What is resilience?
- Strategies for developing resilience
- Overcoming setbacks and challenges

**Day 4: Coping Strategies**

- Healthy coping mechanisms
- Recognizing signs of distress
- Seeking support when needed

**Day 5: Mental Health Awareness and Support**

- Common mental health disorders (e.g., anxiety, depression)
- How to recognize signs of mental health issues in oneself and others
- Resources and support available (e.g., counseling, hotlines)

**Day 6: Self-Care and Well-being Planning**

- Importance of self-care
- Creating a personal well-being plan
- Setting and prioritizing well-being goals



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Value added course on

**Biosimilars and Generic Drug Formulation**

Course Co-ordinator - Mr. Shrikant Ankar

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**“Biosimilars and Generic Drug Formulation”**

**Title of the course: “Biosimilars and Generic Drug Formulation”**

**Title of the Certificate Course: Value added Course on “Biosimilars and Generic Drug Formulation”**

Course Coordinator: Mr. Shrikant Ankar

Training Period: 6 days x 5 hours

**Day 1: Introduction to Biosimilars and Generic Drugs**

- Morning Session: Overview of biosimilars and generic drugs, including definitions, regulatory frameworks, and market dynamics.
- Afternoon Session: Historical perspective and the importance of biosimilars and generic drugs in healthcare cost savings.

**Day 2: Biosimilar Development and Regulation**

- Morning Session: In-depth exploration of the regulatory pathways for biosimilar approval in different regions (e.g., FDA, EMA).
- Afternoon Session: Case studies on successful biosimilar development and market entry.

**Day 3: Generic Drug Development**

- Morning Session: Overview of generic drug development, including bioequivalence studies and regulatory requirements.
- Afternoon Session: Challenges and strategies in the development of generic versions of small-molecule drugs.

**Day 4: Formulation Challenges in Biosimilars**

- Morning Session: Understanding the complexities of biosimilar formulation, including protein stability, manufacturing processes, and quality control.
- Afternoon Session: Strategies for achieving biosimilarity while addressing formulation challenges.

**Day 5: Quality Assurance and Analytical Techniques**

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- Morning Session: Quality assurance and analytical methods specific to biosimilars and generic drugs.
- Afternoon Session: Laboratory or case-based exercises on quality control and analytical testing.

**Day 6: Future Trends and Market Access**

- Morning Session: Emerging trends in biosimilar and generic drug development, such as interchangeable biosimilars.
- Afternoon Session: Discussion on market access, pricing, and reimbursement considerations for biosimilars and generic drugs.

Jai Mahakali Shikshan Sanstha's

**Agnihotri College of Pharmacy,**

**Bapuji Wadi, Ramnagar, Sindi (Meghe), Wardha, (MS)**

Value added course on

**Training program on different extraction techniques**

Course Co-ordinator - Mrs. Jayshree S. Dalal

### **Training program on different extraction techniques**

Title of the course: Training program on different extraction techniques.

Title of the certificate course: Value added course on “Hands-on training program in extraction techniques”.

Course objectives:

The course objective is to provide both theoretical and hands on training on the techniques and development of standardized herbal extract.

Training period: 5 days X 6 hours

Course Coordinator: Mrs. Jayshree S. Dalal

The course outcome for this program involves providing principals, methodology and practical skills required for various extraction techniques used for phytochemicals such as maceration, percolation, infusion, decoction, sonication, soxhlation, microwave-assisted extraction etc.

Day 1: Raw material collection (Plant collection), Preparation of herbarium, various physical methods of evaluation.

Day 2: Phytochemical screening, Different extraction processes such as infusion, decoction, maceration, Soxhlet extraction, successive solvent extraction, and extraction via sonication.

Day 3: Extract collection and calculation of percentage yield. Downstream processing explains the process of extraction and bulk extract preparation.

Day 4: Product formulation and evaluation.

Day 5: Demonstration on TLC of the different extract obtaining. Product quality management.

Jai Mahakali Shikshan Sanstha's

**Agnihotri College of Pharmacy,**

**Bapuji Wadi, Ramnagar, Sindi (Meghe), Wardha, (MS)**

Value added course on

**Quality Control of Natural Products**

Course Co-ordinator - Mrs. Jayshree S. Dalal

## **Quality Control of Natural Products**

Title of the course: Quality Control of Natural Products

Title of the certificate course: Certificate course on "Quality Control Of Natural Products".

Course objectives:

The course objective is to provide both theoretical and hands-on training on the techniques involved in the quality control of herbal drugs or Natural products.

Training period: 5 days X 6 hours

Course Coordinator: Mrs. Jayshree S. Dalal

The course outcome for this program the students will develop skill of performing the quality control of Herbal drug and formulation as per WHO guidelines.

Day 1: Raw material collection, raw material analysis, various physical methods of evaluation.

Day 2: Phytochemical screening, Morphological and microscopic method of evaluation.

Day 3: Leaf constant determination (stomatal number, stomatal index, vein islet no., vein termination number and palisade ratio.

Day 4: Toxicity testing of the herbal drug.

Day 5: Demonstration on TLC of the different extract obtaining. Product quality management.

Jai Mahakali Shikshan Sanstha's

**Agnihotri College of Pharmacy,**

**Bapuji Wadi, Ramnagar, Sindi (Meghe), Wardha, (MS)**

Value added course on

**Biopharmaceutical Formulation and Delivery Systems**

Course Co-ordinator - Dr. Ram D. Bawankar



## **"Biopharmaceutical Formulation and Delivery Systems"**

Title of the course: "Biopharmaceutical Formulation and Delivery Systems"

Title of the certificate course: Value Added Course on "Biopharmaceutical Formulation and Delivery Systems"

Course objectives:

The course objective is to provide both theoretical training on formulation development and challenges related to various biopharmaceutical delivery systems.

Training period: 6 days X 5 hours

Course Coordinator: Dr. Ram D. Bawankar

### **Day 1: Introduction to Biopharmaceuticals**

Morning Session: Overview of biopharmaceuticals, their definition, and their importance in modern medicine.

Afternoon Session: Historical development and key milestones in the field of biopharmaceuticals.

### **Day 2: Types of Biopharmaceuticals**

Morning Session: Explore different types of biopharmaceuticals, including monoclonal antibodies, therapeutic proteins, peptides, and nucleic acid-based therapies.

Afternoon Session: Case studies on notable biopharmaceutical products and their impact on patient care.

### **Day 3: Formulation Challenges**

Morning Session: Understand the formulation challenges specific to biopharmaceuticals, such as protein stability, aggregation, and immunogenicity.

Afternoon Session: Discuss the importance of dosage form selection and the role of excipients in biopharmaceutical formulations.

### **Day 4: Drug Delivery Systems for Biopharmaceuticals**

Morning Session: Explore specialized drug delivery systems for biopharmaceuticals, including liposomes, nanoparticles, and polymer-based carriers.

Afternoon Session: Hands-on exercises or lab visits related to drug delivery system development.

### **Day 5: Regulatory Landscape**

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**Bapuji Wadi, Ramnagar, Sindi (Meghe), Wardha, (MS)**

Morning Session: Learn about the regulatory frameworks governing the development and approval of biopharmaceuticals, including FDA and EMA guidelines.

Afternoon Session: Case studies on regulatory approval processes for biopharmaceutical products.

**Day 6: Future Trends and Challenges**

Morning Session: Discuss emerging trends and innovations in biopharmaceutical research and development.

Afternoon Session: Group discussions or projects on potential solutions to current and future formulation challenges in the biopharmaceutical industry.

Jai Mahakali Shikshan Sanstha's

**Agnihotri College of Pharmacy,**

**Bapuji Wadi, Ramnagar, Sindi (Meghe), Wardha, (MS)**

Value added course on

**Pharmacy Management and Leadership**

Course Co-ordinator - Dr. Ram D. Bawankar

Jai Mahakali Shikshan Sanstha's

**Agnihotri College of Pharmacy,**

**Bapuji Wadi, Ramnagar, Sindi (Meghe), Wardha, (MS)**

**"Pharmacy Management and Leadership"**

Title of the course: "Pharmacy Management and Leadership"

Title of the certificate course: Value Added Course on "Pharmacy Management and Leadership"

Course objectives:

The course objective is to provide both training on Management and leadership skills in pharmaceutical industries.

Training period: 6 days X 5 hours

Course Coordinator: Dr. Ram D. Bawankar

**Day 1: Introduction to Pharmacy Management**

Morning Session: Overview of pharmacy management principles and its importance in healthcare.

Afternoon Session: Organizational structures in pharmacy settings and their roles.

**Day 2: Healthcare Economics for Pharmacy**

Morning Session: Understanding healthcare reimbursement systems and their impact on pharmacy.

Afternoon Session: Cost-effective drug utilization and managing formularies.

**Day 3: Leadership Skills in Pharmacy**

Morning Session: Leadership styles and their application in pharmacy practice.

Afternoon Session: Team building, conflict resolution, and effective communication.

**Day 4: Pharmacy Operations and Workflow**

Morning Session: Streamlining pharmacy operations for efficiency and patient safety.

Afternoon Session: Inventory management and optimizing supply chains.

**Day 5: Strategic Planning and Decision-Making**

Morning Session: Developing strategic plans for pharmacy departments.

Afternoon Session: Making informed decisions in pharmacy management.

**Day 6: Regulatory Compliance and Quality Assurance**

Morning Session: Overview of pharmacy regulations and compliance requirements.

Afternoon Session: Quality assurance, continuous improvement, and patient safety.

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**Agnihotri College of Pharmacy,**  
Bapuji Wadi, Ramnagar, Sindi (Meghe), Wardha, (MS)

Value added course on  
**Training Course on “How to File Copyright?”**

Course Co-ordinator - Mrs. Harshada Kayarkar

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**Agnihotri College of Pharmacy,**

**Bapuji Wadi, Ramnagar, Sindi (Meghe), Wardha, (MS)**

**Training Course on “How to File Copyright?”**

Title of the course: Training course on “How to File Copyright?”

Title of the Certificate Course: Value added Course on “How to File Copyright?”

Course Co-ordinator : Mrs. Harshada Kayarkar

Training Period : 5 days x 6 hours

Course Schedule and content

Day 1: Introduction to copyright and its importance, different criteria that can be copyright

Day 2: How to get information from site, importance of registration on site , introduction to copyright form XIV. E-filling of copyright form.

Day 3: Detail about particular to be filled in each column and its importance as an owner, reasons behind revoked of application, common mistake during filling form. Document required for copy right along with work.

Day 4: Importance of Dairy Number, Acknowledgement Letter, payment slip, timeline for submission.

Day 5: Submission of hard copy to copyright office, How to check status of application on site, conformation of registration, certificate of registration.

Jai Mahakali Shikshan Sanstha's

**Agnihotri College of Pharmacy,**

**Bapuji Wadi, Ramnagar, Sindi (Meghe), Wardha, (MS)**

Value added course on

**Telepharmacy and Digital Health Integration**

Course Co-ordinator - Ms. Neha Ganeshrao Shete

**Agnihotri College of Pharmacy,**

Bapuji Wadi, Ramnagar, Sindi (Meghe), Wardha, (MS)

**"Telepharmacy and Digital Health Integration"**

**Title of the course:** Training course on "Telepharmacy and Digital Health Integration"

**Title of the Certificate Course:** Value added Course on "Telepharmacy and Digital Health Integration"

**Course Coordinator:** Ms. Neha Ganeshrao Shete

**Training Period:** 6 days x 5 hours

**Course Schedule and content:**

**Day 1: Introduction to Telepharmacy**

Morning Session:

- Overview of telepharmacy
- Importance in modern healthcare
- Legal and regulatory considerations

Afternoon Session:

- Telepharmacy models
- Case studies and success stories
- Q&A and discussion

**Day 2: Technology in Telepharmacy**

Morning Session:

- Telepharmacy software and hardware
- Connectivity and security
- Electronic health records (EHR) integration

Afternoon Session:

- Telehealth platforms
- Telepharmacy workflow
- Practical exercises and demonstrations

**Day 3: Telepharmacy Services**

Morning Session:

- Medication counseling via telepharmacy
- Medication therapy management (MTM)



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- Medication adherence tools

Afternoon Session:

- Remote monitoring of patients
- Chronic disease management
- Telepharmacy for specialty medications

**Day 4: Legal and Ethical Aspects**

Morning Session:

- Telepharmacy regulations by region
- Compliance with telehealth laws
- Patient privacy and confidentiality

Afternoon Session:

- Ethical considerations in telepharmacy
- Case studies on legal and ethical dilemmas
- Group discussions and problem-solving

**Day 5: Telepharmacy Implementation**

Morning Session:

- Planning a telepharmacy program
- Staff training and development
- Funding and reimbursement options

Afternoon Session:

- Evaluating telepharmacy outcomes
- Quality assurance and improvement
- Practical exercises in telepharmacy setup

**Day 6: Future Trends and Integration**

Morning Session:

- Emerging technologies in telepharmacy
- Telepharmacy and pandemic preparedness
- Telepharmacy in underserved areas

Afternoon Session:

- Telepharmacy and patient engagement
- Integrating telepharmacy into healthcare systems

Jai Mahakali Shikshan Sanstha's

**Agnihotri College of Pharmacy,**

**Bapuji Wadi, Ramnagar, Sindi (Meghe), Wardha, (MS)**

Value added course on

**Pharmaceutical Sales and Relationship Building**

Course Co-ordinator - Ms. Neha Ganeshrao Shete

**Agnihotri College of Pharmacy,**

**Bapuji Wadi, Ramnagar, Sindi (Meghe), Wardha, (MS)**

**"Pharmaceutical Sales and Relationship Building"**

**Title of the course:** Training course on "Pharmaceutical Sales and Relationship Building"

**Title of the Certificate Course:** Value added Course on "Pharmaceutical Sales and Relationship Building"

**Course Coordinator:** Ms. Neha Ganeshrao Shete

**Training Period:** 6 days x 5 hours

**Course Schedule and content:**

**Day 1: Introduction to Pharmaceutical Sales**

Morning Session:

- Overview of pharmaceutical sales
- Role and responsibilities of pharmaceutical sales representatives
- Importance of building strong relationships with healthcare professionals (HCPs)

Afternoon Session:

- Pharmaceutical product knowledge
- Understanding the product life cycle
- Role-play exercises for effective product presentations

**Day 2: Sales Techniques and Communication Skills**

Morning Session:

- Sales techniques and strategies
- Effective communication in pharmaceutical sales
- Handling objections and inquiries

Afternoon Session:

- Building trust and rapport with HCPs
- Role-play exercises for sales scenarios
- Communication ethics in pharmaceutical sales

**Day 3: Targeting and Segmentation**

Morning Session:

- Market segmentation and targeting
- Identifying key stakeholders in healthcare
- Developing customer profiles

Afternoon Session:

- Understanding HCPs' needs and preferences
- Tailoring sales strategies to different customer segments
- Case studies on successful targeting

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**Day 4: Compliance and Regulations in Pharmaceutical Sales**

Morning Session:

- Pharmaceutical marketing regulations and guidelines
- Compliance with FDA regulations
- Ethical considerations in pharmaceutical sales

Afternoon Session:

- Role of legal and compliance teams
- Adherence to promotional material guidelines
- Real-world examples and compliance challenges

**Day 5: Building and Managing Relationships**

Morning Session:

- Relationship building strategies
- Networking in the pharmaceutical industry
- Leveraging technology for relationship management

Afternoon Session:

- CRM systems and their importance
- Maintaining long-term relationships with HCPs
- Case studies on successful relationship management

**Day 6: Sales Metrics and Continuous Improvement**

Morning Session:

- Key performance indicators (KPIs) in pharmaceutical sales
- Sales data analysis
- Setting and achieving sales targets

Afternoon Session:

- Continuous learning and improvement in sales
- Feedback

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Value added course on

**Advanced Analytical Techniques for Pharmaceutical  
Characterization**

Course Co-ordinator - Mr. Prasad Jumade

**Agnihotri College of Pharmacy,**

**Bapuji Wadi, Ramnagar, Sindi (Meghe), Wardha, (MS)**

**“Advanced Analytical Techniques for Pharmaceutical Characterization”**

Title of the course: Training course on Advanced Analytical Techniques for Pharmaceutical Characterization

Title of the Certificate Course: Value added Course on Advanced Analytical Techniques for Pharmaceutical Characterization

Course Co-ordinator : Mr. Prasad Jumade

Training Period : 6 days x 5 hours

Course Schedule and content

Day 1: Introduction to Pharmaceutical Analysis Techniques

Morning Session:

- Overview of pharmaceutical analysis
- Importance of accurate characterization in drug development
- Types of analytical techniques: qualitative and quantitative

Afternoon Session:

- Spectroscopic techniques (UV-Vis, IR, NMR)
- Practical demonstrations and hands-on exercises with UV-Vis spectrophotometers

Day 2: Mass Spectrometry and Chromatography

Morning Session:

- Introduction to mass spectrometry (MS)
- Liquid chromatography-mass spectrometry (LC-MS)
- Gas chromatography-mass spectrometry (GC-MS)

Afternoon Session:

- Practical aspects of LC-MS and GC-MS instruments
- Data interpretation and troubleshooting

Day 3: X-ray Crystallography and Imaging Techniques

Morning Session:

- Principles of X-ray crystallography
- Single-crystal and powder X-ray diffraction
- Application of X-ray crystallography in pharmaceuticals

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Afternoon Session:

- Introduction to imaging techniques (SEM, TEM, AFM)
- Imaging applications in pharmaceutical characterization
- Case studies

Day 4: Thermal Analysis and Surface Characterization

Morning Session:

- Thermal analysis techniques (DSC, TGA)
- Understanding thermal behavior of pharmaceuticals

Afternoon Session:

- Surface characterization techniques (XPS, AFM)
- Surface analysis in drug delivery systems

Day 5: NMR Spectroscopy and Emerging Analytical Technologies

Morning Session:

- Advanced NMR spectroscopy in pharmaceuticals
- Multinuclear and solid-state NMR
- NMR applications in structural elucidation

Afternoon Session:

- Emerging analytical technologies (Raman spectroscopy, MALDI-TOF MS)
- Integration of multiple analytical techniques for comprehensive characterization
- Case studies and group discussions

Day 6: Quality Assurance, Regulatory Compliance, and Future Trends

Morning Session:

- Quality assurance in pharmaceutical analysis
- Regulatory requirements (USP, EP, JP)
- Data integrity and compliance

Afternoon Session:

- Future trends and advancements in pharmaceutical characterization
- Group projects and presentations on applying advanced techniques to real-world pharmaceutical problems
- Closing remarks and certificates of completion

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**Agnihotri College of Pharmacy,**

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Value added course on

**In Silico Drug Design and Computational Chemistry**

Course Co-ordinator - Mr. Shrikant Ankar



**Agnihotri College of Pharmacy,**

**Bapuji Wadi, Ramnagar, Sindi (Meghe), Wardha, (MS)**

**"In Silico Drug Design and Computational Chemistry"**

Title of the course: "In Silico Drug Design and Computational Chemistry"

Training course on Title of the Certificate Course: Value added Course on "In Silico Drug Design and Computational Chemistry"

Course Co-ordinator : Mr. Shrikant Ankar

Training Period : 6 days x 5 hours

Day 1: Introduction to In Silico Drug Design

Morning Session:

- Overview of in silico drug design
- Role of computational chemistry in drug discovery
- Importance of molecular modeling and simulations

Afternoon Session:

- Introduction to molecular modeling software (e.g., Schrödinger, OpenEye)
- Hands-on session: Software installation and setup

Day 2: Molecular Docking and Binding Affinity Prediction

- Principles of molecular docking
- Protein-ligand interactions
- Docking algorithms and scoring functions

Day 3: Molecular Dynamics Simulations

- Basics of molecular dynamics simulations
- Force fields and parameterization

Day 4: Structure-Based Drug Design

- Structure-based drug design strategies
- Virtual screening and fragment-based drug design
- Case studies in structure-based drug design

Day 5: Ligand-Based Drug Design and Chemoinformatics

- Ligand-based drug design methods
- QSAR (Quantitative Structure-Activity Relationship)
- Chemoinformatics tools and techniques

Day 6: Advanced Topics and Future Trends

- Advanced computational chemistry techniques (QMMM, free energy calculations)
- Integration of experimental and computational approaches
- Ethical considerations in in silico drug design
- Discussion on future trends in computational drug design