

# **Chanchal College**

## **Chanchal, Malda, West Bengal**

### **IAPC/IAPWC Syllabus for UG 4<sup>th</sup> Semester Arts, Science & Commerce (NEP 2020)**

Title of the Course: **Field work, Field survey and Review**

Paper code: IAPC/IAPWC

Total Credit: 02

Total Hours: 60

## **A. Medicinal Plants and Their Usefulness**

### **Objective of the Course:**

To explore the identification, cultivation, and therapeutic uses of medicinal plants in traditional and modern medicine.

### **Course Outcomes:**

Identify and describe common medicinal plants.

Understand phytochemistry and pharmacological actions.

Learn about cultivation and sustainable harvesting practices.

|          | <b>COURSE CONTENTS</b>                                                                                                                                            | <b>Hours</b> |
|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| Module 1 | Introduction to Medicinal Plants, Historical and Cultural Background, Identification and Classification, Botany of Medicinal Plants                               | 10           |
| Module 2 | Phytochemicals and Pharmacology, Active Constituents and Extraction, Mode of Action and Dosage, Toxicity and Side Effects                                         | 10           |
| Module 3 | Cultivation and Conservation, Cultivation Techniques, Harvesting and Post-Harvest Processing, Threatened Species and Their Protection                             | 20           |
| Module 4 | Applications and Case Studies, Traditional Systems (Ayurveda, Siddha), Modern Use in Pharmaceuticals, Case Studies of Key Plants (e.g., Neem, Tulsi, Ashwagandha) | 20           |

## B. Malnutrition

### Objective of the Course:

To provide a comprehensive understanding of the causes, types, and consequences of malnutrition and interventions for prevention and treatment.

### Course Outcomes:

Identify different forms of malnutrition and their impact on health.

Understand nutritional requirements across age groups.

Learn strategies for prevention and control of malnutrition.

|          | <b>COURSE CONTENTS</b>                                                                                                                                           | Hours |
|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| Module 1 | Basics of Nutrition and Malnutrition, Definition and Types of Malnutrition, Nutritional Requirements at Different Life Stages, Macronutrients and Micronutrients | 15    |
| Module 2 | Causes and Effects of Malnutrition, Socioeconomic and Cultural Factors, Disease and Malnutrition Link, Impact on Physical and Cognitive Development              | 10    |
| Module 3 | Assessment and Intervention, Nutritional Assessment Tools, Food Fortification and Supplementation, Role of Public Health Workers                                 | 15    |
| Module 4 | Programs and Policies, ICDS, Mid-Day Meal, POSHAN Abhiyan, WHO and UNICEF Initiatives, Community-Based Approaches                                                | 20    |

## C. Waste Water Management

### Objective of the Course:

To introduce concepts and technologies for efficient wastewater treatment and reuse to ensure environmental sustainability.

### Course Outcomes:

Understand the sources and types of waste water.

Learn methods of wastewater treatment and reuse.

Apply knowledge in designing management systems.

|          | <b>COURSE CONTENTS</b>                                                                                                               | Hours |
|----------|--------------------------------------------------------------------------------------------------------------------------------------|-------|
| Module 1 | Introduction to Wastewater, Definition and Sources, Characteristics and Classification, Health and Environmental Hazards             | 10    |
| Module 2 | Treatment Technologies, Primary, Secondary, Tertiary Treatment, Septic Tanks and Sewage Treatment Plants, Advanced Treatment Methods | 10    |
| Module 3 | Reuse and Sustainability, Water Recycling and Reuse in Agriculture, Urban Wastewater Management, Decentralized Systems               | 20    |
| Module 4 | Data Analysis and Application, Statistical Tools and Software, Demography in Policy Planning, Report Writing and Presentation        | 20    |

## D. Demographic Survey

### Objective of the Course:

To equip students with the skills to collect, analyse, and interpret demographic data for social planning and policy development.

### Course Outcomes:

Understand demographic variables and indicators.  
Develop competency in survey tools and methodologies.  
Analyse demographic trends and their implications.

|          | <b>COURSE CONTENTS</b>                                                                                                               | Hours |
|----------|--------------------------------------------------------------------------------------------------------------------------------------|-------|
| Module 1 | Introduction to Demography, Key Concepts: Population, Growth, Density, Population Structure (Age, Sex, etc.), Theories of Population | 15    |
| Module 2 | Demographic Variables, Fertility, Mortality, Migration, Population Projections and Trends, Urbanization and Its Impacts              | 10    |
| Module 3 | Data Collection and Survey Techniques, Designing Questionnaires, Field Work Methods, Use of Census and NSS Data                      | 15    |
| Module 4 | Data Analysis and Application, Statistical Tools and Software, Demography in Policy Planning, Report Writing and Presentation        | 20    |

## E. Survey of Migrant Workers

### Objective of the Course:

To study the socio-economic conditions of migrant workers and develop skills in conducting field surveys and policy analysis.

### Course Outcomes:

Gain insights into migration patterns and drivers.  
Understand the challenges faced by migrant workers.  
Learn to conduct field surveys and write analytical reports.

|          | <b>COURSE CONTENTS</b>                                                                                              | Hours |
|----------|---------------------------------------------------------------------------------------------------------------------|-------|
| Module 1 | Migration Basics, Types and Causes of Migration, Profile of Migrant Workers, Push and Pull Factors                  | 15    |
| Module 2 | Socioeconomic Impact, Living and Working Conditions, Impact on Families and Children, Issues of Identity and Access | 10    |
| Module 3 | Survey Methodology, Sampling and Questionnaire Design, Ethical Issues in Field Work, Case Study Approaches          | 15    |
| Module 4 | Policy and Advocacy, Government Welfare Schemes, Role of Civil Society, Reporting and Recommendations               | 20    |

## F. Film and Media

### Objective of the Course:

To explore the role of film and media in society, and develop critical thinking and creative skills for media production and analysis.

### Course Outcomes:

Understand media's impact on culture and public opinion.

Learn media production basics.

Analyse films and media texts critically.

|          | <b>COURSE CONTENTS</b>                                                                                                              | Hours |
|----------|-------------------------------------------------------------------------------------------------------------------------------------|-------|
| Module 1 | Fundamentals of Media and Film, Media Types and Functions, History of Cinema and Media in India, Elements of Film Language          | 10    |
| Module 2 | Media Literacy and Ethics, Media Ownership and Control, Censorship and Regulation, Fake News and Digital Responsibility             | 15    |
| Module 3 | Production Techniques, Scriptwriting and Storyboarding, Camera, Lighting, and Sound Basics, Editing and Post-Production             | 20    |
| Module 4 | Media and Society, Representation of Gender, Class, and Race, Film as a Tool for Social Change, Documentary and Short Film Projects | 15    |

## G. Environmental Conservation

### Objective of the Course:

To impart knowledge about environmental issues, ecological balance, and sustainable development practices for conservation of nature and natural resources.

### Course Outcomes:

Understand key environmental concepts and challenges.

Learn about conservation techniques and sustainable living.

Develop skills for environmental impact assessment and eco-restoration.

|          | <b>COURSE CONTENTS</b>                                                                                                                                                   | Hours |
|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| Module 1 | Introduction to Environment and Ecology, Basics of Environmental Science, Ecosystems: Types and Functions, Biodiversity: Importance and Threats                          | 10    |
| Module 2 | Environmental Issues and Resource Management, Natural Resources: Forest, Water, Soil, Environmental Pollution: Air, Water, Soil, Waste Management and Recycling          | 15    |
| Module 3 | Conservation Strategies, Wildlife Conservation, Sustainable Development Goals (SDGs), Role of Local Communities and NGOs                                                 | 15    |
| Module 4 | Laws, Policies and Case Studies, Environmental Protection Acts, International Agreements (e.g., Paris Agreement), Case Studies: Successful Conservation Efforts in India | 20    |

## H. Gender Discrimination

### Objective of the Course:

To understand the roots and manifestations of gender discrimination and explore frameworks for achieving gender equality.

### Course Outcomes:

Analyse gender roles and power structures.  
Identify types of gender-based discrimination.  
Engage in advocacy for gender justice.

|          | <b>COURSE CONTENTS</b>                                                                                                                           | Hours |
|----------|--------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| Module 1 | Understanding Gender, Concept of Gender vs. Sex, Gender Roles and Socialization, Patriarchy and Gender Stereotypes                               | 15    |
| Module 2 | Manifestations of Discrimination, Education, Employment, Health Disparities, Gender-Based Violence, Workplace Inequality                         | 15    |
| Module 3 | Legal and Institutional Framework, Constitutional Provisions, Key Laws (e.g., Domestic Violence Act, POCSO), Role of Commissions and NGOs        | 15    |
| Module 4 | Movements and Advocacy, Feminist Movements in India and Globally, Gender Sensitization Campaigns, Media, Art, and Literature as Tools for Change | 15    |

## I. Unemployment

### Objective of the Course:

To study the causes, consequences, and solutions to unemployment through economic and social perspectives.

### Course Outcomes:

Understand types and causes of unemployment.  
Learn measurement and policy intervention techniques.  
Propose strategies to combat unemployment.

|          | <b>COURSE CONTENTS</b>                                                                                                               | Hours |
|----------|--------------------------------------------------------------------------------------------------------------------------------------|-------|
| Module 1 | Basics of Unemployment, Definition and Types (Seasonal, Frictional, Structural), Measurement and Indicators, Causes and Consequences | 10    |
| Module 2 | Labor Market Analysis, Demand and Supply of Labor, Informal Sector Employment, Skill Mismatch and Automation                         | 15    |
| Module 3 | Government Interventions, Employment Guarantee Schemes (MGNREGA, PMKVY), Role of Entrepreneurship, Skill Development Initiatives     | 20    |
| Module 4 | Solutions and Global Perspectives, International Case Studies, Youth and Women Employment, Innovation and Digital Economy            | 15    |

N.B. Each Department will choose any One form the above mentioned topics.