**Curriculum Plan (Even Semester 2021-22)**

Teacher Name: **Dr. Renu Bala**

Course: **B.Sc. (H) Chemistry, II year, Sem IV**

Paper Name: **Pharmaceutical Chemistry** **(SEC)**

UPC: **32173909**

Month: **January’22 to April’22**

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| **Contents** | **Allocation of Lectures** | **Month wise schedule to be followed** | **Assignments/ Presentations/ Preparation in Lab etc** |
| 1. Drug Discovery: Drug discovery cycle. 2. Design and Development: Uses of drugs in daily life, In medicine, biotechnology, pharmacology, role of basic biological research, short history, relation between drug discovery and development. 3. Basic Retrosynthetic Approach: Technique for solving problems in the planning of organic molecule/synthesis. | Hands on Exercise: 60 lectures | First – Fourth week January | Syllabus Overview  Lectures  Class discussion Presentations |
| IV. Synthesis, Structure Activity Relationship & Different types of the representative drugs of the following classes with uses and abuses:   1. Analgesics agents- aspirin, 2. Antipyretic agents-paracetamol, 3. Anti-inflammatory agents-ibuprofen, 4. Antibiotics-chloramphenicol | First week- Second week February | Lectures  Class discussion Presentations  Quiz |
| IV. Synthesis, Structure Activity Relationship of the representative drugs of the following classes with uses and abuses:   1. Antibacterial and antifungal agents-sulphonamides, sulphanethoxazol, sulphacetamide, trimethoprim 2. Antiviral agent- acyclovir 3. Central nervous system agents – phenobarbital, diazepam 4. Cardiovascular- glyceryl trinitrate | Third week February - First week March | Presentation and discussion |
| IV. Synthesis, Structure Activity Relationship of the representative drugs of the following classes with uses and abuses:   1. Antilaprory agents – dapsone 2. HIV-AIDS related drugs – AZT-zidovudin | Second- Fourth week March | Lectures  Class discussion Presentations  Class test  Assignment Allocation |
| IV. Synthesis, Structure Activity Relationship of the representative drugs of the following classes with uses and abuses:   1. Fermentation   Aerobic and anaerobic fermentation Production of ethyl acetate, citric acid,   1. Antibiotics   Penicillin, cephalorporin, chloromycetin, streptomycin   1. Amino acids Lysine, glutamic acid 2. Vitamins   Vitamin B2, vitamin B12, vitamin C   1. Study of pharmaceutical aids like talc, diatomite, kaolin, bentomite, gelatin and natural colours | First - Fourth week April | Lectures  Class discussion  Assignment Allocation  Previous year question paper and discussion |

**Dr. Renu Bala**

**Department of Chemistry**