**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 OverviewLecturesClass 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 | LecturesClass discussion PresentationsQuiz |
| 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 | LecturesClass discussion PresentationsClass testAssignment 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, streptomycin1. Amino acids Lysine, glutamic acid
2. Vitamins

Vitamin B2, vitamin B12, vitamin C1. Study of pharmaceutical aids like talc, diatomite, kaolin, bentomite, gelatin and natural colours
 | First - Fourth week April | LecturesClass discussionAssignment AllocationPrevious year question paper and discussion |

**Dr. Renu Bala**

**Department of Chemistry**