

JSS Academy of Higher Education & Research, Mysore
(Deemed to be University - Accredited 'A' Grade by NAAC)



JSS College of Pharmacy, Rocklands, Ooty
(An ISO 9001:2015 Certified Institution)



Academic Plan

(Academic Year: 2019-2020)
Course: IV PHARM.D.

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| Name of the Subject | Pharmacotherapeutics- III (Theory) |
| Name of the Faculty | Dr. M.Deepalakshmi |
| Designation, Department | Lecturer, Department of Pharmacy Practice |
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LECTURE PLAN - Theory

| Sessional | Number of Hours of Didactic Lecture | No. of Hours of other Pedagogy | Total Number of Lecture Hours | Tutorial Classes |
|--------------------------------------|-------------------------------------|--------------------------------|-------------------------------|------------------|
| I | 25 | 13 | 38 | 12 |
| II | 25 | 03 | 28 | 06 |
| III | 25 | 03 | 28 | 05 |
| Total Number of Lecture Hours | 75 | 11 | 88 | 23 |

I SESSIONAL : 25 Lectures + 13 Activities

| Lecture No. | Date | Lecture Details |
|---|------------|---|
| Unit-1: Peptic Ulcer Disease | | 03 Hours |
| Tutorial-1 | 17.06.2019 | - |
| 1 | 18.06.2019 | Introduction |
| 2 | 19.06.2019 | Pathophysiology, Etiology, signs and symptoms |
| 3 | 19.06.2019 | Pharmacotherapeutic management |
| Tutorial-2 | 24.06.2019 | - |
| Activity- 1 | 25.06.2019 | Summary of peptic ulcer/ Case discussion |
| Unit-2: Gastro Esophageal Reflux Disease | | 03 Hours |
| 1 | 26.06.2019 | Introduction |
| 2 | 26.06.2019 | Pathophysiology, Etiology, signs and symptoms |
| Tutorial-3 | 01.07.2019 | - |
| 3 | 02.07.2019 | Pharmacotherapeutic management |
| Activity- 2 | 03.07.2019 | Summary of GERD/ Case discussion |
| Unit-3: Inflammatory bowel disease | | 03 Hours |
| 1 | 03-07-2019 | Introduction |
| Tutorial-4 | 08.07.2019 | - |
| 2 | 09.07.2019 | Pathophysiology, Etiology, signs and symptoms |
| 3 | 10.07.2019 | Pharmacotherapeutic management |
| Activity- 3 | 10.07.2019 | Summary of IBD/ Case discussion |
| Tutorial- 5 | 15.07.2019 | - |
| Unit-4: Liver disorders | | 03 Hours |
| 1 | 16.07.2019 | Introduction |
| 2 | 17.07.2019 | Pathophysiology, Etiology, signs and symptoms |

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| 3 | 17.07.2019 | Pharmacotherapeutic management |
| Tutorial- 6 | 22.07.2019 | - |
| Activity- 4 | 23.07.2019 | Summary of Liver disorder/ Case discussion |
| Unit-5: Alcoholic liver disease | | 03Hours |
| 1 | 24.07.2019 | Introduction |
| 2 | 24.07.2019 | Pathophysiology, Etiology, signs and symptoms |
| Tutorial- 7 | 29.07.2019 | - |
| 3 | 30.07.2019 | Pharmacotherapeutic management |
| Activity-5 | 28.07.2019 | |
| Tutorial-8 | 30.07.2019 | - |
| Activity-6 | 31.07.2019 | Case Discussion |
| Unit-6: Viral hepatitis including Jaundice | | 03 Hours |
| 1. | 31.07.2019 | Introduction |
| Tutorial-9 | 05.08.2019 | - |
| Activity-7 | 06.08.2019 | Group Discussion |
| 2. | 07.08.2019 | Pathophysiology, Etiology, signs and symptoms |
| 3 | 07.08.2019 | Pharmacotherapeutic management |
| Activity-8 | 13.08.2019 | Case discussion/Test |
| Unit-7: Drug induced liver disorders. | | 03 Hours |
| Activity | 14.08.2019 | Quiz |
| 1. | 14.08.2019 | Introduction |
| Tutorial-10 | 19.08.2019 | - |
| Activity-9 | 20.08.2019 | Case discussion/Test |
| 2. | 21.08.2019 | Drug induced liver disorders |
| 3. | 21.08.2019 | Drug induced liver disorders |
| Tutorial-11 | 26.08.2019 | - |
| Activity-10 | 27.08.2019 | Case discussion/Test |
| Unit-8: Schizophrenia | | 04 Hours |
| 1 | 28.08.2019 | Introduction |
| 2 | 28.08.2019 | Pathophysiology, Etiology, signs and symptoms |
| Activity-11 | 03.09.2019 | Case discussion/Test |
| 3. | 04.09.2019 | Pharmacotherapeutic management |
| 4. | 04.09.2019 | Pharmacotherapeutic management |
| Tutorial-12 | 09.09.2019 | - |
| Activity-12 | 11.09.2019 | Case discussion/Test |
| Activity-13 | 11.09.2019 | Case discussion/Test |

II SESSIONAL : 24 Lectures

| Lecture No. | Date | Lecture Details |
|--------------------------|------------|-----------------|
| Tutorial- 1 | 23.09-2019 | - |
| Unit-10: Epilepsy | | 04 Hours |
| 1. | 24.09.2019 | Introduction |

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| Tutorial- 2 | 30.09.2019 | - |
| 2 | 01-10.2019 | Pathophysiology, Etiology, signs and symptoms |
| 3 | 09.10.2019 | Pharmacotherapeutic management |
| 4 | 09.10.2019 | Pharmacotherapeutic management |
| Tutorial- 3 | 14.10.2019 | - |
| Unit-11: Alzheimer' disease | | 04 Hours |
| 1 | 15.10-2019 | Introduction |
| 2 | 16.10.2019 | Pathophysiology, Etiology, signs and symptoms |
| 3 | 16.10.2019 | Pharmacotherapeutic management |
| Tutorial- 4 | 21.10.2019 | - |
| 4 | 22.10.2019 | Pharmacotherapeutic management |
| Unit-12: Stroke | | 04 Hours |
| 1 | 23.10.2019 | Introduction |
| 2 | 23.10.2019 | Pathophysiology, Etiology, signs and symptoms |
| 3 | 29.10.2019 | Pharmacotherapeutic management |
| 4 | 30.10.2019 | Pharmacotherapeutic management |
| Unit-13: Parkinsonism | | 05 Hours |
| 1 | 30.10.2019 | Introduction |
| Tutorial- 6 | 04.11.2019 | - |
| 2 | 05.11.2019 | Pathophysiology, Etiology, signs and symptoms |
| 3 | 06.11.2019 | Pharmacotherapeutic management |
| 4 | 06.11.2019 | Pharmacotherapeutic management |
| Activity-1 | 11.11.2019 | Quiz/ Test |
| 5 | 12.11.2019 | Pharmacotherapeutic management |
| Unit-14: Anemias | | 04 Hours |
| 1 | 13.11.2019 | Introduction |
| 2 | 13.11.2019 | Pathophysiology, Etiology, signs and symptoms |
| Activity-2 | 18.11.2019 | Case Discussion |
| 3 | 19.11.2019 | Pharmacotherapeutic management |
| 4 | 20.11.2019 | Pharmacotherapeutic management |
| Unit-15: Venous thromboembolism | | 04 Hours |
| 1 | 20.11.2019 | Introduction |
| Activity-3 | 25.11.2019 | Case Discussion |
| 1 | 26.11.2019 | Pathophysiology, Etiology, signs and symptoms |
| 2 | 27.11.2019 | Pharmacotherapeutic management |
| 3 | 27.11.2019 | Pharmacotherapeutic management |

III SESSIONAL : 25 Lectures + 03 Activities

| Lecture No. | Date | Lecture Details |
|-------------|------------|------------------------------|
| Tutorial- 1 | 16.12.2019 | - |
| 1 | 17.12.2019 | Drug induced blood disorders |

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| Unit-16: Anxiety | | | 03 Hours |
| 1 | 18.12.2020 | Introduction, Pathophysiology | |
| 2 | 18.12.2020 | Etiology, signs and symptoms | |
| Tutorial- 2 | 20.01.2020 | - | |
| 3 | 21.01.2020 | Pharmacotherapeutic management | |
| Unit-17: Depression | | | 05 Hours |
| 1 | 22.01.2020 | Introduction, | |
| 2 | 22.01.2020 | Pathophysiology, Etiology, signs and symptoms | |
| Tutorial- 3 | 27.01.2020 | - | |
| 3 | 28.01.2020 | Pharmacotherapeutic management | |
| 4 | 29.01.2020 | Pharmacotherapeutic management | |
| 5 | 29.01.2020 | Pharmacotherapeutic management | |
| Tutorial- 3 | 03.02.2020 | - | |
| Unit-18: Sleep disorders & Obsessive Compulsive disorders | | | 05 Hours |
| 1 | 04.02.2020 | Introduction | |
| 2 | 05.02.2020 | Pathophysiology, Etiology, signs and symptoms | |
| 3 | 05.02.2020 | Pharmacotherapeutic management | |
| Tutorial-4 | 10.02.2020 | - | |
| 4 | 11.02.2020 | Pharmacotherapeutic management | |
| 5 | 12.02.2020 | Pharmacotherapeutic management | |
| Unit-19: Pain Pathways | | | 05 Hours |
| 1 | 12.02.2020 | Introduction | |
| Tutorial- 5 | 17.02.2020 | - | |
| 2 | 18.02.2020 | Pathophysiology, Etiology, signs and symptoms | |
| 3 | 19.02.2020 | Pain Pathway | |
| Activity-1 | 24.02.2020 | Group Discussion/Test | |
| 4 | 25.02.2020 | Pharmacotherapeutic management | |
| 5 | 26.02.2020 | Pharmacotherapeutic management | |
| Unit-9: Neuralgias | | | 02 Hours |
| 1 | 26.02.2020 | Introduction, Pathophysiology, Etiology, signs and symptoms | |
| Activity-2 | 02.03.2020 | Group Discussion/Test | |
| 2 | 03.03.2020 | Pharmacotherapeutic management | |
| Unit-10: Headaches. | | | 02 Hours |
| 1 | 04.03.2020 | Introduction, Pathophysiology, Etiology, signs and symptoms | |
| 2 | 04.03.2020 | Pharmacotherapeutic management | |
| Activity-3 | 09.03.2020 | Group Discussion/Test | |
| Unit-20: Evidence based medicine | | | 03 hours |
| 1 | 10.03.2020 | Introduction | |
| 2 | 11.03.2020 | Analysis | |
| 3 | 11.03.2020 | Analysis cont... | |

TEXT BOOKS

1. Clinical Pharmacy and Therapeutics – Walker and Whittlesea, Churchill Livingstone publication
2. Pharmacotherapy: A Pathophysiology approach - Joseph T. Dipiro et al. Appleton & Lange
3. Pharmacotherapy: Principles and Practice- Chisholm- Burn Wells Schwinghammer Malone and Joseph P Dipiro. McGraw Hill Publications.

REFERENCE BOOKS

1. Pathologic basis of disease: Robbins SL, W.B. Saunders publication
2. Pathology and therapeutics for Pharmacists: A Basis for Clinical Pharmacy Practice - Green and Harris, Chapman and Hall publication
3. Clinical Pharmacy and Therapeutics - Eric T. Herfindal, Williams and Wilkins Publication
4. Applied Therapeutics: The clinical Use of Drugs. Lloyd Young and Koda-Kimble MA, Williams and Wilkins Publication
5. Avery's Drug Treatment, 4th Edn, 1997, Adis International Limited.
6. Relevant review articles from recent medical and pharmaceutical literature.

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|--------------------------------|--|
| Name of the Subject | Hospital Pharmacy (Theory) |
| Name of the Faculty | Mr. Vishwas H N |
| Designation, Department | Lecturer, Department of Pharmacy Practice |
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LECTURE PLAN - Theory

| Sessional | Number of Hours of Didactic Lecture | No of Hours of other Pedagogy | Total Number of Lecture Hours | Tutorial Classes |
|------------------------------|-------------------------------------|-------------------------------|-------------------------------|------------------|
| | Hospital Pharmacy | | | |
| I | 19 | 02 | 19 | 11 |
| II | 16 | 02 | 16 | 09 |
| III | 15 | 04 | 15 | 09 |
| Total Number of Hours | 50 | 08 | 50 | 29 |

I SESSIONAL : 19 Lectures + 02 Activities

| Lecture No. | Date | Lecture Details |
|--|------------|---|
| Tutorial-1 | 18-06-2019 | Orientation about the subject |
| Hospital - its Organisation and functions | | 01 Hour |
| 1 | 20-06-2019 | Organization and functions of Hospital |
| Hospital pharmacy-Organisation and management | | 05 Hours |
| 2 | 21-06-2019 | Organizational structure- Hospital pharmacy |
| Tutorial-2 | 25-06-2019 | -- |
| 3 | 27-06-2019 | Staff, Infrastructure- Hospital pharmacy |
| 4 | 28-06-2019 | Work loadstatistics- Hospital pharmacy |
| 5 | 04-07-2019 | Management of materials and finance |
| 6 | 05-07-2019 | Roles & responsibilities of Hospital pharmacist |
| Tutorial-3 | 09-07-2019 | -- |
| The Budget – Preparation and implementation | | 01 Hour |
| 7 | 11-07-2019 | Budget-Preparation and implementation |
| Hospital drug policy | | 12 Hours |
| 8 | 12-07-2019 | Pharmacy and Therapeutic Committee (PTC) |
| Tutorial-4 | 16-07-2019 | -- |
| 9 | 18-07-2019 | Pharmacy and Therapeutic Committee (PTC) |
| 10 | 19-07-2019 | Hospital formulary |
| Tutorial-5 | 23-07-2019 | -- |
| 11 | 25-07-2019 | Hospital formulary |
| 12 | 26-07-2019 | Hospital committees- Infection committee |
| Tutorial-6 | 30-07-2019 | -- |
| 13 | 01-08-2019 | Hospital committees- Infection committee |
| 14 | 02-08-2019 | Hospital committees- Research and ethical committee |
| Tutorial-7 | 06-08-2019 | -- |
| 15 | 08-08-2019 | Hospital committees- Research and ethical committee |

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| 16 | 09-08-2019 | Development of therapeutic guidelines |
| Tutorial-8 | 13-08-2019 | -- |
| 17 | 16-08-2019 | Development of therapeutic guidelines |
| Tutorial-9 | 20-08-2019 | -- |
| 18 | 22-08-2019 | Hospital pharmacy communication –Newsletter |
| Tutorial-10 | 27-08-2019 | -- |
| 19 | 30-08-2019 | Hospital pharmacy communication –Newsletter |
| Tutorial-11 | 03-09-2019 | -- |
| Activity-1 | 05-09-2019 | Group discussion/Test |
| Activity-2 | 06-09-2019 | Group discussion/Test |

II SESSIONAL : 16 Lectures + 02 Activities

| Lecture No. | Date | Lecture Details |
|---|------------|---|
| Hospital pharmacy services | | 12 Hours |
| Tutorial-1 | 24-09-2019 | -- |
| 1 | 26-09-2019 | Procurement & warehousing of drugs and Pharmaceuticals |
| 2 | 27-09-2019 | Procurement & warehousing of drugs and Pharmaceuticals |
| Tutorial-2 | 01-10-2019 | -- |
| 3 | 03-10-2019 | Inventory control: Definition, various methods of Inventory Control ABC |
| 4 | 04-10-2019 | VED, EOQ |
| 5 | 10-10-2019 | Lead time and safety stock |
| 6 | 11-10-2019 | Drug distribution in the Hospital: Individual prescription method |
| Tutorial-3 | 15-10-2019 | -- |
| 7 | 17-10-2019 | Floor stockmethod |
| 8 | 18-10-2019 | Unit dose drug distribution method |
| Tutorial-4 | 22-10-2019 | -- |
| 9 | 24-10-2019 | Distribution of Narcotic and other controlled substances |
| 10 | 25-10-2019 | Distribution of Narcotic and other controlled substances |
| Tutorial-5 | 29-10-2019 | -- |
| 11 | 31-10-2019 | Central sterile supply services – Role of pharmacist |
| 12 | 01-11-2019 | Central sterile supply services – Role of pharmacist |
| Tutorial-6 | 05-11-2019 | -- |
| Manufacture of Pharmaceutical preparations | | 12 Hours |
| 13 | 07-11-2019 | Sterile formulations – large and small volume parenterals |
| 14 | 08-11-2019 | Sterile formulations – large and small volume parenterals |
| Tutorial-7 | 12-11-2019 | -- |
| 15 | 14-11-2019 | Sterile formulations – large and small volume parenterals |
| 16 | 15-11-2019 | Manufacture of Ointments |
| Tutorial-8 | 19-11-2019 | -- |
| Activity-1 | 21-11-2019 | Group discussion/Test |
| Activity-2 | 22-11-2019 | Group discussion/Test |
| Tutorial-9 | 26-11-2019 | -- |

III SESSIONAL : 15 Lectures + 04 Activities

| Lecture No. | Date | Lecture Details |
|--|------------|---|
| Activity-1 | 05-12-2019 | Group discussion/Test |
| Activity-2 | 06-12-2019 | Group discussion/Test |
| 1 | 13-12-2019 | Manufacture of Liquids |
| Tutorial-1 | 17-12-2019 | -- |
| 2 | 19-12-2019 | Manufacture of Creams |
| 3 | 20-12-2019 | Manufacturing of Tablets, granules |
| Tutorial-2 | 21-01-2020 | -- |
| 4 | 23-01-2020 | Manufacturing of capsules |
| 5 | 24-01-2020 | Manufacturing of powders |
| Tutorial-3 | 28-01-2020 | -- |
| 6 | 30-01-2020 | Total parenteral nutrition |
| 7 | 31-01-2020 | Total parenteral nutrition |
| Tutorial-4 | 04-02-2020 | -- |
| 8 | 06-02-2020 | Total parenteral nutrition |
| Tutorial-5 | 11-02-2020 | -- |
| Continuing professional development programs | | 02 Hours |
| 9 | 13-02-2020 | CPD- Education and training |
| 10 | 14-02-2020 | CPD- Education and training |
| Tutorial-6 | 18-02-2020 | -- |
| Radio Pharmaceuticals | | 03 Hours |
| 11 | 20-02-2020 | Radio pharmaceuticals-Introduction |
| Tutorial-7 | 25-02-2020 | -- |
| 12 | 27-02-2020 | Radio pharmaceuticals- Handling |
| 13 | 28-02-2020 | Radio pharmaceuticals- Packing |
| Tutorial-8 | 03-03-2020 | -- |
| Professional Relations and practices of hospital pharmacist | | 02 Hours |
| 14 | 05-03-2020 | Professional Relations and practices of hospital pharmacist |
| 15 | 06-03-2020 | Professional Relations and practices of hospital pharmacist |
| Tutorial-9 | 10-03-2020 | -- |
| Activity-3 | 12-03-2020 | Group discussion/Test |
| Activity-4 | 13-03-2020 | Group discussion/Test |

Text books: (latest editions)

1. Hospital Pharmacy by WilliamE. Hassan
2. A text book of Hospital Pharmacy by S.H.Merchant&Dr.J.S.Qadry. Revised by R.K.Goyal& R.K. Parikh

References:

1. WHO consultative group report.
2. R.P.S. Vol.2. Part –B; Pharmacy Practice section.
3. Handbook of pharmacy – health care. Edt. Robin J Harman. The Pharmaceutical press.

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|--------------------------------|--|
| Name of the Subject | Clinical Pharmacy (Theory) |
| Name of the Faculty | Dr Sivasankaran PONNUSANKAR |
| Designation, Department | Professor and Head, Dept. of Pharmacy Practice |
| Mobile Number | 9489613428 |
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LECTURE PLAN - Theory

| Sessional | Number of Hours of Didactic Lecture | No of Hours of other Pedagogy | Total Number of Lecture Hours | Tutorial Classes |
|------------------------------|-------------------------------------|-------------------------------|-------------------------------|------------------|
| I | 25 | 09 | 34 | 10 |
| II | 21 | 4 | 25 | 8 |
| III | 18 | 11 | 29 | 10 |
| Total Number of Hours | 64 | 24 | 88 | 28 |

I SESSIONAL : 25 Lectures + 09 Activities

| Lecture No. | Date | Lecture Details |
|--|------------|---|
| Unit-1: Introduction to Clinical Pharmacy | | 06 hours |
| 1. | 17.06.2019 | Orientation to Clinical Pharmacy |
| 2. | 18.06.2019 | Discussion on Clinical Pharmacy |
| Tutorial -1 | 20.06.2019 | Orientation to Clinical Pharmacy |
| 3. | 21.06.2019 | Orientation to Clinical Pharmacy |
| 4. | 24.06.2019 | Definition and development of clinical pharmacy practice |
| 5. | 25.06.2019 | Question and Answer session |
| Tutorial - 2 | 27.06.2019 | Definition and development and clinical pharmacy practice |
| 6. | 28.06.2019 | Scope of clinical pharmacy practice |
| Unit-2: Introduction to daily activities of Clinical Pharmacist | | 18 Hours |
| 7. | 01.07.2019 | Drug therapy monitoring (medication chart review) |
| Activity - 1 | 02.07.2019 | Medication Chart review |
| Tutorial - 3 | 04.07.2019 | Question and answer / practice session |
| 8. | 05.07.2019 | Drug Therapy Monitoring (Clinical Review) |
| 9. | 08.07.2019 | Drug Therapy Monitoring (Pharmacist intervention) |
| Activity - 2 | 09.07.2019 | Pharmacist Intervention |
| Tutorial -4 | 11.07.2019 | Question and answer / practice session |
| 10. | 12.07.2019 | Ward round participation |
| 11. | 15.07.2019 | Adverse drug reaction management (1) |
| Activity- 3 | 16.07.2019 | Adverse drug reaction management activity |
| Tutorial - 5 | 18.07.2019 | Question and answer / practice session |
| 12. | 19.07.2019 | Drug and poison information services – role of pharmacist |

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| Activity - 4 | 22.07.2019 | Drug and poison information resources activity |
| 13. | 23.07.2019 | Medication history –introduction (1) |
| Tutorial - 6 | 25.07.2019 | Question and answer / practice session |
| 14. | 26.07.2019 | Medication history interview (2) |
| 15. | 29.07.2019 | Patient counseling |
| Activity - 5 | 30.08.2019 | Patient Counseling activity |
| Tutorial - 7 | 01.08.2019 | Question and answer / practice session |
| 16. | 02.08.2019 | Drug Utilization Evaluation (DUE) |
| 17. | 05.08.2019 | Drug Utilization Review (DUR) |
| 18. | 06.08.2019 | Quality assurance of clinical pharmacy services |
| Tutorial - 8 | 08.08.2019 | Question and answer / practice session |
| 19. | 09.08.2019 | Quality assurance of clinical pharmacy services |
| Unit – 3 Patient Data Analysis | | 5 Hours |
| 20. | 13.08.2019 | Patient case history and its structure |
| 21. | 16.08.2019 | Patient case history evaluation |
| Activity - 6 | 19.08.2019 | Case history activity |
| 22. | 20.08.2019 | Medical abbreviations and terminologies |
| Tutorial - 9 | 22.08.2019 | Question and answer / practice session |
| Activity - 7 | 26.08.2019 | Medical abbreviation and terminologies - activity |
| Unit 4: Pharmaceutical Care concepts | | 5 Hours |
| 23. | 27.08.2019 | Introduction, definition and principles of pharmaceutical care |
| 24. | 30.08.2019 | How to achieve pharmaceutical care plan? |
| 25. | 03.09.2019 | Pharmacists role in pharmaceutical care |
| Tutorial - 10 | 05.09.2019 | Question and answer / practice session |
| Activity - 8 | 06.09.2019 | Pharmaceutical care plan - preparation on selected diseases |
| Activity - 9 | 09.09.2019 | Pharmaceutical care plan – preparation on selected diseases |

II SESSIONAL : 21 Lectures + 04 Activities

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| | 20.09.2019 | I sessional examination theory paper evaluation - discussion |
| Unit-5: Clinical laboratory tests used in the evaluation of disease states and interpretation of test results | | 16 Hours |
| 1. | 23.09.2019 | Clinical Laboratory Test – Hematology |
| 2. | 24.09.2019 | Clinical Laboratory Test - Hematology |
| Tutorial - 1 | 26.09.2019 | Question and answer / practice session |
| 3. | 27.09.2019 | Clinical Laboratory Test – Liver Function |
| 4. | 30.09.2019 | Clinical Laboratory Test – Liver Function |
| 5. | 01.10.2019 | Clinical Laboratory Test – Renal function |
| Tutorial- 2 | 03.10.2019 | Question and answer / practice session |
| 6. | 04.10.2019 | Clinical Laboratory Test – Thyroid function |

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| Tutorial - 3 | 10.10.2019 | Question and answer / practice session |
| 7. | 11.10.2019 | Clinical Laboratory Test – Cardiac disorders |
| 8. | 14.10.2019 | Clinical Laboratory Test – Cardiac disorders |
| 9. | 15.10.2019 | Clinical Laboratory Test – Fluid and electrolyte balance |
| Tutorial-3 | 17.10.2019 | Question and answer / practice session |
| 10. | 18.10.2019 | Clinical Laboratory Test – Fluid and electrolyte balance |
| 11. | 21.10.2019 | Clinical Laboratory Test – Microbial culture sensitivity test |
| 12. | 22.10.2019 | Clinical Laboratory Test – Microbial culture sensitivity test |
| Tutorial-4 | 24.10.2019 | Question and answer / practice session |
| 13. | 25.10.2019 | Clinical Laboratory Test – Pulmonary function test |
| 14. | 29.10.2019 | Clinical Laboratory Test – Pulmonary function test |
| Tutorial - 5 | 31.10.2019 | Question and answer / practice session |
| 15. | 01.11.2019 | Clinical Laboratory Test – Pulmonary function test |
| Activity - 1 | 04.11.2019 | Clinical Laboratory Test - activity |
| Unit 6: Biomedical literature evaluation | | 9 Hours |
| 16. | 05.11.2019 | Biomedical literature – an introduction |
| Tutorial - 6 | 07.11.2019 | Question and answer / practice session |
| 17. | 08.11.2019 | Critical appraisal of biomedical literature |
| 18. | 11.11.2019 | Critical appraisal of primary research papers |
| 19. | 12.11.2019 | Critical appraisal of primary research papers |
| Tutorial - 7 | 14.11.2019 | Question and answer / practice session |
| 20. | 15.11.2019 | Critical appraisal of therapeutic guidelines |
| 21. | 18.11.2019 | Evaluation of biomedical literature |
| Activity 2 | 19.11.2019 | Biomedical literature evaluation - activity |
| Tutorial - 8 | 21.11.2019 | Question and answer / practice session |
| Activity- 3 | 22.11.2019 | Biomedical literature evaluation - activity |
| Activity - 4 | 25.11.2019 | Biomedical literature evaluation - activity |

III SESSIONAL :18 Lectures + 11 Activities

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| Unit-7: Drug and Poison Information Service | | 04 Hours |
| 1. | 26.11.2019 | Introduction to drug information service and resources |
| Tutorial-1 | 05.12.2019 | Question and answer / practice session |
| 2. | 06.12.2019 | Systematic approach in answering drug information services |
| 3. | 13.12.2019 | Preparation of written and verbal reports |
| 4. | 16.12.2019 | Poison information center – organization and resources |
| Unit 8: Pharmacovigilance | | 08 Hours |
| 5. | 17.12.2019 | Introduction – scope, definition and aim of pharmacovigilance |
| Tutorial-2 | 19.12.2019 | Question and answer / practice session |
| 6. | 20.12.2020 | ADR – classification, mechanism and predisposing factors |
| 7. | 17.01.2020 | Adverse drug reactions – causality assessment |
| 8. | 20.01.2020 | Adverse drug reactions – causality assessment |

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| 9. | 21.01.2020 | ADR – reporting, evaluation and monitoring |
| Tutorial - 3 | 23.01.2020 | Question and answer / practice session |
| 10. | 24.01.2020 | Role of pharmacist in ADR management |
| Activity 1 | 27.01.2020 | ADR assessment activity |
| Activity 2 | 28.01.2020 | ADR assessment activity |
| Tutorial - 4 | 30.01.2020 | Question and answer / practice session |
| Unit 9: Communication skills | | 06 Hours |
| 11. | 31.01.2020 | Introduction, aim and objectives of communication skills |
| 12. | 03.02.2020 | Patient counseling techniques |
| 13. | 04.02.2020 | Medication history interview |
| Tutorial - 5 | 06.02.2020 | Question and answer / practice session |
| 14. | 10.02.2020 | Patient adherence assessment |
| Activity - 3 | 11.02.2020 | Patient counseling activity |
| Tutorial - 6 | 13.02.2020 | Question and answer / practice session |
| 15. | 14.02.2020 | Presentation of cases – counseling session |
| Unit 10: Medication Errors | | 04 Hours |
| 16. | 17.02.2020 | Introduction to medication errors and definition |
| 17. | 18.02.2020 | Medication errors – identification and classification |
| Tutorial - 7 | 20.02.2020 | Question and answer / practice session |
| 18. | 24.02.2020 | Prescription analysis - model |
| Activity -4 | 25.02.2019 | Medication error activity |
| Tutorial - 8 | 27.02.2020 | Question and answer / practice session |
| Activity -5 | 28.02.2020 | Clinical Pharmacy Activity |
| Activity -6 | 02.03.2020 | Clinical Pharmacy Activity documentation |
| Activity -7 | 03.03.2020 | Clinical Pharmacy Activity |
| Tutorial - 9 | 05.03.2020 | Group discussion |
| Activity -8 | 06.03.2020 | Clinical Pharmacy Activity documentation |
| Activity -9 | 09.03.2020 | Group discussion |
| Activity - 10 | 10.03.2020 | Clinical Pharmacy Activity |
| Tutorial - 10 | 12.03.2020 | Group discussion |
| Activity - 11 | 13.03.2020 | Clinical Pharmacy Activity documentation |

Text Books

1. Practice standards and definitions: Society of Hospital Pharmacists of Australia (SHPA)
2. Basic skills in interpreting laboratory data - Scott LT, American Society of Health System Pharmacists Inc.

3. A text book of Clinical Pharmacy Practice; Essential concepts and skills, Dr. G. Parthasarathi, Karin Nyfort Hansen, Milap Nahata, Orient Longman Pvt. Ltd. ISBN8125026

Reference Books

1. Australian drug information -Procedure manual. The Society of Hospital Pharmacists of Australia.
2. Pharmaceutical statistics. Practical and clinical applications. Sanford Bolton, Marcel Dekker, Inc.
3. Clinical Pharmacokinetics - Rowland and Tozer, Williams and Wilkins Publication.

| | | |
|--------------------------------|--|--|
| Name of the Subject | Biostatistics and Research Methodology (Theory) | |
| Name of the Faculty | Mr. Jayakumar | Mr. Vishwas H N |
| Designation, Department | Assistant Professor, Department of Pharmacy Practice | Lecturer, Department of Pharmacy Practice |
| Mobile Number | 9443476698 | 9885104372 |
| e-Mail i.d. | jrccc@jssuni.edu.in | vishwas@jssuni.edu.in |

LECTURE PLAN - Theory

| Sessional | Number of Hours of Didactic Lecture | | No of Hours of other Pedagogy | Total Number of Lecture Hours | Tutorial Classes |
|------------------------------|-------------------------------------|----------------------|-------------------------------|-------------------------------|------------------|
| | Biostatistics | Research Methodology | | | |
| I | 10 | 10 | 02 | 20 | 12 |
| II | 09 | 05 | 04 | 14 | 09 |
| III | 08 | 08 | 04 | 16 | 11 |
| Total Number of Hours | 27 | 23 | 10 | 50 | 32 |

I SESSIONAL: 20 Lectures + 02 Activities

| Lecture No. | Date | Lecture Details |
|-----------------------------|------------|--|
| Tutorial - 1 | 29-06-2019 | Orientation about the subject – Biostatistics |
| Activity -1 | 29-06-2019 | Orientation about the subject – Biostatistics |
| Tutorial - 2 | 06-07-2019 | Basics of Statistical concepts- An Overview |
| Activity -2 | 06-07-2019 | Various methods of calculations – Hands on activity |
| RESEARCH METHODOLOGY | | |
| Research Methodology | | 10 Hours |
| 1 | 18-06-2019 | Introduction to the subject (Research Methodology) Types of clinical study designs: Case studies, observational studies, interventional studies |
| 2 | 25-06-2019 | Designing the methodology |
| 3 | 09-07-2019 | Designing the methodology |
| 4 | 16-07-2019 | Designing the methodology |
| 5 | 23-07-2019 | Sample size determination |
| 6 | 30-07-2019 | Power of a study |
| 7 | 06-08-2019 | Sample size for simple comparative experiments |
| 8 | 13-08-2019 | Sample size for simple comparative experiments |
| 9 | 20-08-2019 | Sample size to obtain a confidence interval of specified width |
| 10 | 27-08-2019 | Report writing and presentation of data |
| BIOSTATISTICS | | |
| Introduction | | 10 Hours |
| Tutorial - 3 | 13-07-2019 | - |
| 1 | 13-07-2019 | Introduction to data distribution |

| | | |
|---------------|------------|---|
| Tutorial - 4 | 20-07-2019 | - |
| 2 | 20-07-2019 | Methods of data collection |
| Tutorial – 5 | 27-07-2019 | - |
| 3 | 27-07-2019 | Types of data distribution |
| Tutorial – 6 | 03-08-2019 | - |
| 4 | 03-08-2019 | Measures describing the central tendency distributions- average, median, mode |
| Tutorial – 7 | 10-08-2019 | - |
| 5 | 10-08-2019 | Measures describing the central tendency distributions- average, median, mode |
| Tutorial – 8 | 17-08-2019 | - |
| 6 | 17-08-2019 | Measures describing the central tendency distributions- average, median, mode |
| Tutorial – 9 | 24-08-2019 | - |
| 7 | 24-08-2019 | Measurement of the spread of data-range, mean deviation, standard deviation, variance, coefficient of variation, standard error of mean |
| Tutorial – 10 | 31-08-2019 | - |
| 8 | 31-08-2019 | Measurement of the spread of data-range, mean deviation, standard deviation, variance, coefficient of variation, standard error of mean |
| Tutorial – 11 | 07-09-2019 | |
| 9 | 07-09-2019 | Measurement of the spread of data-range, mean deviation, standard deviation, variance, coefficient of variation, standard error of mean |
| Tutorial – 12 | 14-09-2019 | |
| 10 | 14-09-2019 | Measurement of the spread of data-range, mean deviation, standard deviation, variance, coefficient of variation, standard error of mean |

II SESSIONAL: 14 Lectures + 04 Activities

| Lecture No. | Date | Lecture Details |
|--|------------|--|
| BIOSTATISTICS | | 09 hours |
| Data graphics 02 Hours | | |
| Tutorial - 1 | 21-09-2019 | - |
| 1 | 21-09-2019 | Construction and labeling of graphs, histogram, Pie charts, scatter plots, semi-logarithmic graphs |
| Tutorial-2 | 28-09-2019 | |
| 2 | 28-09-2019 | Construction and labeling of graphs, histogram, Pie charts, scatter plots, semi-logarithmic graphs |
| Basics of testing hypothesis 07 Hours | | |
| 3 | 05-10-2019 | Null hypothesis, level of significance |
| Tutorial - 3 | 05-10-2019 | - |

| | | |
|--|------------|--|
| 4 | 12-10-2019 | Level of significance (Parametric data)- students t test (paired and unpaired) |
| Tutorial - 4 | 12-10-2019 | - |
| 5 | 19-10-2019 | Chi Square test |
| Tutorial – 5 | 19-10-2019 | - |
| 6 | 02-11-2019 | Analysis of Variance (one-way and two-way) |
| Tutorial – 6 | 02-11-2019 | - |
| 7 | 09-11-2019 | Level of significance (Non-parametric data)- Sign test |
| Tutorial – 7 | 09-11-2019 | - |
| 8 | 16-11-2019 | Wilcoxon’s signed rank test, |
| Tutorial – 8 | 16-11-2019 | |
| 9 | 23-11-2019 | Wilcoxon rank sum test |
| Tutorial – 9 | 23-11-2019 | |
| Statistical methods in epidemiology05 Hours | | |
| 1 | 24-09-2019 | Incidence |
| 2 | 01-10-2019 | Prevalence |
| 3 | 15-10-2019 | Relative risk |
| 4 | 22-10-2019 | Attributable risk |
| 5 | 29-10-2019 | Odds ratio |
| Activity-1 | 05-11-2019 | Group discussion/Test |
| Activity-2 | 12-11-2019 | Group discussion/Test |
| Activity-3 | 19-11-2019 | Group discussion/Test |
| Activity-4 | 26-11-2019 | Group discussion/Test |

III SESSIONAL: 16 Lectures + 04 Activities

| Lecture No. | Date | Lecture Details |
|-------------------------------------|------------|--|
| Basics of testing hypothesis | | 08 Hours |
| 1 | 07-12-2019 | Mann Whitney U test |
| Tutorial – 1 | 07-12-2019 | - |
| 2 | 14-12-2019 | Kruskal-Wall’s test (one way ANOVA) |
| Tutorial – 2 | 14-12-2019 | - |
| 3 | 21-12-2019 | Linear regression and correlation- Introduction Pearson’s correlation |
| Tutorial – 3 | 21-12-2019 | - |
| 4 | 28-12-2019 | Spearman’s correlation, correlation co-efficient |
| Tutorial – 4 | 28-12-2019 | - |
| 5 | 18-01-2020 | -Introduction to statistical software: SPSS |
| Tutorial – 5 | 18-01-2020 | - |
| Activity -1 | 25-01-2020 | SPSS- Hands on Activity |
| Tutorial- 6 | 25-01-2020 | - |

| | | |
|---|------------|---|
| 6 | 01-02-2020 | Introduction to statistical software: Epi Info |
| Tutorial- 7 | 01-02-2020 | |
| Activity -2 | 15-02-2020 | Epi Info – Hands on Activity |
| Tutorial- 8 | 15-02-2020 | |
| 7 | 22-02-2020 | Introduction to statistical software: SAS. |
| Tutorial- 9 | 22-02-2020 | |
| Activity - 3 | 29-02-2020 | SAS- Hands on Activity |
| Tutorial- 10 | 29-02-2020 | |
| 8 | 07-03-2020 | Practical components of statistical software |
| Tutorial- 11 | 07-03-2020 | |
| Computer applications in pharmacy | | 08 hours |
| Computer System in Hospital Pharmacy | | 04 hours |
| 1 | 17-12-2019 | Patterns of Computer use in Hospital Pharmacy – Patient record database management |
| 2 | 21-01-2020 | Medication order entry – Drug labels and list |
| 3 | 28-01-2020 | Intravenous solution and admixture, patient medication profiles, Inventory control |
| 4 | 04-02-2020 | Management report & Statistics |
| Computer In Community Pharmacy | | 02 hours |
| 5 | 11-02-2020 | Computerizing the Prescription Dispensing process |
| 6 | 18-02-2020 | Use of Computers for Pharmaceutical Care in community pharmacy Accounting and General ledger system |
| Drug Information Retrieval & Storage | | 02 Hours |
| 7 | 25-02-2020 | Introduction – Advantages of Computerized Literature Retrieval |
| 8 | 03-03-2020 | Use of Computerized Retrieval |
| Activity-4 | 10-03-2020 | Group discussion/Test |

Reference books:

1. Pharmaceutical statistics- practical and clinical applications, Sanford Bolton 3rd edition, publisher Marcel Dekker Inc. NewYork.
2. Drug Information- A Guide for Pharmacists, Patrick M Malone, Karen L Kier, John E Stanovich , 3rd edition, McGraw Hill Publications 2006
3. Computer Application in Pharmacy- William E. Fassett, Publisher- Lea & Febiger. Philadelphia.

| | |
|--------------------------------|--|
| Name of the Subject | Biopharmaceutics and Pharmacokinetics (Theory) |
| Name of the Faculty | Dr. Arun KP |
| Designation, Department | Assistant Professor, Department of Pharmacy Practice |
| Mobile Number | 9994934663 |
| e-Mail i.d. | kparun@jssuni.edu.in |

LECTURE PLAN - Theory

| Sessional | Number of Hours of Didactic Lecture | | No of Hours of other Pedagogy | Total Number of Lecture Hours | Tutorial Classes |
|------------------------------|-------------------------------------|------------------|-------------------------------|-------------------------------|------------------|
| | Biopharmaceutics | Pharmacokinetics | | | |
| I | 17 | 14 | 3 | 34 | 12 |
| II | 10 | 15 | 2 | 27 | 7 |
| III | 06 | 13 | 13 | 32 | 11 |
| Total Number of Hours | 33 | 42 | 18 | 93 | 30 |

I SESSIONAL : 31 Lectures + 3 Activities

| Lecture No. | Date | Lecture Details | |
|---|------------|--|-----------------|
| BIOPHARMACEUTICS | | | 09 Hours |
| Unit-1: Introduction to Biopharmaceutics | | | 01 Hour |
| Tutorial-1 | 19-06-2019 | Orientation to the subject | |
| 1. | 20-06-2019 | Introduction to Biopharmaceutics | |
| Unit-2: Absorption of Drug | | | 08 Hours |
| 1. | 21-06-2019 | Oral Drug Absorption: Introduction, Rate limiting step in bioavailability, Anatomical and physiological consideration of the GIT | |
| 2. | 22-06-2019 | Introduction to Biopharmaceutics | |
| Tutorial-2 | 26-06-2019 | - | |
| 3. | 27-06-2019 | Carrier mediated transport – active transport, Facilitated diffusion, Ion-pair formation, Pore transport, Endocytosis | |
| 4. | 28-06-2019 | Physiological factors governing GI drug absorption | |
| 5. | 29-06-2019 | Physicochemical factors governing GI drug absorption (cont...) | |
| Tutorial-3 | 03-07-2019 | - | |
| 6. | 04-07-2019 | Formulation factors governing GI drug absorption | |
| 7. | 05-07-2019 | Absorption of drug from Non <i>per OS</i> extra-vascular routes | |
| 8. | 06-07-2019 | Absorption of drug from Non <i>per OS</i> extra-vascular routes (cont...) | |
| PHARMACOKINETICS | | | 14 Hours |
| Unit-6: Introduction to Pharmacokinetics | | | 05 Hours |
| Tutorial-4 | 10-07-2019 | - | |
| 1. | 11-07-2019 | Introduction, Mathematical model | |

| | | |
|---|------------|--|
| 2. | 12-07-2019 | Drug levels in blood |
| 3. | 13-07-2019 | Pharmacokinetic models |
| Tutorial-5 | 17-07-2019 | - |
| 4. | 18-07-2019 | Compartment models |
| 5. | 19-07-2019 | Noncompartmental models, Physiological model |
| Unit-7: One Compartment Open Model | | 09 Hours |
| 1. | 20-07-2019 | Intravenous injection – bolus – plasma data |
| Tutorial-6 | 24-07-2019 | - |
| 2. | 25-07-2019 | Intravenous injection – bolus – plasma data (cont...) |
| 3. | 26-07-2019 | Intravenous injection – bolus – urine data |
| 4. | 27-07-2019 | Intravenous injection – bolus – urine data (cont...) |
| Tutorial-7 | 31-07-2019 | - |
| 5. | 01-08-2019 | Intravenous injection – bolus – urine data (cont...) |
| 6. | 02-08-2019 | Intravenous injection – infusion |
| 7. | 03-08-2019 | Intravenous injection – infusion (cont...) |
| Tutorial-8 | 07-08-2019 | - |
| 8. | 08-08-2019 | Intravenous injection – infusion (cont...) |
| 9. | 09-08-2019 | Intravenous injection – infusion (cont...) |
| BIOPHARMACEUTICS | | 08 Hours |
| Unit-3: Distribution of Drugs | | 08 Hours |
| 1. | 10-08-2019 | Tissue permeability of drugs, Binding of drugs |
| Tutorial-9 | 14-08-2019 | - |
| 2. | 16-08-2019 | Apparent volume of distribution |
| 3. | 17-08-2019 | Apparent volume of distribution (cont...) |
| Tutorial- 10 | 21-08-2019 | - |
| 4. | 22-08-2019 | Protein binding of drugs, factors Affecting protein – drug binding |
| 5. | 23-08-2019 | Protein binding of drugs, factors Affecting protein – drug binding (cont...) |
| 6. | 24-08-2019 | Kinetics of protein binding |
| Tutorial- 11 | 28-08-2019 | - |
| 7. | 30-08-2019 | Kinetics of protein binding (cont...) |
| 8. | 31-08-2019 | Clinical significance of protein – drug binding |
| Tutorial- 12 | 04-09-2019 | - |
| Activity-1 | 05-09-2019 | Mind Mapping on Selected Topic(s) |
| Activity-2 | 06-09-2019 | MCQ Test (Biopharmaceutics) |
| Activity-3 | 07-09-2019 | MCQ Test (Pharmacokinetics) |

II SESSIONAL : 25 Lectures + 2 Activities

| | | |
|--|------------|--|
| BIOPHARMACEUTICS | | 10 Hours |
| Unit-5: Bioavailability and Bioequivalence | | 10 Hours |
| 1. | 20-09-2019 | Introduction, Objectives of Bioavailability studies, Relative and Absolute Bioavailability, Bioavailability study protocol |
| 2. | 21-09-2019 | Bioequivalence studies |
| 3. | 26-09-2019 | Bioequivalence studies (cont...) |
| 4. | 27-09-2019 | Methods of assessment of bioavailability |
| 5. | 28-09-2019 | Methods to enhance bioavailability |
| 6. | 03-10-2019 | Methods to enhance bioavailability (cont...) |
| 7. | 04-10-2019 | in-vitro drug dissolution: mechanisms (theories) of dissolution, measurement of dissolution rates |
| Tutorial-1 | 09-10-2019 | - |
| 8. | 10-10-2019 | Official and unofficial methods of dissolution, control of variables in dissolution testing |
| 9. | 11-10-2019 | <i>in-vitro</i> and <i>in-vivo</i> Correlation, limitations of dissolution test |
| 10. | 12-10-2019 | Factors influencing the rate of dissolution |
| Tutorial-2 | 16-10-2019 | - |
| PHARMACOKINETICS | | 15 Hours |
| Unit-7: One Compartment Open Model: (cont...) | | 06 Hours |
| 1. | 17-10-2019 | Extravascular administration |
| 2. | 18-10-2019 | Extravascular administration (cont...) |
| 3. | 19-10-2019 | Extravascular administration (cont...) |
| Tutorial-3 | 23-10-2019 | - |
| 4. | 24-10-2019 | Extravascular administration (cont...) |
| 5. | 25-10-2019 | Extravascular administration (cont...) |
| Tutorial-4 | 30-10-2019 | - |
| 6. | 31-10-2019 | Extravascular administration (cont...) |
| Unit-10: Nonlinear Pharmacokinetics | | 05 Hours |
| 1. | 01-11-2019 | Introduction, Factors causing non-linearity |
| 2. | 02-11-2019 | Michaelis - Menton method of estimating parameters |
| Tutorial-5 | 06-11-2019 | - |
| 3. | 07-11-2019 | Michaelis-Menton method of estimating parameters (cont...) |
| 4. | 08-11-2019 | Michaelis-Menton method of estimating parameters (cont...) |
| 5. | 09-11-2019 | Michaelis-Menton method of estimating parameters (cont...) |
| Tutorial-6 | 13-11-2019 | - |
| Unit-11: Noncompartmental Pharmacokinetics | | 04 Hours |
| 1. | 14-11-2019 | Introduction, Statistical Moment Theory |
| 2. | 15-11-2019 | Mean Residence Time (MRT) for various compartment models |
| 3. | 16-11-2019 | Mean Residence Time (MRT) for various compartment models (cont...) |

| | | |
|------------|------------|-------------------------------------|
| Tutorial-7 | 20-11-2019 | - |
| 4. | 21-11-2019 | Physiological pharmacokinetic model |
| Activity-1 | 22-11-2019 | MCQ Test (Biopharmaceutics) |
| Activity-2 | 23-11-2019 | MCQ Test (Pharmacokinetics) |

III SESSIONAL : 19 Lectures + 13 Activities

| | | | |
|-----------------------------------|------------|--|-----------------|
| BIOPHARMACEUTICS | | | 06 Hours |
| Unit-4: Drug Elimination | | | 06 Hours |
| Tutorial-1 | 04-12-2019 | - | |
| 1. | 05-12-2019 | Biotransformation of drugs | |
| 2. | 06-12-2019 | Biotransformation of drugs (cont...) | |
| 3. | 07-12-2019 | Renal excretion of dugs | |
| 4. | 13-12-2019 | Factors affecting renal excretion of dugs | |
| 5. | 14-12-2019 | Renal clearance | |
| Tutorial-2 | 18-12-2019 | - | |
| 6. | 19-12-2019 | Non renal routes of excretion of drugs | |
| PHARMACOKINETICS | | | 13 Hours |
| Multiple - Dosage Regimens | | | 05 Hours |
| 1. | 20-12-2019 | Repetitive intravenous injections – One compartment open model | |
| 2. | 21-12-2019 | Repetitive intravenous injections – One compartment open model (cont...) | |
| 3. | 17-01-2020 | Repetitive extravascular dosing – One compartment open model | |
| 4. | 18-01-2020 | Repetitive extravascular dosing – One compartment open model (cont...) | |
| Tutorial-3 | 22-01-2020 | | |
| 5. | 23-01-2020 | Multiple Dosage Regimen – Two compartment open model | |
| Multicompartment Models | | | 08 Hours |
| 1. | 24-01-2020 | Two compartment open model – i.v. bolus (cont.) | |
| 2. | 25-01-2020 | Two compartment open model – i.v. bolus (cont.) | |
| Tutorial-4 | 29-01-2020 | | |
| 3. | 30-01-2020 | Two compartment open model – i.v. bolus (cont.) | |
| 4. | 31-01-2020 | Two compartment open model – i.v. infusion (cont.) | |
| 5. | 01-02-2020 | Two compartment open model – i.v. infusion (cont.) | |
| Tutorial-5 | 05-02-2020 | - | |
| 6. | 06-02-2020 | Two compartment open model – oral administration | |
| Tutorial-6 | 12-02-2020 | | |
| 7. | 13-02-2020 | Two compartment open model – oral administration (contd.) | |
| 8. | 14-02-2020 | Two compartment open model – oral administration (contd.) | |
| Activity – 1 | 15-02-2020 | Unit Test - 1 | |
| Tutorial-7 | 19-02-2020 | - | |

| | | |
|---------------|------------|-------------------|
| Activity – 2 | 20-02-2020 | Unit Test - 2 |
| Activity – 3 | 22-02-2020 | Unit Test - 3 |
| Tutorial-8 | 26-02-2020 | - |
| Activity – 4 | 27-02-2020 | Unit Test - 4 |
| Activity – 5 | 28-02-2020 | Unit Test - 5 |
| Tutorial-9 | 04-03-2020 | - |
| Activity – 6 | 05-03-2020 | MCQ Test -1 |
| Activity – 7 | 06-03-2020 | MCQ Test -2 |
| Activity – 8 | 07-03-2020 | MCQ Test -3 |
| Tutorial-10 | 11-03-2020 | - |
| Activity – 9 | 12-03-2020 | Revision Exam - 1 |
| Activity – 10 | 13-03-2020 | Revision Class |
| Tutorial-11 | 25-03-2020 | - |
| Activity – 11 | 26-03-2020 | Revision Exam - 2 |
| Activity – 12 | 27-03-2020 | Revision Class |
| Activity – 13 | 28-03-2020 | Revision Exam - 3 |

Text Books

1. Biopharmaceutics and Clinical Pharmacokinetics by, Milo Gibaldi.
2. Biopharmaceutics and Pharmacokinetics; By Robert F Notari.
3. Applied biopharmaceutics and pharmacokinetics, Leon Shargel and Andrew B.C.YU 4th edition, Prentice-Hall International edition.USA.
4. Biopharmaceutics and Pharmacokinetics-A Treatise, By D. M. Brahmkar and Sunil B.Jaiswal, VallabhPrakashanPitampura, Delhi.
5. Biopharmaceutics and Pharmacokinetics, V Venkateswarulu, Pharma Book Syndicate.

Reference Books

1. Pharmacokinetics: By Milo Gibaldi Donald, R. Merce Dekker Inc.
2. Hand Book of Clinical Pharmacokinetics, By Milo Gibaldi and Laurie Prescott by ADIS Health Science Press.
3. Biopharmaceutics; By Swarbrick.
4. Clinical Pharmacokinetics, Concepts and Applications: By Malcolm Rowland and Toezer.
5. Thomas, N. Tozen, Lea and Febrger, Philadelphia, 1995.
6. Dissolution, Bioavailability and Bioequivalence, By Abdou H.M, Mack, Publishing Company, Pennsylvania 1989.
7. Biopharmaceutics and Clinical Pharmacokinetics-An introduction 4th edition Revised and expanded by Robert F Notari Marcel Dekker Inc, New York and Basel, 1987.
8. Remington's Pharmaceutical Sciences, By Mack Publishing Company, Pennsylvania

| | |
|--------------------------------|--|
| Name of the Subject | Biopharmaceutics and Pharmacokinetics (Practical) |
| Name of the Faculty | Dr. Arun KP |
| Designation, Department | Assistant Professor, Department of Pharmacy Practice |
| Mobile Number | 9994934663 |
| e-Mail i.d. | kparun@jssuni.edu.in |

LECTURE PLAN - Practicals

| Sessional | Number of Practical (Mention the Highest Number Amongst Various Batches) | Total Number of Practical Hours (Number of Practical X 3) |
|--|---|--|
| I | 11 | 33 |
| II | 9 | 27 |
| III | 7 | 21 |
| Total Number of Practical/Hours | 27 | 81 |

I SESSIONAL

| Practical No. | Name of the Experiment | Date(s) | |
|------------------------------------|--|-------------------|-------------------|
| | | Batch I | Batch II |
| 1. | Improvement of dissolution characteristics of slightly soluble drugs by co-solvency | 21-06-2019 | 20-06-2019 |
| | Improvement of dissolution characteristics of slightly soluble drugs by co-solvency | 28-06-2019 | 27-06-2019 |
| | Improvement of dissolution characteristics of slightly soluble drugs by co-solvency | 05-07-2019 | 04-07-2019 |
| 2. | Improvement of dissolution characteristics of slightly soluble drugs by solid dispersion | 12-07-2019 | 11-07-2019 |
| | Improvement of dissolution characteristics of slightly soluble drugs by solid dispersion | 19-07-2019 | 18-07-2019 |
| | Improvement of dissolution characteristics of slightly soluble drugs by solid dispersion | 26-07-2019 | 25-07-2019 |
| 3. | Improvement of dissolution characteristics of slightly soluble drugs by use of surfactant | 02-08-2019 | 01-08-2019 |
| | Improvement of dissolution characteristics of slightly soluble drugs by use of surfactant | 09-08-2019 | 08-08-2019 |
| | Improvement of dissolution characteristics of slightly soluble drugs by use of surfactant | 16-08-2019 | - |
| 4. | PK Parameters Estimation : One Compartment Open Model - i.v. Bolus - Unchanged Drug in Blood | 23-08-2019 | 22-08-2019 |
| 5. | PK Parameters Estimation : One Compartment Open Model - i.v. Bolus - Unchanged Drug in Urine | 30-08-2019 | 22-08-2019 |
| FIRST SESSIONAL EXAMINATION | | 06-09-2019 | 05-09-2019 |

II SESSIONAL

| Practical No. | Name of the Experiment | Date(s) | |
|-------------------------------------|--|-------------------|-------------------|
| | | Batch I | Batch II |
| 6. | Revision Practical | 20-09-2019 | - |
| | Comparison of dissolution studies of two different marketed products of same drug. | 27-09-2019 | 26-09-2019 |
| | Comparison of dissolution studies of two different marketed products of same drug. | 04-10-2019 | 03-10-2019 |
| | Comparison of dissolution studies of two different marketed products of same drug. | 11-10-2019 | 10-10-2019 |
| | Comparison of dissolution studies of two different marketed products of same drug. | 18-10-2019 | 17-10-2019 |
| 7. | Influence of polymorphism on solubility and dissolution | 25-10-2019 | 24-10-2019 |
| | Influence of polymorphism on solubility and dissolution | 01-11-2019 | 31-10-2019 |
| | Influence of polymorphism on solubility and dissolution | 08-11-2019 | 07-11-2019 |
| 8. | PK Parameters Estimation : One Compartment Open Model - Extravascular Administration - Unchanged Drug in Blood | 15-11-2019 | 14-11-2019 |
| SECOND SESSIONAL EXAMINATION | | 22-11-2019 | 21-11-2019 |

III SESSIONAL

| Practical No. | Name of the Experiment | Date(s) | |
|---|---|-------------------|-------------------|
| | | Batch I | Batch II |
| 9. | Protein binding studies of a drug | 06-12-2019 | 05-12-2019 |
| | Protein binding studies of a drug | 13-12-2019 | 19-12-2019 |
| | Protein binding studies of a drug | 20-12-2019 | 23-01-2020 |
| 10. | Calculation of bioavailability/Bioequivalence | 17-01-2020 | 30-01-2020 |
| 11. | Pharmacokinetic Problems using Non-linear PK / Non-compartment Models | 24-01-2020 | 06-02-2020 |
| REPEATATION OF IMPORTANT EXPERIMENTS | | 31-01-2020 | 13-02-2020 |
| REPEATATION OF IMPORTANT EXPERIMENTS | | 14-02-2020 | 20-02-2020 |
| THIRD SESSIONAL EXAMINATION | | 28-02-2020 | 27-02-2020 |
| COMPREHENSIVE VIVA | | 06-03-2020 | 05-03-2020 |
| RECORD BONIFICATION | | 13-03-2020 | 12-03-2020 |
| COMPREHENSIVE VIVA | | 27-03-2020 | 26-03-2020 |

| | |
|--------------------------------|---|
| Name of the Subject | Clinical Toxicology |
| Name of the Faculty | Dr. Swathi Swaroopa B |
| Designation, Department | Lecturer, Department of Pharmacy Practice |
| Mobile Number | 9629547089 |
| e-Mail i.d. | swasasree@jssuni.edu.in |

LECTURE PLAN - Theory

| Sessional | No. of Hours of Didactic Lecture | No. of hours of other Pedagogy | Total no. of Lecture Hours | Total No. of Tutorial Hours |
|---------------------------|----------------------------------|--------------------------------|----------------------------|-----------------------------|
| I | 19 | 3 | 22 | 12 |
| II | 16 | 0 | 16 | 09 |
| III | 15 | 4 | 19 | 09 |
| Total No. of Hours | 50 | 07 | 57 | 30 |

I Sessional: 19 Lectures + 03Activity

| Lecture No. | Date | Lecture details |
|-------------------|----------|---|
| <i>Activity 1</i> | 19/06/19 | Orientation on Clinical Toxicology |
| 1 | 20/06/19 | General principles involved in the management of poisoning |
| Tutorial-1 | 22/06/19 | - |
| 2 | 26/06/19 | General principles involved in the management of poisoning |
| 3 | 27/06/19 | Antidotes and the clinical applications |
| Tutorial-2 | 29/06/19 | - |
| 4 | 03/07/19 | Supportive care in clinical Toxicology |
| 5 | 04/07/19 | Supportive care in clinical Toxicology |
| Tutorial-3 | 06/07/19 | - |
| 6 | 10/07/19 | Gut Decontamination |
| 7 | 11/07/19 | Gut Decontamination |
| Tutorial-4 | 13/07/19 | - |
| 8 | 17/07/19 | Elimination Enhancement |
| 9 | 18/07/19 | Toxicokinetics |
| Tutorial-5 | 20/07/19 | - |
| 10 | 24/07/19 | Toxicokinetics |
| 11 | 25/07/19 | Clinical symptoms and management of acute poisoning with the following agents |
| | | Organophosphorous poisoning |
| Tutorial-6 | 27/07/19 | - |
| 12 | 31/07/19 | Organophosphorous poisoning |
| 13 | 01/08/19 | Carbamates poisoning |
| Tutorial-7 | 03/08/19 | - |

| | | |
|--------------------|----------|--|
| 14 | 07/08/19 | Organochlorines poisoning |
| 15 | 08/08/19 | Pyrethroid poisoning |
| Tutorial-8 | 10/08/19 | - |
| 16 | 14/08/19 | Opiates overdose |
| Tutorial-9 | 17/08/19 | - |
| 17 | 21/08/19 | Antidepressants |
| 18 | 22/08/19 | Antidepressants |
| Tutorial-10 | 24/08/19 | - |
| 19 | 28/08/19 | Antidepressants |
| Tutorial-11 | 31/08/19 | - |
| Activity-2 | 04/09/19 | Case discussion on OP poisoning |
| Activity-3 | 05/09/19 | Class test/ Quiz/Group discussion on CNS depressants |
| Tutorial-12 | 07/09/19 | - |

II Sessional: 16 Lectures + 0 Activity

| Lecture No. | Date | Lecture details |
|-------------------|----------|---|
| Tutorial-1 | 21/09/19 | - |
| 1 | 26/09/19 | Barbiturates and benzodiazepines. |
| Tutorial-2 | 28/09/19 | - |
| 2 | 03/10/19 | Barbiturates and benzodiazepines. |
| Tutorial-3 | 05/10/19 | - |
| 3 | 09/10/19 | Alcohol: Ethanol |
| 4 | 10/10/19 | Alcohol: Ethanol |
| Tutorial-4 | 12/10/19 | - |
| 5 | 16/10/19 | Alcohol: Methanol |
| 6 | 17/10/19 | Paracetamol and salicylates |
| Tutorial-5 | 19/10/19 | |
| 7 | 23/10/19 | Paracetamol and salicylates |
| 8 | 24/10/19 | Non-steroidal anti-inflammatory drugs |
| 9 | 30/10/19 | Non-steroidal anti-inflammatory drugs |
| 10 | 31/10/19 | Hydrocarbons: Petroleum products and PEG |
| Tutorial-6 | 02/11/19 | |
| 11 | 06/11/19 | Caustics: inorganic acids and alkali. |
| 12 | 07/11/19 | Caustics: inorganic acids and alkali. |
| Tutorial-7 | 09/11/19 | |
| 13 | 13/11/19 | Radiation poisoning |
| 14 | 14/11/19 | Clinical symptoms and management of chronic poisoning with the following agents – Heavy metals Arsenic |
| Tutorial-8 | 16/11/19 | |
| 15 | 20/11/19 | Lead |
| 16 | 21/11/19 | Mercury |
| Tutorial-9 | 23/11/19 | |

III Sessional: 15 Lectures + 4 Activities

| Lecture No. | Date | Lecture details |
|-------------------|----------|--|
| 1 | 05/12/19 | Iron |
| Tutorial-1 | 07/12/19 | |
| 2 | 18/12/19 | Copper |
| 3 | 19/12/19 | Families of venomous snakes, clinical effects of venoms, general management as first aid, early manifestations, complications and snake bite injuries. |
| Tutorial-2 | 21/12/19 | |
| Tutorial-3 | 18/01/20 | |
| 4 | 22/01/20 | Families of venomous snakes, clinical effects of venoms, general management as first aid, early manifestations, complications and snake bite injuries |
| 5 | 23/01/20 | Plants poisoning. Mushrooms, Mycotoxins |
| Tutorial-4 | 25/01/20 | |
| 6 | 29/01/20 | Plants poisoning. Mushrooms, Mycotoxins |
| 7 | 30/01/20 | Food poisonings |
| Tutorial-5 | 01/02/20 | |
| 8 | 05/02/20 | Envenomations – Arthropod bites and stings |
| Activity-1 | 06/02/20 | Class test/Group discussion on Snake Bite |
| 8 | 12/02/20 | Substance abuse: Signs and symptoms of substance abuse and treatment of dependence- CNS stimulants :Amphetamine |
| 9 | 13/02/20 | Opioids |
| Tutorial-6 | 15/02/20 | |
| 10 | 19/02/20 | CNS depressants |
| 11 | 20/02/20 | CNS depressants |
| Tutorial-7 | 22/02/20 | |
| 12 | 26/02/20 | Hallucinogens: LSD |
| 13 | 27/02/20 | Cannabis group |
| Tutorial-8 | 29/02/20 | |
| 14 | 04/03/20 | Cannabis group |
| 15 | 05/03/20 | Tobacco |
| Tutorial-9 | 07/03/20 | |
| Activity-2 | 11/03/20 | Case discussion on substance abuse |
| Activity-3 | 12/03/20 | Group discussion on food poisoning |
| Activity-4 | 14/03/20 | Revision |

References:

1. Matthew J Ellenhorn. ELLENHORNS MEDICAL TOXICOLOGY – DIAGNOSIS AND TREATMENT OF POISONING. Second edition. Williams and Wilkins publication, London
2. V V Pillay. HANDBOOK OF FORENSIC MEDICINE AND TOXICOLOGY. Thirteenth edition 2003 Paras Publication, Hyderabad

| | |
|--------------------------------|---|
| Name of the Subject | Pharmacotherapeutics I and II (Theory) |
| Name of the Faculty | Ms. Roopa B S |
| Designation, Department | Lecturer, Department of Pharmacy Practice |
| Mobile Number | 9047155003 |
| e-Mail i.d. | roopabs@jssuni.edu.in |

LECTURE PLAN - Theory

| Sessional | Number of Hours of Didactic Lecture | No. of Hours of other Pedagogy | Total Number of Lecture Hours | Tutorial Classes |
|------------------------------|-------------------------------------|--------------------------------|-------------------------------|------------------|
| | | | | |
| I | 23 | 03 | 23 | 09 |
| II | 21 | 02 | 21 | 10 |
| III | 31 | 02 | 31 | 09 |
| Total Number of Hours | 75 | 07 | 75 | 28 |

I SESSIONAL: 23 + 03 Activities Lectures

| Lecture No. | Date | Lecture Details |
|------------------------------|------------|---|
| Cardiovascular system | | 13 Hours |
| Activity-1 | 06.07.2019 | Orientation about the subject |
| 1 | 06.07.2019 | Hypertension |
| 2 | 08.07.2019 | Hypertension |
| 3 | 08.07.2019 | Hypertension |
| Tutorial-1 | 12.07.2019 | - |
| 4 | 13.07.2019 | Congestive cardiac failure |
| 5 | 15.07.2019 | Congestive cardiac failure Contd. |
| 6 | 15.07.2019 | Angina Pectoris |
| Tutorial-2 | 19.07.2019 | - |
| 7 | 20.07.2019 | Angina Pectoris Contd. |
| 8 | 22.07.2019 | Myocardial infarction |
| 9 | 22.07.2019 | Myocardial infarction Contd. |
| Activity-2 | 22.07.2019 | - |
| Tutorial-3 | 26.07.2019 | - |
| 10 | 29.07.2019 | Hyperlipidemia |
| 11 | 29.07.2019 | Hyperlipidemia Contd. |
| Tutorial-4 | 02.08.2019 | - |
| 12 | 05.08.2019 | Arrhythmias. |
| 13 | 05.08.2019 | Electrophysiology of heart |
| Tutorial-5 | 09.08.2019 | - |
| Tutorial-6 | 16.08.2019 | - |
| 14 | 03.08.2019 | Arrhythmias. |
| 15 | 03.08.2019 | Arrhythmias Contd. |
| Tutorial-7 | 03.08.2019 | - |
| Respiratory system | | 06 Hours |
| 16 | 19.08.2019 | Introduction to Pulmonary function test |

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|-------------------------|-------------------|--|
| 17 | 19.08.2019 | Asthma |
| 18 | 24.08.2019 | Asthma Contd. |
| 19 | 26.08.2019 | Chronic obstructive airways disease |
| Activity-3 | 26.08.2019 | - |
| 20 | 26.08.2019 | Chronic obstructive airways disease Contd. |
| Tutorial-8 | 30.08.2019 | - |
| 21 | 31.08.2019 | Drug induced pulmonary diseases Contd. |
| Tutorial-9 | 06.09.2019 | - |
| Endocrine system | | 08 Hours |
| 22 | 09.09.2019 | Diabetes |
| 23 | 09.09.2019 | Diabetes Contd. |
| 24 | 11.09.2019 | I sessional Exam |

II SESSIONAL: 21 Lectures + 02 Activities

| Lecture No. | Date | Lecture Details |
|--|------------|--|
| Tutorial-1 | 20.09.2019 | - |
| 1 | 23.09.2019 | Diabetes Contd. |
| 2 | 23.09.2019 | Thyroid diseases |
| Tutorial-2 | 27.09.2019 | - |
| 3 | 30.09.2019 | Thyroid diseases Contd. |
| 4 | 30.09.2019 | Oral contraceptives |
| Tutorial-3 | 04.10.2019 | - |
| Tutorial-4 | 11.10.2019 | - |
| 5 | 12.10.2019 | Hormone replacement therapy |
| 6 | 14.10.2019 | Osteoporosis |
| General prescribing guidelines | | 04 Hours |
| 7 | 14.10.2019 | Paediatric patients |
| Tutorial-5 | 18.10.2019 | - |
| 8 | 19.10.2019 | Geriatric patients |
| 9 | 21.10.2019 | Pregnancy and breast feeding |
| Ophthalmology | | 03 Hours |
| 10 | 21.10.2019 | Glaucoma, |
| Tutorial-6 | 25.10.2019 | - |
| 11 | 01.11.2019 | Conjunctivitis- viral and bacterial |
| Tutorial-7 | 02.11.2019 | - |
| Introduction to rational drug use | | 02 Hours |
| 12 | 04.11.2019 | Definition, Role of pharmacist Essential drug concept Rational drug formulations |
| 13 | 04.11.2019 | Guidelines for the rational use of antibiotics and surgical Prophylaxis, |
| Infectious disease | | 18 Hours |
| 14 | 04.11.2019 | Tuberculosis |
| Activity-4 | 04.11.2019 | - |
| Tutorial-8 | 08.11.2019 | - |
| 15 | 09.11.2019 | Tuberculosis Contd. |
| 16 | 11.11.2019 | Meningitis |
| 17 | 11.11.2019 | Respiratory tract infections |

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|-------------|-------------------|------------------------------|
| Tutorial-9 | 15.11.2019 | - |
| 18 | 18.11.2019 | Respiratory tract infections |
| 19 | 18.11.2019 | Gastroenteritis |
| Tutorial-10 | 22.11.2019 | - |
| 20 | 25.11.2019 | Endocarditis |
| Activity-5 | 25.11.2019 | - |
| 21 | 25.11.2019 | Septicaemia |
| 22 | 26.11.2019 | II Sessional Exam |

III SESSIONAL: 31 Lectures + 02 Activities

| Lecture No. | Date | Lecture Details |
|----------------------------------|-------------|--|
| 1 | 02.12.2019 | Urinary tract infections |
| 2 | 02.12.2019. | Malaria |
| Tutorial-1 | 6.12.2019 | - |
| 3 | 7.12.2019 | Gonorrhoea |
| Tutorial-2 | 13.12.2019 | - |
| 4 | 14.12.2019 | Syphilis |
| 5 | 16.12.2019 | Viral infections |
| 6 | 16.12.2019 | Viral infections |
| Tutorial-3 | 20.12.2019 | HIV & Opportunistic infections |
| 7 | 21.12.2019 | HIV & Opportunistic infections |
| Tutorial-4 | 17.01.2020 | - |
| Musculoskeletal disorders | | 06 Hours |
| 8 | 18.01.2020 | Rheumatoid arthritis |
| 9 | 20.01.2020 | Rheumatoid arthritis |
| 10 | 20.01.2020 | Osteoarthritis |
| Tutorial-5 | 24.01.2020 | - |
| 11 | 25.01.2020 | Osteoarthritis |
| 12 | 27.01.2020 | Gout |
| 13 | 27.01.2020 | Spondylitis |
| Tutorial-6 | 31.01.2020 | - |
| 14 | 01.02.2020 | Systemic lupus erythematosus |
| Renal system | | 05 Hours |
| 15 | 03.02.2020 | Acute Renal Failure |
| 16 | 03.02.2020 | Acute Renal Failure |
| 17 | 10.02.2020 | Chronic Renal Failure |
| Activity-6 | 10.02.2020 | - |
| 18 | 10.02.2020 | Chronic Renal Failure |
| Tutorial-7 | 14.02.2020 | - |
| 19 | 15.02.2020 | Renal Dialysis |
| 20 | 17.02.2020 | Drug induced renal disorders |
| Oncology | | 06 Hours |
| 21 | 17.02.2020 | Basic principles of Cancer therapy |
| 22 | 22.02.2020 | Basic principles of Cancer therapy |
| 23 | 24.02.2020 | General introduction to cancer chemotherapeutic agents |
| 24 | 24.02.2020 | Chemotherapy of breast cancer |

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|--------------------|-------------------|---|
| Activity-7 | 24.02.2020 | - |
| Tutorial-8 | 28.02.2020 | - |
| 25 | 29.02.2020 | Leukaemia |
| 26 | 02.03.2020 | - |
| 27 | 02.03.2020 | Management of chemotherapy nausea and emesis. |
| Tutorial-9 | 06.03.2020 | - |
| Dermatology | | 04 Hours |
| 28 | 07.03.2020 | Psoriasis |
| 29 | 09.03.2020 | Scabies |
| 30 | 09.03.2020 | Eczema |
| 31 | 13.03.2020 | Impetigo |
| 32 | 16.03.2020 | III sessional Exam |

Reference Books

1. Pathologic basis of disease - Robins SL, W.B.Saunders publication.
2. Pathology and therapeutics for Pharmacists: A Basis for Clinical Pharmacy Practice -
3. Green and Harris, Chapman and Hall publication.
4. Clinical Pharmacy and Therapeutics - Eric T. Herfindal, Williams and Wilkins
5. Publication.
6. Applied Therapeutics: The clinical Use of Drugs. Lloyd Young and Koda-Kimble MA.
7. Avery's Drug Treatment, 4th Edn, 1997, Adis International Limited.
8. Relevant review articles from recent medical and pharmaceutical literature.

IV Pharm. D. & I year Pharm. D. (PB) (Academic Year 2019-2020)

| Day | 9-10 am | 10-11 am | 11-12 am | 12 -1 pm | 1-2 pm | 2-3 pm | 3-4 pm | 4-5 pm |
|-----------|-------------------------|--|-----------------------|-----------------|--|------------------------|----------------|-----------------------|
| Monday | PT- III (Tu) (DM) | Batch II- CP (P)(SP) Batch I-HP (P)(VHN) | | | L U N C H B R E A K | PT I & II (T) (BSR) | CP (T) (SP) | PT I & II (T)(BSR) |
| Tuesday | HP (Tu) (VHN) | Batch I-CP (P)(SP) Batch II-HP (P)(VHN) | | | | BSRM(T) (VHN) | CP (T) (SP) | PT-III (T) (DM) |
| Wednesday | B&P (Tu) (KPA) | PB-PT I & II(P)(BSR) | | | | PT-III (T)(DM) | CT(T)(SS) | PT-III (T)(DM) |
| Thursday | CP (Tu) (SP) | Batch II-BPPK (P)(KPA) Batch I-PT-III (P)(DM) | | | | HP (T)(VHN) | CT(T)(SS) | BPPK (T)(KPA) |
| Friday | PT I & II (Tu) (BSR) | Batch I-BPPK (P)(KPA) Batch II-PT-III (P)(DM) | | | | CP (T)(SP) | HP (T)(VHN) | BPPK (T) (KPA) |
| Saturday | B &RM (Tu) (CJ) | BPPK (T)(KPA) | PT I & II (T)(BSR) | BSRM(T) (CJ) | CT (Tu) (SS) | <i>Library/Sports</i> | | |

Subject Incharges:

Theory (T), Practical (P), Tutorial (Tu)

Dr. S. Ponnusankar (SP) (Professor) : Clinical Pharmacy (CP)
 Dr. K.P. Arun (KPA)(Asst. Professor) : Biopharmaceutics&Pharmacokinetics (BPPK)
 Mr. C. Jeyakumar & Mr. Vishwas H N (CJ & VHN): Biostatistics&ResearchMethodology (B &RM)
 Ms. M Deepalakshmi (DM) (Lecturer) : Pharmacotherapeutics III (PT-III)
 Ms. B.S. Roopa (BSR) (Lecturer) : Pharmacotherapeutics I & II (PT I&II)
 Dr. Swathi Swaroopa. B (SS) (Lecturer) : Clinical Toxicology (CT)
 Mr. Vishwas H N (VHN) (Lecturer) : Hospital Pharmacy (HP)

Class-in-Charge: Dr Swathi Swaroopa. B, Lecturer, Dept. Of Pharmacy practice