



P.K.M Educational Trust (R)

R.R. COLLEGE OF PHARMACY

Chikkabanavara, Bangalore-560090

Affiliated to Rajiv Gandhi University of Health Sciences Bangalore, and recognised by PCI, AICTE and Govt of Karnataka

Internal Quality Assurance Cell

Course out Comes and Programme outcomes

Pharm D I Year

Name of Course: Pharmaceutics

Academic year: 2019-20

Program: Pharm D I Year

Faculty in Charge: Ms Kavita yadav

Section: Theory

At the end of the course the student will able to

Sl. No	Course Outcome (CO)	Cognitive level (CL) R/U/AP/An/E/ C	Knowledge Categories (KC) F/C/P/MC	Programme outcomes (PO) PO1/PO2,PO3.... PO11
CO1	Understand the history of profession of pharmacy as career, education, industries, types of pharmacopoeia, the basics of different dosage forms.	R & U	F	PO1,PO4
CO2	Explain the Parts, handling the prescriptions their parts.Factors affecting posology, calculate the dosage based on age, body weight and surface area.	U & Ap	F & C	PO1,PO4
CO3	Calculate and analyze pharmaceutical calculation involving percentage solution, alligation, proof spirit and isotonic solution based on freezing point & molecular weight,	U & Ap	C & P	PO1,PO4
CO4	Define and classify powders and their preparations.	R & Ap	C&P	PO1,PO4
CO5	Explain liquid dosage form, classify pharmaceutical incompatibility with example.	U & Ap	C & P	PO1,PO4
CO6	Define & classify monophasic and biphasic liquid dosage forms,suppositories, types, method of preparation, evaluation parameter, stability problems	U & Ap	C & P	PO1,PO4



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Internal Quality Assurance Cell

Course out Comes and Programme outcomes

Name of Course: Pharmaceutics

Academic year: 2019-20

Program: Pharm D I Year

Faculty in Charge: Ms Kavita yadav

Section: Practical

At the end of the course the student will able to

Sl. No	Course Outcome (CO)	Cognitive level (CL) R/U/AP/An/E/C	Knowledge Categories (KC) F/C/P/MC	Programme outcomes (PO) PO1/PO2,PO3....PO11
CO1	Prepare Syrups and Elixirs.	Ap	p	PO1,PO4
CO2	Prepare Linctus and Solutions.	Ap	P	PO1,PO4
CO3	Prepare Suspensions and Emulsions.	Ap	p	PO1,PO4
CO4	Prepare Powders and Granules.	Ap	p	PO1,PO4
CO5	Prepare Suppositories.	Ap	p	PO1,PO4
CO6	Prepare Semisolids.	Ap	p	PO1,PO4



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Internal Quality Assurance Cell

Course out Comes and Programme outcomes

Name of Course: Medicinal Biochemistry

Academic year: 2019-20

Program: Pharm D I Year

Faculty in Charge: Ms Shilpashree AT

Section: Theory

At the end of the course the student will able to

Sl. No	Course Outcome (CO)	Cognitive level (CL) R/U/AP/An/E/C	Knowledge Categories (KC) F/C/P/MC	Programme outcomes (PO) PO1/PO2,PO3.... PO11
CO1	Explain the cell , transport Process , Energy rich compounds, classification of Enzymes and their kinetics, inhibition, regulation and applications.	U	C	PO1
CO2	Explain the biological oxidation process, Bioenergetics, classification, chemical nature, biological role of Carbohydrates, lipids, Nucleic acid, amino acid and Proteins.	U	C	PO1
CO3	Describe the metabolism of Carbohydrates in physiological and pathological conditions.	U	C	PO1, PO3
CO4	Describe the metabolism of lipids in physiological and pathological conditions.	U	C	PO1, PO3
CO5	Describe the metabolism of proteins, amino acids in physiological and pathological conditions.	U	C	PO1, PO3
CO6	Describe the genetic organization of mammalian genome and functions of DNA in the synthesis of RNA's and proteins and Describe the biochemical principles of organ function tests of kidney, liver,Endocrine gland and determination of bio molecules in the body fluids.	U	C	PO1, PO3



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Course out Comes and Programme outcomes

Name of Course: Medicinal Biochemistry

Academic year: 2019-20

Program: Pharm D I Year

Faculty in Charge: Ms Shilpashree AT

Section: Practical

At the end of the course the student will able to

Sl. No	Course Outcome (CO)	Cognitive level (CL) R/U/AP/An/E/ C	Knowledge Categories (KC) F/C/P/MC	Programme outcomes (PO) PO1/PO2,PO3.... PO11
CO1	Analyse the Normal and Abnormal constituents of Urine - Qualitatively	U,An,Ap	P	PO1,
CO2	Determine the Urine Creatinine, sugar, chloride, calcium.	U,An,Ap	P	PO1, PO4
CO3	Determine the serum cholesterol, urea, proteins, bilirubin, creatinine, SGPT, SGOT, inorganic ions.	U,An,Ap	P	PO1, PO4
CO4	Prepare the buffer solution and measure the pH; Perform the enzymatic hydrolysis of starch;	U,An,Ap	P	PO1, PO4
CO5	Determine of Salivary amylase activity, understand the effect of Temperature & substrate concentration on Salivary amylase activity.	U,An,Ap	P	PO1, PO4
CO6	Perform lipid profile test	U,An,Ap	P	PO1, PO4



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Internal Quality Assurance Cell

Course out Comes and Programme outcomes

Name of Course: Pharmaceutical Organic chemistry

Academic year: 2019-20

Program: Pharm D I Year

Faculty in Charge: Mr. Nagaraj N Durgadasheemi

Section: Theory

At the end of the course the student will able to

Sl. No	Course Outcome (CO)	Cognitive level (CL) R/U/AP/An/E /C	Knowledge Categories (KC) F/C/P/MC	Programme outcomes (PO) PO1/PO2,PO3....PO11
CO1	Explain structures & Physical Properties, Understand Nomenclature of Organic compounds.	U	C	PO1
CO2	Explain Free radicals and Bayer's strain theory	U	C	PO1
CO3	Understand Nucleophilic substitution reactions and Dehydrohalogenation reaction	U	C	PO1
CO4	Understand electrophilic addition reaction	U	C	PO1
CO5	Understand Nucleophilic addition reactions.	U	C	PO1
CO6	Understand Medicinal compounds & their uses	U	C	PO1



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Internal Quality Assurance Cell

Course out Comes and Programme outcomes

Name of Course: Pharmaceutical Organic chemistry

Academic year: 2019-20

Program: Pharm D I Year

Faculty in Charge: Mr. Nagaraj N Durgadasheemi

Section: Practical

At the end of the course the student will able to

Sl. No	Course Outcome (CO)	Cognitive level (CL) R/U/AP/An/E /C	Knowledge Categories (KC) F/C/P/MC	Programme outcomes (PO) PO1/PO2,PO3....PO11
CO1	Understand preparation of different organic compounds.	U, AP, An,E	C, P	PO1, PO2, PO3
CO2	Identification of organic compounds by systematic qualitative analysis	U, AP, An,E	C, P	PO1, PO2, PO3
CO3	Identification of Nitro benzene (nitro compound) by systematic qualitative analysis	U, AP, An,E	C, P	PO1, PO2, PO3
CO4	Identification of Chloro benzene (Hydrocarbon compound) by systematic qualitative analysis	U, AP, An,E	C, P	PO1, PO2, PO3
CO5	Identification of (ketone compound) by systematic qualitative analysis	U, AP, An,E	C, P	PO1, PO2, PO3
CO6	Identification of Benzaldehyde (Aldehyde compound) by systematic qualitative analysis	U, AP, An,E	C, P	PO1, PO2, PO3



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Course out Comes and Programme outcomes

Name of Course: Pharmaceutical Inorganic chemistry

Academic year: 2019-20

Program: Pharm D I Year

Faculty in Charge: Mr.Hemanth S

Section: Theory

At the end of the course the student will able to

Sl. No	Course Outcome (CO)	Cognitive level (CL) R/U/AP/An/E/C	Knowledge Categories (KC) F/C/P/MC	Programme outcomes (PO) PO1/PO2,PO3 ...PO11
CO1	To understand different sources of impurities & to develop ideas with the fundamentals of analytical chemistry.	U	C	PO1
CO2	Explain need and basic principle and applications of different titrations.	U	C	PO1
CO3	Describe acquainted with the principles of limit test and important inorganic compounds of antidotes, respiratory stimulants & medicinal gases.	U	C	PO1, PO3
CO4	Understand the medicinal and pharmaceutical importance of inorganic compounds of acidifiers and antacids.	U	C	PO1, PO3
CO5	Describe with the difference classes of inorganic pharmaceutical compounds and their analysis.	U	C	PO1, PO3
CO6	To highlight domain of radiopharmaceuticals used in diagnostics and therapy & to describe typical therapeutic classes of inorganic compounds.	An	C	PO1, PO3



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Course out Comes and Programme outcomes

Name of Course: Pharmaceutical Inorganic chemistry

Academic year: 2019-20

Program: Pharm D I Year

Faculty in Charge: Mr.Hemanth S

Section: Practical

At the end of the course the student will able to

Sl. No	Course Outcome (CO)	Cognitive level (CL) R/U/AP/An/E/C	Knowledge Categories (KC) F/C/P/MC	Programme outcomes (PO) PO1/PO2,PO3.... PO11
CO1	Analyse the fundamentals of volumetric analytical skills analytical techniques in lab	U,An,Ap	P	PO1,
CO2	Determine various impurities in inorganic drugs and pharmaceuticals.	U,An,Ap	P	PO1, PO4
CO3	Identify and determine tests for the purity and preparation of some inorganic compounds	U,An,Ap	P	PO1, PO4
CO4	Analyse the knowledge about assay of pharmaceutical substances	U,An,Ap	P	PO1, PO4



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Course out Comes and Programme outcomes

Pharm D II Year

Name of Course: Pathophysiology

Academic year: 2019-20

Program: Pharm D II Year

Faculty in Charge: Dr.Shyam Nandan

Section: Theory

At the end of the course the student will able to

Sl. No	Course Outcome (CO)	Cognitive level (CL) R/U/AP/An/E /C	Knowledge Categories (KC) F/C/P/MC	Programme outcomes (PO) PO1/PO2,PO3....PO11
CO1	Understand the basic principles of cell injury ,cellular adaptations& inflammation	U	F	PO1,PO6
CO2	Understand the pathophysiology of diseases of cardio vascular, respiratory& renal system	U	C	PO1,PO6
CO3	Explain and understand immunity & its disease	U	C	PO1,PO6
CO4	Understand the pathophysiology of endocrine, nervous& gastro intestinal system disease	U	F/C	PO1,PO6
CO5	Explain the pathophysiology of disease of bones & joints	R	C/F	PO1,PO6
CO6	Understand the principle of cancer Define and explore infectious disease sexually transmitted disease	U R An	C	PO1,PO6



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Internal Quality Assurance Cell

Course out Comes and Programme outcomes

Name of Course: Pharmaceutical Microbiology

Academic year: 2019-20

Program: Pharm D II Year

Faculty in Charge: Mr. Pushkal Roy

Section: Theory

At the end of the course the student will able to

Sl. No	Course Outcome (CO)	Cognitive level (CL) R/U/AP/An/E /C	Knowledge Categories (KC) F/C/P/MC	Programme outcomes (PO) PO1/PO2,PO3....PO11
CO1	Understand methods of identification, cultivation and preservation of microorganism	U	C	PO1,PO6 PO7
CO2	Understand the importance and implementation of sterilization in pharmaceutical process and industry	R U	C	PO1,PO6 PO7
CO3	Determine the sterility testing of pharmaceuticals	Ap U	P	PO1,PO6
CO4	Carry out microbial standardization of pharmaceuticals	An U	C P	PO1 PO7
CO5	List out the disease causing microorganisms by performing diagnostic tests	An U	C	PO1,PO6 PO7
CO6	Understand the behavioral characteristics of microorganism and explain antigen and antibody	U	C p	PO1, PO2 ,PO6 PO7



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Internal Quality Assurance Cell

Course out Comes and Programme outcomes

Name of Course: Pharmaceutical Microbiology

Academic year: 2019-20

Program: Pharm D II Year

Faculty in Charge: Mr. Pushkal Roy

Section: Practical

At the end of the course the student will able to

Sl. No	Course Outcome (CO)	Cognitive level (CL) R/U/AP/An/E /C	Knowledge Categories (KC) F/C/P/MC	Programme outcomes (PO) PO1/PO2,PO3....PO11
CO1	List out the apparatus used in microbiology	U	C	PO1,PO6 PO7
CO2	Carry out staining techniques	R U	C	PO1,PO6 PO7
CO3	Determine the sterility testing of media and glass wares used	An U	P	PO1,PO6
CO4	Carry out microbial counting	An U	C P	PO1 PO7
CO5	List out the biochemical reactions	An U	C	PO1,PO6 PO7
CO6	Understand pure culture	U	C	PO1,PO6 PO7



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Internal Quality Assurance Cell

Course out Comes and Programme outcomes

Name of Course: Pharmacognosy & Phytopharmaceuticals

Academic year: 2019-20

Program: Pharm D II Year

Faculty in Charge: Dr B. Gopala Krishna

Section: Theory

At the end of the course the student will able to

Sl. NO	Course Outcome (CO)	Cognitive level (CL)R/U/AP/An/E/C	Knowledge Categories (KC) F/C/P/MC	Programme outcomes (PO)PO1/PO2,PO3.... PO11
CO1	Explain Pharmacognosy and its history,scope. Sources of crude drugs and categorize the organized and unorganized drugs	U	F	PO1,PO2,PO6
CO2	Classify the crude drugs and analyze Quality control of drugs of Natural origin	U,AN	C,P	PO1,PO2,PO3
CO3	Explain techniques in cultivation and production, storage of crude drugs.	U,AP	C	PO1,PO2,PO3, PO4, PO11
CO4	Summarize the Plant Cell Constituents and morphological, microscopical characters of crude drugs.	U	C	PO1,PO2,PO4
CO5	Explain natural pesticides& plant fibres.	U	F	PO1,PO2,PO6
CO6	Explain biological source, chemical nature and uses of plant products of primary metabolites of Carbohydrates, Proteins, Lipids.	U	F	PO1,PO9



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Internal Quality Assurance Cell

Course out Comes and Programme outcomes

Name of Course: Pharmacognosy & Phytopharmaceuticals

Academic year: 2019-20

Program: Pharm D II Year

Faculty in Charge: Dr B. Gopala Krishna

Section: Practical

At the end of the course the student will able to

SL. NO	Course Outcome (CO)	Cognitive level (CL) R/U/AP/An/E/C	Knowledge Categories (KC) F/C/P/MC	Programme outcomes (PO) PO1/PO2,PO3.... PO11
CO1	Clarify Cell wall constituents and Cell inclusions.	U	C,P	PO1,PO2,PO6
CO2	Categorize the crude drugs by macroscopical characters powder and microscopic study	U,AN	C,P	PO1,PO2,PO4,PO6,PO11
CO3	Categorize the crude drugs by microscopical characters	U,AN	C,P	PO1,PO2,PO4,PO6,PO11
CO4	Categorize the crude drugs by powder microscopical characters	U,AN	C,P	PO1,PO2,PO4,PO6,PO11
CO5	Analyse of crude drugs by Chemical tests	U,AN	C,P	PO1,PO2,PO6
CO6	Analyse lipid drugs by acid value, saponification value, Ester value, Iodine value.	U,AN	C,P	PO1,PO2,PO4,PO6



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Internal Quality Assurance Cell

Course out Comes and Programme outcomes

Name of Course: Pharmacology I

Program: Pharm D II Year

Section: Theory

At the end of the course the student will able to

Academic year: 2019-20

Faculty in Charge: Ramya H

Sl. No	Course Outcome (CO)	Cognitive level (CL) R/U/AP/An/E/C	Knowledge Categories (KC) F/C/P/MC	Programme outcomes (PO) PO1/PO2,PO3.... PO11
CO1	Know basics of pharmacological history, scope & general principles and Define drug & illustrate on types of drug including their uses	R, U	F/MC	PO1, PO4 and PO7
CO2	Classify the various routes of administration with their advantages & disadvantages and Understand the process of new drug discovery & development of drug	R, U	C/F	PO1,PO4 and PO7
CO3	Understand the basics of pharmacokinetic & pharmacodynamics and Classify receptors & study the principles, site mechanism & factors modifying drug action	R, U	C/F	PO1,PO4 and PO4
CO4	Explain the mechanism of action, target receptors, adverse effects, drug interaction, contraindication & therapeutic uses of drug in ANS & CNS	R	C/F	PO1,PO3,PO4
CO5	Explain the mechanism of action, adverse effects, drug interaction, contraindication, therapeutic uses of drug in CVS	R	C	PO1,PO3,PO4
CO6	Explain the mechanism of action, target receptors, adverse effects, drug interaction, contraindication & therapeutic uses of drug in Respiratory tract, hormones, autotoxins	R	C	PO1,PO3,PO4,PO6,PO8



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Internal Quality Assurance Cell

Course out Comes and Programme outcomes

Name of Course: Pharmacology I

Academic year: 2019-20

Program: Pharm D II Year

Faculty in Charge: Ramya H

Section: Practical

At the end of the course the student will able to

CO	Course Outcome (CO)	Cognitive level (CL) R/U/AP/An /E/C	Knowledge Categories (KC) F/C/P/MC	Programme outcomes (PO) PO1/PO2, PO3....PO11
CO1	Apply the current knowledge of General pharmacology, Drugs acting on CNS.	R/AP	F/C	PO1, PO6 & PO9
CO2	Assess involvement of drugs used for the treatment of Cardiovascular system, Central nervous system.	U	C	PO3
CO3	Elucidate the pharmacology of drugs acting on Respiratory tract.	R/AP	F/C	PO1, PO6 & PO9
CO4	Explain the pharmacology of hormones and hormone antagonist.	R/AP	F/C	PO3, PO6, PO11.
CO5	Elaborate the concepts of autacoids and their antagonists.	R/AP	F/C	PO3, PO6, PO11.



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Internal Quality Assurance Cell

Course out Comes and Programme outcomes

Name of Course: community pharmacy

Academic year: 2019-20

Program: Pharm D II Year

Faculty in Charge: Dr. Beulah Milton

Section: Theory

At the end of the course the student will able to

Sl. No	Course Outcome (CO)	Cognitive level (CL) R/U/AP/An/E /C	Knowledge Categories (KC) F/C/P/MC	Programme outcomes (PO) PO1/PO2,PO3....PO11
CO1	Demonstrate knowledge of the business and professional practice management skills in community pharmacies	R/U/AP	F/C/P	PO1,PO5,
CO2	Understand the process of educating patients through counselling and provide health screening service to public	U/AP	C	PO1,PO2,PO5
CO3	Identify symptoms of minor ailments and provide appropriate medication	R	C/P	PO1,PO3,PO4
CO4	Exhibit professional ethics by promoting safe and appropriate medication use	AP	P	PO1,PO2,PO4,PO8
CO5	Understand importance of participating in prevention programmes of communicable diseases	U/AP	MC	PO1,PO5
CO6	Demonstrate the healthcare to various patients by counselling	AP	P	PO1,PO4,PO5



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Internal Quality Assurance Cell

Course out Comes and Programme outcomes

Name of Course: Pharmacothreapeutics-I

Academic year: 2019-20

Program: Pharm D II Year

Faculty in Charge: Mrs. Linta Kurian

Section: Theory

At the end of the course the student will able to

Sl. No	Course Outcome (CO)	Cognitive level (CL) R/U/AP/An/E/ C	Knowledge Categories (KC) F/C/P/ MC	Programme outcomes (PO) PO1/PO2,PO3PO11
CO1	Understand the pathophysiology of cardiovascular haematological disease states and its appropriate drug therapy.	U	C	PO1,PO3
CO2	Understand the pathophysiology of respiratory disease state and endocrine diseases its appropriate drug therapy.	U	C	PO1,PO3
CO3	Assess the therapeutic approach to management of disease and Explain the importance of preparation of individualized therapeutic plans based on diagnosis	An R	P C	PO1,PO2,PO3, PO4
CO4	Explore the diagnostic procedure for the selected disease	U	P	PO1,PO4
CO5	Know the normal laboratory values and interpret the alterations in these values.	R	F/C	PO1,PO4
CO6	Explanation of ophthalmology with disease and treatment and Discuss the side effects, ADR and ADE due to drug administration.	U/R/An	F/C	PO1,PO2, PO3, PO5,PO8



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Course out Comes and Programme outcomes

Name of Course: Pharmacothreapeutics-I

Academic year: 2019-20

Program: Pharm D II Year

Faculty in Charge: Mrs. Linta Kurian

Section: Practical

At the end of the course the student will able to

Sl. no	Course Outcome (CO)	Cognitive level (CL) R/U/AP/An/E/ C	Knowledge Categories (KC) F/C/P/MC	Programme outcomes (PO) PO1/PO2,PO3....PO 11
CO1	Participate in the ward rounds along with clinical pharmacist	Ap/An	MC	PO1,PO2,PO4,PO7
CO2	Collect the cases and document them	Ap	MC	PO1,PO4,PO7,PO8
CO3	Analyze the case and report drug interactions, side effects and ADRs found	U/An	MC	PO1,PO3,PO8
CO4	Participate in patient counseling	Ap	MC	PO1,PO2,PO4,PO8
CO5	Plan to answer drug information queries	Ap,An	MC	PO1,PO2
CO6	Execute patient medication history interview	Ap	MC	PO1,PO2,PO4,PO8



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Internal Quality Assurance Cell

Course out Comes and Programme outcomes

Pharm D III Year

Name of Course: Pharmacology-II

Academic year: 2019-20

Program: Pharm D III Year

Faculty in Charge: Mrs Aparna A S

Section: Theory

At the end of the course the student will able to

Sl. No	Course Outcome (CO)	Cognitive level (CL) R/U/AP/An/ E/C	Knowledge Categories (KC) F/C/P/MC	Programme outcomes (PO) PO1/PO2,PO3....PO11
CO1	Understand the anticoagulants classification.	R	P	PO1,PO7
CO2	Explaining pharmacology of the drug acting drug acting on Renal system	U/R	c	PO1,PO4
CO3	Demonstrate chemotherapy	U/R	C	PO1,PO7
CO4	Explain Immunopharmacology	U/R	C	PO1,PO7
CO5	Explaining principles of toxicology	U/R	C	PO1,PO5,PO8
CO6	Understand the structure and function of cell, genome structure & function, RNA processing	R/AP/U/R	C/P	PO1,PO3,PO1,PO7



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Course out Comes and Programme outcomes

Name of Course: Pharmacology-II

Academic year: 2019-20

Program: Pharm D III Year

Faculty in Charge: Mrs Aparna A S

Section: Practical

At the end of the course the student will able to

Sl. No	Course Outcome (CO)	Cognitive level (CL) R/U/AP/An/E/C	Knowledge Categories (KC) F/C/P/MC	Programme outcomes (PO) PO1/PO2,PO3 ...PO11
CO1	To evaluate bioassay of histamine and acetyl choline using isolated chick ileum by matching dose method and interpolation method and three point bioassay method, physiological salt solution used in experimental pharmacology	R/U/Ap/E	C/P	PO1,PO4,PO7
CO2	To determine principle, procedure involved and interpretation of given result for analgesic property of drug using analgesiometer	R/U/Ap/E	C/P	PO1,PO4,PO7
CO3	To determine principle, procedure involved and interpretation of given result for anti depressant activity of drugs using pole climbing operater	R/U/Ap/E	C/P	PO1,PO3
CO4	Study of laboratory animals and their handling	U/R/AP	C/P	PO1,PO2,PO4
CO5	To determine principle, procedure involved and interpretation of given result for muscle relaxant effect of drugs using rota rod & locomotor activity	R/U/Ap/E	C/P	PO1,PO4,PO7
CO6	To determine principle, procedure involved and interpretation of given result for hypnotics and sedative property using pentobarbitone induced sleeping time method, pole climbing operater	R/U/Ap/E	C/P	PO1,PO4,PO7



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Internal Quality Assurance Cell

Course out Comes and Programme outcomes

Name of Course: Pharmaceutical Analysis III

Academic year: 2019-20

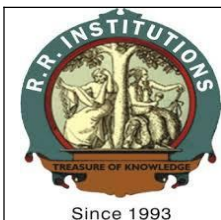
Program: Pharm D III Year

Faculty in Charge: Dr Gnana Ruba Priya

Section: Theory

At the end of the course the student will able to

Sl. No	Course Outcome (CO)	Cognitive level (CL)R/U/AP/An/E/C	Knowledge Categories(KC) F/C/P/MC	Programme outcomes (PO) PO1,PO2,PO3,PO11
CO1	Know the Quality assurance and quality control methods quality of equipment, validation of equipment and validation of analytical instruments and calibration.	U , A	F,C	Po1 , Po4 and Po9
CO2	Understand classification, separation techniques, choice of methods For various Chromatography techniques.	U	C ,P	Po1 And PO4
CO3	Demonstrate the theory, instrumentation,applications For HPLC, HPTLC, Gas chromatography, Electrophoresis, Gel filtration and affinity chromatography	U	C,P	Po1,Po3 And PO4
CO4	know the theoretical aspects, instrumentation, interpretation of data/spectra, analytical applications for electro analytical methods of titration	E A	P	Po1 and Po4
CO5	Understand the Theoretical aspects, instrumentation, elements of interpretation of data/spectra and application for Absorption Spectroscopy	U	C F	Po1 and P04
CO6	Understand theoretical aspects , Applications NMR & ESR ,Mass Spectroscopy,Polarimetry, X-RAY Diffraction and ThermalAnalysis	U	P	Po1 and Po4



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Internal Quality Assurance Cell

Course out Comes and Programme outcomes

Name of Course: Pharmaceutical Analysis III

Academic year: 2019-20

Program: Pharm D III Year

Faculty in Charge: Dr Gnana Ruba Priya

Section: Practical

At the end of the course the student will able to

Sl. No	Course Outcome (CO)	Cognitive level (CL) R/U/AP/An/E/C	Knowledge Categories (KC) F/C/P/MC	Programme outcomes (PO) PO1/PO2,PO3....PO11
CO1	Separation and identification of Amino Acids by Paper Chromatography, Sulpha drugs by TLC technique.	C,U, AP	P	Po1 , Po4
CO2	Recognize the principle, instrumentation and applications of analytical instruments	C,U, AP	P	Po1 , Po4
CO3	Study of quenching effect in fluorimetry, Effect of pH and solvent on the UV spectrum of given compound,	C,U	P,C	Po1 , Po4
CO4	Estimation of drugs by Fluorimetric technique, Colourimetric estimation of Supha drugs using BMR reagent, Simultaneous estimation of two drugs present in given formulation, Assay of Salicylic Acid by colourimetry.	C,U, AP	P	Po1 , Po4
CO5	Determination of dissociation constant of indicators using UV-Visible spectroscopy, Determination of Chlorides and Sulphates in Calcium gluconate by Nepheloturbidimetric Method. Determination of Na/K by Flame Photometry. Determination of pKa using pH meter.	C,U, AP	P	Po1 , Po4
CO6	Demonstration of HPLC, HPTLC, GC MS and DSC	U, AP	P, MC	Po1,P03 and Po4



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Internal Quality Assurance Cell

Course out Comes and Programme outcomes

Name of Course: Pharmacotherapeutics- II

Academic year: 2019-20

Program: Pharm D III Year

Faculty in Charge: Mr. Pruthvi Thakur

Section: Theory

At the end of the course the student will able to

Sl. No	Course Outcome (CO)	Cognitive level (CL)R/U/AP/An/E/C	Knowledge Categories (KC) F/C/P/MC	Programme outcomes (PO) PO1/PO2,PO3....PO11
CO1	Understand the pathophysiology of infectious disease states and its appropriate drug therapy.	U	C	PO1, PO2,PO3
CO2	Understand the pathophysiology of musculo skeletal disease state and its appropriate drug therapy.	U	C	PO1, PO2,PO3
CO3	Understand the pathophysiology of Renal and dermatological disease state and its appropriate drug therapy Discuss the side effects, ADR and ADE due to drug administration	U An	C, F	PO1, PO2, PO3 PO6
CO4	Understand the pathophysiology of Breast cancer and leukeamia Conduct the patient counseling for the selected disease state.	U AP	M, C P	PO1, PO2,PO3
CO5	Assess the therapeutic approach to management of disease. Know the normal laboratory values and interpret the alterations in these values	An R	P F/C	PO1,PO2,PO3 PO4
CO6	Explain the importance of preparation of individualized therapeutic plans based on diagnosis and diagnostic procedure for the selected disease.	R U	C P	PO1,PO2,PO3 PO4



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Course out Comes and Programme outcomes

Name of Course: Pharmacotherapeutics- II

Academic year: 2019-20

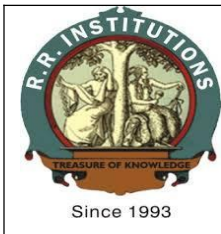
Program: Pharm D III Year

Faculty in Charge: Mr. Pruthvi Thakur

Section: Practical

At the end of the course the student will able to

Sl. No	Course Outcome (CO)	Cognitive level (CL) R/U/AP/An/E/ C	Knowledge Categories (KC) F/C/P/MC	Programme outcomes (PO) PO1/PO2,PO3...PO 11
CO1	Understand the pathophysiology of disease states and its appropriate drug therapy.	U	C	PO1, PO2,PO3
CO2	Assess the therapeutic approach to management of disease.	U	C	PO1, PO2,PO3
CO3	Conduct the patient counseling for the selected disease state	U	C	PO1, PO2,PO6
CO4	Assess the follow up progress and changes made in drug therapy in allotted patients	U	C	PO1, PO2,PO3
CO5	Conduct the case presentation of different disease states	An	P	PO1,PO2,PO3



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Internal Quality Assurance Cell

Course out Comes and Programme outcomes

Name of Course: Pharmaceutical. Jurisprudence

Academic year: 2019-20

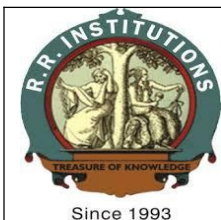
Program: Pharm D III Year

Faculty in Charge: Mr. Pushkal Roy

Section: Theory

At the end of the course the student will able to

Sl. No	Course Outcome (CO)	Cognitive level (CL) R/U/AP/An/ E/C	Knowledge Categories (KC) F/C/P/MC	Programme outcomes (PO) PO1/PO2,PO3.... PO11
CO1	Pharmaceutical Legislation – Principle and Significance of professional ethics. Critical study of the code of Pharmaceutical ethics drafted by PCI.	U, AP	C	PO1, PO2, PO4
CO2	Drugs and Cosmetics Act, 1940 and its rules 1945.	U, AP	C &P	PO1, PO2, PO4
CO3	Pharmacy Act –1948 , Medicinal and Toilet Preparation Act –1955.	U, AP	C&P	PO1, PO2, PO4
CO4	Narcotic Drugs and Psychotropic substances Act-1985 Study of Drugs and magic remedies Act and its rules.	U, AP	C&P	PO1, PO2, PO4
CO5	Study of essential Commodities Act Relevant to drugs price control Order & Drug Price control Order & National Drug Policy	U, AP	C&P	PO1, PO2, PO4
CO6	Prevention of Cruelty to animals Act-1960 & Patents & design Act-1970 and Brief study of prescription and Non-prescription Products	U, AP	C&P	PO1, PO2, PO4



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Internal Quality Assurance Cell

Course out Comes and Programme outcomes

Name of Course: Medicinal Chemistry

Academic year: 2019-20

Program: Pharm D III Year

Faculty in Charge: Mrs Poornima N.B

Section: Theory

At the end of the course the student will able to

Sl. No.	Course Outcome (CO)	Cognitive level (CL)R/U/AP/An/E/C	Knowledge Categories (KC)F/C/P/MC	Programme outcomes (PO) PO1/PO2,PO3....PO11
CO1	Understand the Modern concept of rational drug design.QSAR, prodrug,combinatorial, chemistry,computer aided drug design and concept of antisense molecules. mechanism of action,synthesis, chemical nomenclature, brand names of important marketed products and their side effects.	U	C	PO1 &PO3
CO2	Explain Anti-infective agents,Antifungal agents, Urinary tract anti-infectives , Antitubercular agents, Antiviral agents, Anti AIDS agents,Antiprotozoal agents , Anthelmintics , Antiscabies and Antipedicular agents	U	C &P	PO1 &PO3
CO3	Explain Sulphonamides and sulphones, Antimalarial, Antibiotics and Antineoplastic agents	U	C&P	PO1 &PO3
CO4	Explain Cardiovascular agents,Antihypertensive agents, Antiarrhythmic agents, Antianginal agents and vasodilators , Antihyperlipidemic agents , Coagulants and Anticoagulants and Endocrine	U	C&P	PO1 &PO3
CO5	Explain Hypoglycemic agents, Thyroid and Antithyroid agents Diuretics , Diagnostic agents. Steroidal Hormones and Adrenocorticoids	U	C&P	PO1 &PO3



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Internal Quality Assurance Cell

Course out Comes and Programme outcomes

Name of Course: Medicinal Chemistry

Academic year: 2019-20

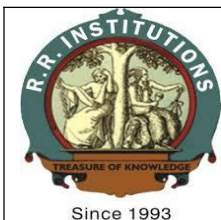
Program: Pharm D III Year

Faculty in Charge: Mrs Poornima N.B

Section: Practical

At the end of the course the student will able to

Sl. No	Course Outcome (CO)	Cognitive level (CL) R/U/AP/An /E/C	Knowledge Categories (KC) F/C/P/M	Programme outcomes (PO) PO1/PO2,PO3....P O11
CO1	Perform the synthesis of Dichloramine –T, 2,3 diphenylQuinoxaline, Benzimidazole,Fluorescein Eosin, 4-hydroxy,4-methyl coumarin and Chlorambutanol, Phenothiazine	U	C &P	PO1 &PO3
CO2	Estimate of Ascorbic acid, Metronidazole , Isoniazid, Chloroquine phosphate, Dapsone, Sulhadiazine	U	C &P	PO1 &PO3
CO3	Determine the Monograph analysis of Aspirin, Paracetamol, Caffiene, Isoniazid and Atropine sulphate	U	C&P	PO1 &PO3



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Internal Quality Assurance Cell

Course out Comes and Programme outcomes

Name of Course: Pharmaceutical Formulation

Academic year: 2019-20

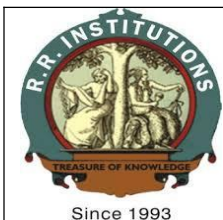
Program: Pharm D III Year

Faculty in Charge: Mr. Sunil V

Section: Theory

At the end of the course the student will able to

Sl. No	Course Outcome (CO)	Cognitive level (CL) R/U/AP/An/ E/C	Knowledge Categories (KC) F/C/P/MC	Programme outcomes (PO) PO1/PO2,PO3 ...PO11
CO1	Understand the concept and classification involved in formulation of various pharmaceutical dosage forms	U	C	PO1
CO2	Explain the formulation,evaluation of tablets. Tablet coating, quality control tests for coated tablet	U, AP	C &P	PO1, PO2, PO4
CO3	Explain the production and filling of hard gelatin & soft gelatin capsules, quality control tests for capsules.	U, AP	C&P	PO1, PO2, PO4
CO4	Explain the formulation and evaluation of suspensions, emulsions and solutions. And Stability of these preparations	U, AP	C&P	PO1, PO2, PO4
CO5	Understand the containers used for Parenterals andExplain formulation of large and small volume Parenterals	U, AP	C&P	PO1, PO2, PO4
CO6	Explain ophthalmic preparations, ointment, jellies and Summarize the concept of Controlled and Novel drug delivery systems viz. parenteral, trans dermal, buccal, rectal, nasal, implants, ocular	U, AP	C&P	PO1, PO2, PO4



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Internal Quality Assurance Cell

Course out Comes and Programme outcomes

Name of Course: Pharmaceutical Formulation

Academic year: 2019-20

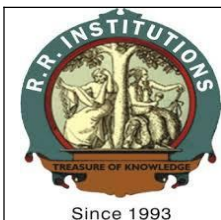
Program: Pharm D III Year

Faculty in Charge: Mr. Sunil V

Section: Practical

At the end of the course the student will able to

Co. No	Course Outcome (CO)	Cognitive level (CL) R/U/AP/ An/E/C	Knowledge Categories (KC) F/C/P/MC	Programme outcomes (PO) PO1/PO2,PO3...PO11
CO1	Explain the concept and classification involved in formulation of various pharmaceutical dosage form and formulation, evaluation of tablets. Tablet coating, quality control tests for coated tablet	U	C,P	PO1,PO4, PO11
CO2	Explain the production and filling of hard gelatin & soft gelatin capsules, quality control tests for capsules	U	C,P	PO1, PO4,PO11
CO3	Explain the formulation and evaluation of suspensions, emulsions and solutions. And Stability of these preparations	U	C,P	PO1,PO4PO11
CO4	Understand the containers used for Parenterals and Explain formulation of large and small volume Parenterals	U	C,P	PO1,PO4,PO11
CO5	Understand the ophthalmic preparations	U	C,P	PO1, PO4, PO11
CO6	Understand the concept of Controlled and Novel drug delivery systems.	U	C,P	PO1, PO4,PO11



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Internal Quality Assurance Cell

Course out Comes and Programme outcomes

Pharm D IV Year

Name of Course: Pharmacotherapeutics-III

Academic year: 2019-20

Program: Pharm D IV Year

Faculty in Charge: Mr. Kamal Pandey

Section: Theory

At the end of the course the student will able to

Sl. No	Course Outcome (CO)	Cognitive level (CL) R/U/AP/An/E/C	Knowledge Categories (KC) F/C/P/MC	Programme outcomes (PO) PO1/PO2,PO3....PO11
CO1	Explain the Etiopathogenesis of selected gastrointestinal, hematological, neurological and psychiatric diseases.	U	C	PO1
CO2	Discuss the principal of evidence based therapy and pain management	R/U	F	PO1
CO3	Identify the patient specific parameters relevant in initiating and monitoring drug therapies and adverse effects.	U/Ap	C	PO1,PO3
CO4	Discuss the therapeutic approach in the management of selected diseases and controversies in drug therapy	U	C /MC	PO1,PO2
CO5	Prepare individualized therapeutic plans based on diagnosis.	U/Ap	C	PO1,PO2,PO6
CO6	Recognize the role of pharmacist in essential and rational drug use	U	C	PO1,PO6, PO8



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Internal Quality Assurance Cell

Course out Comes and Programme outcomes

Name of Course: Pharmacotherapeutics-III

Academic year: 2019-20

Program: Pharm D IV Year

Faculty in Charge: Mr. Kamal Pandey

Section: Practical

At the end of the course the student will able to

Sl. No	Course Outcome (CO)	Cognitive level (CL) R/U/AP/An/E /C	Knowledge Categories (KC) F/C/P/MC	Programme outcomes (PO) PO1/PO2,PO3....PO11
CO1	Identify the drug interactions and rationalize the drug therapy	An/Ap	P	PO1,PO2,PO3
CO2	Discuss the therapeutic approach to management of selected disease	Ap	P	PO1,
CO3	Prepare individualized therapeutic plans based on diagnosis.	U/Ap	P/Mc	PO1,PO2
CO4	Conduct patient counseling	U	Mc	PO1,PO8,PO6
CO5	Identify the adverse reactions	U/Ap	P	PO1,PO3



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Internal Quality Assurance Cell

Course out Comes and Programme outcomes

Name of Course: Hospital Pharmacy

Academic year: 2019-20

Program: Pharm D IV Year

Faculty in Charge: Dr. Peter Kandel

Section: Theory

At the end of the course the student will able to

Sl. No	Course Outcome (CO)	Cognitive level (CL) R/U/AP/An/E /C	Knowledge Categories (KC) F/C/P/MC	Programme outcomes (PO) PO1/PO2,PO3....PO11
CO1	Classify the drug distribution methods	U	MC/C	P01, P09, P011
CO2	Exemplify the professional practice management skills in the hospital pharmacies	U	MC/C	P01, P02, P06, P09, P011
CO3	Produce unbiased drug information to the doctors	C	MC/F	P01, P02, P05, P06, P07, P08, P09, P011
CO4	Explain the manufacturing practices of formulations in hospital set up	U	MC/C	P01, P02, P04, P06, P09, P011
CO5	Describe the practice based research methods	R	MC/C	P01, P02, P09, P011
CO6	Determine the stores management and inventory control	Ap	MC/P	P01, P02, P05, P06, P09, P011



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Internal Quality Assurance Cell

Course out Comes and Programme outcomes

Name of Course: Hospital Pharmacy

Academic year: 2019-20

Program: Pharm D IV Year

Faculty in Charge: Dr. Peter Kandel

Section: Practical

At the end of the course the student will able to

Sl. No	Course Outcome (CO)	Cognitive level (CL) R/U/AP/An/E /C	Knowledge Categories (KC) F/C/P/MC	Programme outcomes (PO) PO1/PO2,PO3....PO11
CO1	Evaluate the assessment of drug interactions in the given prescription	E	MC	P01,P02,P03, P05, P06, P09, P011
CO2	Determine the manufacture of parenteral formulations and powders	Ap	MC/P	P01,P02, P03, P05,P06, P09, P011
CO3	Evaluate the drug information queries	E	MC	P01,P02,P03, P05, P06, P09, P011
CO4	Determine the inventory control	Ap	MC/P	P01,P02,P05, P06, P09, P011



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Internal Quality Assurance Cell

Course out Comes and Programme outcomes

Name of Course: Clinical Pharmacy

Academic year: 2019-20

Program: Pharm D IV Year

Faculty in Charge: Mr. Aruva Kumar

Section: Theory

At the end of the course the student will able to

Sl. No	Course Outcome (CO)	Cognitive level (CL) R/U/AP/An/E /C	Knowledge Categories (KC) F/C/P/MC	Programme outcomes (PO) PO1/PO2,PO3....PO11
CO1	Monitor the drug therapy of patient through medication chart review and clinical review	E	MC	P01, P02, P05, P06, P08 P09, P011
CO2	Implement medication history interview and counsel the patients	Ap	MC	P01, P02, P05,P06, P08, P09, P011
CO3	Recall and solve the drug related problems	R/Ap	MC	P01, P02, P03, P05, P06, P07, P08, P09, P011
CO4	Detect, assess and monitor the adverse drug reactions	E	MC/P	P01, P02, P03, P04, P06, P07, P08, P09, P011
CO5	Interpret the selected laboratory results as monitoring parameters in therapeutics of specific disease states	U/E	MC/P	P01, P02, P03, P05, P06, P07, P08, P09, P011
CO6	Select, analyze, interpret and formulate drug or medicine information	An/U/C	MC	P01, P02, P03, P05, P06, P09, P011



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Internal Quality Assurance Cell

Course out Comes and Programme outcomes

Name of Course: Clinical Pharmacy

Academic year: 2019-20

Program: Pharm D IV Year

Faculty in Charge: Mr. Aruva Kumar

Section: Practical

At the end of the course the student will able to

Sl. No	Course Outcome (CO)	Cognitive level (CL) R/U/AP/An/E /C	Knowledge Categories (KC) F/C/P/MC	Programme outcomes (PO) PO1/PO2,PO3....PO11
CO1	Plan to answer drug information questions	C	MC	P01, P02, P03, P05, P06, P07, P08, P09, P011
CO2	Execute patient medication counselling	Ap	MC	P01, P02, P03, P05,P06, P07,P08, P09, P011
CO3	Determine case studies related to laboratory investigation	Ap	MC/P	P01, P02, P05, P06, P07 P08, P09, P011
CO4	Execute patient medication history interview	Ap	MC	P01, P02, P03, P05, P06, P07, P08, P09, P011



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Internal Quality Assurance Cell

Course out Comes and Programme outcomes

Name of Course: Biostatistics & Research Methodology

Academic year: 2019-20

Program: Pharm D IV Year

Faculty in Charge: Mr Sunil V

Section: Theory

At the end of the course the student will able to

Sl. No	Course Outcome (CO)	Cognitive level (CL) R/U/AP/An/E/C	Knowledge Categories (KC) F/C/P/MC	Programme outcomes (PO) PO1/PO2,PO3....PO11
CO1	Concept of Research Methodology - understanding about Types of clinical study designs, Designing the methodology, sample size, Report writing and presentation of data.	U/R	F	PO2,PO3,PO4
CO2	Understanding Biostatistics –Data and central tendency distributions, measurement of data, data graphics, basic testing of hypothesis and Statistical methods in epidemiology.	U/R	F/P	PO3,PO4
CO3	Understanding Computer applications in pharmacy – Use of computers in Hospital pharmacy, community pharmacy and Drug Information Retrieval & Storage.	U/R	F/P	PO3,PO4,PO6



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Internal Quality Assurance Cell

Course out Comes and Programme outcomes

Name of Course: Biopharmaceutics & Pharmacokinetics

Academic year: 2019-20

Program: Pharm D IV Year

Faculty in Charge: Mr. Mahalingan K

Section: Theory

At the end of the course the student will able to

Sl. No	Course Outcome (CO)	Cognitive level (CL) R/U/AP/An /E/C	Knowledge Categories (KC) F/C/P/MC	Programme outcomes (PO) PO1/PO2,PO3....PO11
CO1	Introduction to Biopharmaceutics, Absorption of drugs from gastrointestinal tract.	U, AP	C	PO1, PO10, PO11
CO2	Drug Distribution and Elimination	U, AP	C &P	PO1, PO10, PO11
CO3	Pharmacokinetics: One compartment open model: a. Intravenous Injection (Bolus) b. Intravenous infusion. Multicompartment models: a. Two compartment open model. b. IV bolus, IV infusion and oral administration	U, AP	C&P	PO1, PO10, PO11
CO4	Multiple – Dosage Regimens & Nonlinear Pharmacokinetics	U, AP	C&P	PO1, PO10, PO11
CO5	Noncompartmental Pharmacokinetics,	U, AP	C&P	PO1, PO10, PO11
CO6	Bioavailability and Bioequivalence	U, AP	C&P	PO1, PO10, PO11



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Internal Quality Assurance Cell

Course out Comes and Programme outcomes

Name of Course: Biopharmaceutics & Pharmacokinetics

Academic year: 2019-20

Program: Pharm D IV Year

Faculty in Charge: Mr. Mahalingan K

Section: Practical

At the end of the course the student will able to

Sl. No	Course Outcome (CO)	Cognitive level (CL) R/U/AP/An/ E/C	Knowledge Categories (KC) F/C/P/MC	Programme outcomes (PO) PO1/PO2,PO3PO11
CO1	Improvement of dissolution characteristics of slightly soluble drugs by some methods	U, AP, An	C	PO1
CO2	Comparison of dissolution studies of two different marketed products of same drug and Influence of polymorphism on solubility and dissolution	U, AP, An	C &P	PO1,PO2, PO4
CO3	Protein binding studies of a highly protein bound drug and poorly protein bound drug	U, AP, An	C&P	PO1,PO2, PO4
CO4	Calculation of K_a , K_e , $t_{1/2}$, C_{max} , AUC, AUMC, MRT etc. from blood profile data	U, AP, An	C&P	PO1,PO2, PO4
CO5	Calculation of bioavailability from urinary excretion data for two drugs && Determination of renal clearance	U, AP, An	C&P	PO1,PO2, PO4
CO6	Effect on contact time on the plasma protein binding of drugs and Calculation of AUC	U, AP, An	C&P	PO1,PO2, PO4



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Chikkabanavara, Bangalore-560090

Affiliated to Rajiv Gandhi University of Health Sciences Bangalore, and recognised by PCI, AICTE and Govt of Karnataka

Internal Quality Assurance Cell

Course out Comes and Programme outcomes

Name of Course: Clinical toxicology

Academic year: 2019-20

Program: Pharm D IV Year

Faculty in Charge: Ms. Manju M S

Section: Theory

At the end of the course the student will able to

Sl. No	Course Outcome (CO)	Cognitive level (CL) R/U/AP/An/ E/C	Knowledge Categories (KC) F/C/P/MC	Programme outcomes (PO) PO1/PO2, PO3....PO 11
CO1	Understand general working knowledge of the principles and practice of clinical toxicology	U	C	PO1, PO3, PO4
CO2	Demonstrate an understanding of health implications of toxic exposure and commonly involved chemicals for toxicity	AP/U	C/P	PO1, PO3, PO4
CO3	Demonstrate and apply an understanding of the history, assessment and therapy associated with management of toxic exposure	AP/U	F/P	PO1, PO3, PO4
CO4	Demonstrate and apply understanding of characteristics of treatment guidelines for specific toxic substance	AP/U	C/P	PO1, PO4, PO5
CO5	Know several preventive approaches to reduce unintentional poisoning	R/U	C	PO1, PO4
CO6	Demonstrate an understanding of general toxicology principles and clinical management practice	AP/U	C/P	PO1, PO4



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Internal Quality Assurance Cell

Course out Comes and Programme outcomes

Pharm D V Year

Name of Course: Clinical Research

Academic year: 2019-20

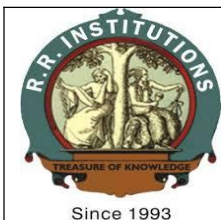
Program: Pharm D V Year

Faculty in Charge: Mr. Madhurendra

Section: Theory

At the end of the course the student will able to

Sl. No	Course Outcome (CO)	Cognitive level (CL) R/U/AP/An/E /C	Knowledge Categories (KC) F/C/P/MC	Programme outcomes (PO) PO1/PO2,PO3....PO11
CO1	Discuss the pharmacological and toxicological considerations in process of development of new drugs	U	C	PO1
CO2	Discuss the principal and phases in clinical trial of drug	U	C	PO1
CO3	Explain the guidelines for ethics and safe monitoring in clinical trial of a drug	U	F/C	PO1,PO3
CO4	Design the documents of clinical trial	U/Ap	C /MC	PO1,PO2
CO5	Distinguish the guidelines of national and international regulatory bodies for clinical trial	U	C	PO1,PO2,PO6
CO6	Recognize differing roles and obligations of the investigator, sponsor and institutional review board.	U	C	PO1,PO6, PO8



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Internal Quality Assurance Cell

Course out Comes and Programme outcomes

Name of Course: Pharmacoepidemiology and Pharmacoconomics

Academic year: 2019-20

Program: Pharm D V Year

Faculty in Charge: Mr. Regadagunta Reddy

Section: Theory

At the end of the course the student will able to

Sl. No	Course Outcome (CO)	Cognitive level (CL) R/U/AP/An/E/ C	Knowledge Categories (KC) F/C/P/MC	Programme outcomes (PO)PO1/PO2,PO3.... PO11
CO1	Define Pharmacoepidemiology and mention its scope	R	F	P01, P011
CO2	Understand the measurement of outcomes in Pharmacoepidemiology	U	C	P01, P09, P011
CO3	Understand the concept of risk in pharmacoepidemiology	U	C	P01, P09, P011
CO4	Classify the pharmacoepidemiological methods and Describe the applications of pharmacoconomics	R	C	P01, P011
CO5	Differentiate the sources of data for pharmacoepidemiological studies and pharmaco-economic evaluations	U/E	C	P01, P09, P011
CO6	Describe the selected special applications of pharmacoepidemiology and pharmacoconomics and describe the history and needs of pharmaco-economic evaluations	U/E	F	P01, P011



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Internal Quality Assurance Cell

Course out Comes and Programme outcomes

Name of Course: Clinical pharmacokinetic & therapeutic drug monitoring

Academic year: 2019-20

Program: Pharm D V Year

Faculty in Charge: Kavitha Yadav

Section: Theory

At the end of the course the student will able to

Sl. No	Course Outcome (CO)	Cognitive level (CL) R/U/AP/An/E /C	Knowledge Categories (KC) F/C/P/MC	Programme outcomes (PO) PO1/PO2,PO3....PO11
CO1	Apply the concept of pharmacokinetics to individualize the drug dosage regimen	AP	C	PO1,PO4,PO5
CO2	Design a dosage regimen of drug based on its route of administration	AP	F/MC	PO1,PO4
CO3	Design & implement pharmacokinetic services such as intravenous to oral conversion& TDM services	AP	C/MC	PO1,PO4,PO7,
CO4	Understand the significance of altered pharmacokinetics, pharmacogenetics	U	C	PO1,PO4
CO5	Understand to adjust the dosage regimen for patients with renal & hepatic impairment	U	F/C	PO1,PO4,PO7
CO6	Assess the drug interaction issues in the clinical setting and Design & implement TDM for various drugs	An AP	C	PO1,PO3,PO4, PO5 PO7 PO8