



MALLIGE COLLEGE OF PHARMACY

#71, SILVEPURA, CHIKKABANAVARA POST, BANGLORE - 560 090

(Recognized by AICTE, PCI, New Delhi, RGUHS Bangalore)

Web: www.mallige.ac.in, E - mail: mcpbangalore@gmail.com, Ph: 080-28446666, 9353729763

COURSE OUTCOMES - B PHARM

Name of the Program:	B PHARM
Year:	1 st SEM
Course wise COs	

Program	Course name	Course Code	Year	Course Outcomes (COs)	
B PHARM	HUMAN ANATOMY AND PHYSIOLOGY I	BP101T	1 st SEM	CO1	Describe the anatomy of CVS peripheral & Sense organs.
				CO2	Explain the formation of blood cells, lymph and their circulation.
				CO3	Recognize various tissues and bones.
				CO4	Explain the physiology of Skeletal muscles, blood and sense organs.
				CO5	Define the disorders and diseases associated with related skeletal systems, blood and sense organs.
				CO6	Write the disorders of Skeletal muscles, Lymphatic system & Cell tissues
Program	Course name	Course Code	Year	Course Outcomes (COs)	
B PHARM	PHARMACEUTICAL ANALYSIS I	BP102T	1 st SEM	CO1	Understand the Methods of expressing concentration, Preparation and standardization of molar and normal solutions Understand various sources of impurities and errors arise during the process.
				CO2	Understand the various principles involved in volumetric and gravimetric analysis.
				CO3	Understand the principle and concept of electrochemical methods of analysis.




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Name of the Program:	B PHARM
Year:	1 st SEM
Course wise COs	

Program	Course name	Course Code	Year	Course Outcomes (COs)	
B PHARM	PHARMACEUTICS I	BP103T	1 st SEM	CO1	Know the history of profession of pharmacy
				CO2	Understand the Basics of different dosage forms, parts, and handling of Prescription.
				CO3	Understand the Basics of Pharmaceutical incompatibilities, pharmaceutical calculations
				CO4	Understand the professional way of handling the Prescription.
				CO5	Preparation of various conventional dosage forms
Program	Course name	Course Code	Year	Course Outcomes (COs)	
B PHARM	PHARMACEUTICAL INORGANIC CHEMISTRY	BP104T	1 st SEM	CO1	
				CO2	
				CO3	Summarize the principle, properties, measurement, and applications of radiopharmaceuticals. (PO1)
				CO4	Describe the method of preparation, storage, assay and uses of certain inorganic pharmaceuticals. (PO1)
				CO5	understand the medicinal and pharmaceutical importance of inorganic compounds
				CO6	To have been introduced to a variety of inorganic drug classes




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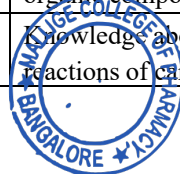
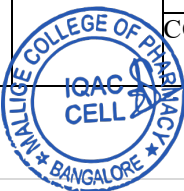
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Name of the Program:	B PHARM
Year:	2 nd SEMESTER
Course wise COs	

Program	Course name	Course Code	Year	Course Outcomes (COs)	
B PHARM	HUMAN ANATOMY AND PHYSIOLOGY 2	BP201T	2 nd SEM	CO1	Students would have studied about the gross morphology, structure and functions of nervous, respiratory, urinary and reproductive systems in the human body.
				CO2	They would have studied in detail about energy and metabolism.
				CO3	Students would be able to identify the various organs of different systems of human body.
				CO4	They would have performed and learnt about the experiments like neurological reflex, body temperature measurement
				CO5	They would have studied elaborate on interlinked mechanisms in the maintenance of normal functioning of human body
				CO6	They would have learnt and performed the experiments like Olfaction, gustation reflex and eyesight
Program	Course name	Course Code	Year	Course Outcomes (COs)	
B PHARM	PHARMACEUTICAL ORGANIC CHEMISTRY I	BP202T	2 nd SEM	CO1	Write the structure, name of the organic compound
				CO2	Knowledge about the type of isomerism
				CO3	Write the reaction, name the reaction and orientation of reactions
				CO4	Account for reactivity/stability of compounds
				CO5	Identify/confirm the unknown organic compound
				CO6	Knowledge about the naming reactions of carbonyl compounds




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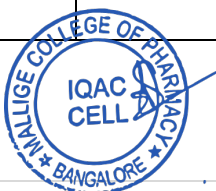
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Course wise COs	

Program	Course name	CourseCode	Year	Course Outcomes (COs)	
B PHARM	BIOCHEMISTRY	BP203T	2 nd SEM	CO1	To understand the importance of metabolism of substrates.
				CO2	Acquire chemistry and biological importance of biological macromolecules.
				CO3	To acquire knowledge in qualitative and quantitative estimation of the biological macromolecules.
				CO4	To know the interpretation of data emanating from a Clinical Test Lab.
				CO5	To know how physiological conditions influence the structures and re-activities of biomolecules.
				CO6	To understand the basic principles of protein and polysaccharide structure.
Program	Course name	CourseCode	Year	Course Outcomes (COs)	
B PHARM	PATHOPHYSIOLOGY	BP204T	2 nd SEM	CO1	Knowledge of the structure and function of the major organ systems, including the molecular, biochemical and cellular mechanisms for maintaining homeostasis
				CO2	To describe the pathophysiological responses to infection, necrosis, stress, carcinogenesis
				CO3	To analyse the processes that lead to cell injury and describe its types and responses for healing, including inflammation.
				CO4	To analyze the concept of inflammation, Repair of wound and factors influencing Healing
				CO5	To study the immune response and evaluate some diseases that affect immunity
				CO6	To, recognize, define, and classify diseases based on pathogenic or morphological characteristics




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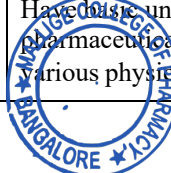
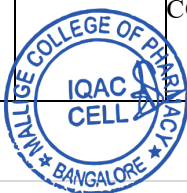
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Name of the Program:	B PHARM
Year:	3 rd SEMESTER
Course wise COs	

Program	Course name	Course Code	Year	Course Outcomes (COs)	
B PHARM	PHARMACEUTICAL ORGANIC CHEMISTRY 2	BP301T	3 rd SEM	CO1	To write the structure, name and the type of isomerism of the organic compound
				CO2	To explain the reaction, name the reaction and orientation of reactions
				CO3	To discuss the reactivity and stability of organic reactions
				CO4	To describe the chemistry of fats and oils
				CO5	To explain the preparation, reactions and stability of Polynuclear and Alicyclic compounds
Program	Course name	Course Code	Year	Course Outcomes (COs)	
B PHARM	PHYSICAL PHARMACEUTICS 1	BP302T	3 rd SEM	CO1	State the physicochemical properties of drug molecules, pH, and solubility
				CO2	Explain the role of surfactants, interfacial phenomenon and thermodynamics
				CO3	Describe the flow behavior of fluids and concept of complexation
				CO4	Analyze the chemical stability tests of various drug products
				CO5	Understand the physical properties of solutions, buffers, isotonicity, disperse systems and rheology.
				CO6	Understand of physicochemical properties of drugs including solubility, distribution, adsorption, and stability
				CO7	Have basic knowledge of pharmaceutical suspensions and colloids
				CO8	Have basic understanding of the pharmaceutical applications of various physical




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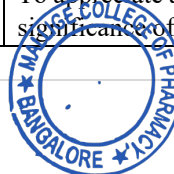
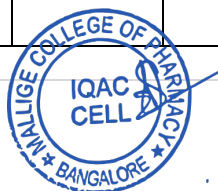
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Year:	3 rd SEMESTER
Course wise COs	

Program	Course name	Course Code	Year	Course Outcomes (COs)	
B PHARM	PHARMACEUTICAL MICROBIOLOGY	BP303T	3 rd SEM	CO1	Recognize the different groups of microorganisms like bacteria, fungi and viruses and describe different physical and chemical requirements for growth of microorganism, their identification by staining and biochemical tests and preservation by different methods
				CO2	Name the different sterilization procedures useful in microbiology and manufacture of pharmaceuticals and explain the sterility testing of pharmaceuticals
				CO3	List the disinfectants used to maintain cleanliness in microbiology and manufacture of pharmaceuticals and discuss evaluation of disinfectants by different methods.
				CO4	Outline the cell culture technology and point out its role in pharmaceutical industries and research.
				CO5	Understand the physical properties of solutions, buffers, isotonicity, disperse systems and rheology.
Program	Course name	Course Code	Year	Course Outcomes (COs)	
B PHARM	PHARMACEUTICAL ENGINEERING	BP304T	3 rd SEM	CO1	To know various unit operations used in Pharmaceutical industries
				CO2	To understand the material handling techniques.
				CO3	To perform various processes involved in pharmaceutical manufacturing process
				CO4	To carry out various test to prevent environmental pollution
				CO5	To appreciate and comprehend significance of plant layout design




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Year:	4 TH SEMESTER
Course wise COs	

Program	Course name	Course Code	Year	Course Outcomes (COs)	
B PHARM	PHARMACEUTICAL ORGANIC CHEMISTRY 3	BP401T	4 TH SEM	CO1	Write the isomerism involved for organic compound and synthesis of isomers.
				CO2	Write the nomenclature, reaction, synthesis and medicinal uses of organic compounds
				CO3	Discuss the orientation and reactivity of organic compounds
				CO4	Explain the name of the reactions and understanding mechanism of reactions
Program	Course name	Course Code	Year	Course Outcomes (COs)	
B PHARM	Medicinal chemistry 1	BP402T	4 th SEM	CO1	To know the structural activity relationship of different class of drugs
				CO2	Knowledge about the mechanism pathways of different class of medicinal compounds
				CO3	To understand the chemistry of drugs with respect to their pharmacological activity
				CO4	To write the chemical synthesis of some drugs




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Year:	4 TH SEMESTER
Course wise COs	

Program	Course name	Course Code	Year	Course Outcomes (COs)	
B PHARM	PHYSICAL PHARMACEUTICS 2	BP403T	4 TH SEM	CO1	State the physicochemical properties of drug molecules, pH, and solubility
				CO2	Explain the role of surfactants, interfacial phenomenon and thermodynamics
				CO3	Describe the flow behavior of fluids and concept of complexation
				CO4	Analyze the chemical stability tests of various drug products
				CO5	Understand the physical properties of solutions, buffers, isotonicity, disperse systems and rheology
				CO6	Have basic knowledge of pharmaceutical suspensions and colloids
				CO7	Have basic understanding of the pharmaceutical applications of various physical
Program	Course name	Course Code	Year	Course Outcomes (COs)	
B PHARM	PHARMACOLOGY 1	BP404T	4 th SEM	CO1	Understand the pharmacological actions of different categories of drugs
				CO2	Explain the mechanism of drug action at organ system/sub cellular/ macromolecular levels
				CO3	Apply the basic pharmacological knowledge in the prevention and treatment of various diseases
				CO4	Appreciate correlation of pharmacology with other bio medical sciences




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Program	Course name	Course Code	Year	Course Outcomes (COs)	
B PHARM	PHARMACOGNOS Y1	BP405T	4 TH SEM	CO1	To understand the basic concepts of Pharmacognosy like the history of Pharmacognosy, Current status, and classification of crude drugs
				CO2	To describe the awareness of detecting adulteration of drugs using morphological, microscopical, chemical, and physical Evaluation methods
				CO3	Generalized the knowledge concerning medicinal plants for cultivation, collection, processing, and storage of crude drugs
				CO4	To understand the concept of tissue culture and application in Pharmacognosy
				CO5	To learn the various systems of medicines, secondary metabolites, and their application in the pharmacy field




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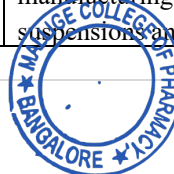
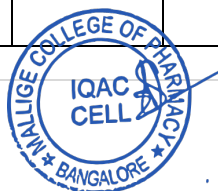
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Name of the Program:	B PHARM
Year:	5 TH SEMESTER
Course wise COs	

Program	Course name	Course Code	Year	Course Outcomes (COs)	
B PHARM	MEDICINAL CHEMISTRY 2	BP501T	5 TH SEM	CO1	Helps in correlating between pharmacology of a disease and its mitigation or cure
				CO2	To write the chemical synthesis of some drugs.
				CO3	To know the structural activity relationship of different class of drugs
				CO4	Knowledge about the mechanism pathways of different class of medicinal compounds
				CO5	To acquire knowledge about the chemotherapy for cancer
				CO6	Have basic knowledge of pharmaceutical suspensions and colloids
				CO7	To understand the chemistry of drugs with respect to their pharmacological activity
Program	Course name	Course Code	Year	Course Outcomes (COs)	
B PHARM	INDUSTRIAL PHARMACY	BP502T	5 TH SEM	CO1	To recall the knowledge of pre-formulation studies for dosage form development and its applications
				CO2	To prepare and coat tablets, capsules and pellets by various equipments and further they can evaluate in process and final product quality control.
				CO3	Summarize the preparation of parenterals and ophthalmic preparations and also can plan the selection of packing materials with their official requirements.
				CO4	Design formulations and manufacturing of liquid orals like suspensions and emulsions.




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Year:	5 TH SEMESTER
Course wise COs	

Program	Course name	Course Code	Year	Course Outcomes (COs)	
B PHARM	PHARMACOLOGY 2	BP503T	5 TH SEM	CO1	Students would have understood the mechanism of drug action and its relevance in the treatment of different diseases
				CO2	They would be trained with isolation of different organs/tissues from the laboratory animals by simulated experiments
				CO3	They would have observed the various receptor actions using isolated tissue preparation
				CO4	Students would appreciate the correlation of pharmacology with related medical sciences
				CO5	They would have understood the cell communication mechanism
				CO6	They would appreciate the newer targets of several diseases
Program	Course name	Course Code	Year	Course Outcomes (COs)	
B PHARM	PHARMACOGNOS Y2	BP504T	5 TH	CO1	Illustrate the different methods to enhance production of secondary plant metabolites by using different precursors in biogenetic pathways.
				CO2	Outline the chemical and biological efficacy of drugs containing alkaloids, glycosides, essential oils, resins and tannins.
				CO3	Apply the different techniques to identify and estimate the phytoconstituents present in the herbal drugs
				CO4	Industrial production, estimation and utilization of phytoconstituents




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Program	Course name	Course Code	Year	Course Outcomes (COs)	
B PHARM	PHARMACEUTICAL JURISPRUDENCE	BP505T	5 TH SEM	CO1	About Professional ethics
				CO2	They understood the various concepts of the Pharmaceutical Legislation in India.
				CO3	They understood the various parameters in the Drug and Cosmetic Act and rules
				CO4	They understood the various concepts of Drug policy, DPCO, Patent and Designing act
				CO5	They came to know about the labelling requirements and packaging guidelines for Drugs and Cosmetics.
				CO6	They came to know about the salient features of different laws which have been prescribed by the Pharmacy Council of India from time to time including International Laws




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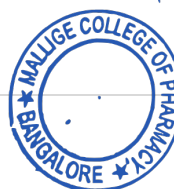
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Name of the Program:	B PHARM
Year:	6 TH SEMESTER
Course wise COs	

Program	Course name	Course Code	Year	Course Outcomes (COs)	
B PHARM	MEDICINAL CHEMISTRY 3	BP601T	6 TH SEM	CO1	To develop an understanding of the physico-chemical properties of drugs
				CO2	To understand how current drugs were developed by using pharmacophore modeling and docking technique
				CO3	To acquire knowledge in the chemotherapy for cancer and microbial diseases and different anti-viral agents
				CO4	To acquire knowledge about the mechanism pathways of different class of medicinal compounds.
				CO5	To have been introduced to a variety of drug classes and some pharmacological properties
Program	Course name	Course Code	Year	Course Outcomes (COs)	
B PHARM	PHARMACOLOGY 3	BP602T	6 TH SEM	CO1	To study the pharmacology of various drugs acting on respiratory system and gastrointestinal tract
				CO2	To understand the chemotherapy of various infectious diseases and cancer
				CO3	To understand the basic knowledge of immunopharmacology, toxicology, biosimilars and chronopharmacology
				CO4	To understand the general principles of management and treatment of poisoning.




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Program	Course name	Course Code	Year	Course Outcomes (COs)	
B PHARM	HERBAL DRUG TECHNOLOGY	BP603T	6 TH SEM	CO1	Understand raw material as source of herbal drugs from cultivation to herbal drug product
				CO2	know the WHO and ICH guidelines for evaluation of herbal drugs
				CO3	Know the herbal cosmetics, natural sweeteners, nutraceuticals
				CO4	Appreciate patenting of herbal drugs, GMP
Program	Course name	Course Code	Year	Course Outcomes (COs)	
B PHARM	BIOPHARMACEUTICS AND PHARMACOKINETICS	BP604T	6 TH SEM	CO1	Explain the principles and its applications
				CO2	Define methodology of various unit operation processes and its application in pharmaceutical industry
				CO3	Describe various mechanisms and equipment
				CO4	Explain metals used in pharmaceutical industry
				CO5	Discuss preventive measures of hazards




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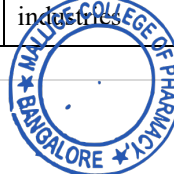
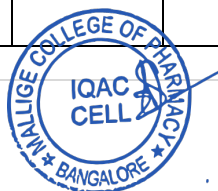
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Program	Course name	Course Code	Year	Course Outcomes (COs)	
B PHARM	PHARMACEUTICAL BIOTECHNOLOGY	BP605T	6 TH SEM	CO1	State the importance of enzymes in the field of pharmacy and describe the different methods of enzyme immobilization and applications of immobilized enzymes
				CO2	List the salient features of rDNA technology and describe the use of rDNA technology in the production of biopharmaceuticals
				CO3	Identify the different types of immunity and explain the production of monoclonal antibodies, vaccines and blood products.
				CO4	State the different microbial gene transfer methods including mutation and explain the importance of blotting techniques in the detection of biomolecules
Program	Course name	Course Code	Year	Course Outcomes (COs)	
B PHARM	QUALITY ASSURANCE	BP606T	6 TH SEM	CO1	Acquire knowledge on various quality assurance systems, processes and current regulatory guidelines related to manufacturing and distribution
				CO2	Address the quality issues and provide solutions needed to attain quality leadership in an environment of continual improvement
				CO3	Understand the importance of effective documentation
				CO4	To prepare professionally competent individuals with quality concept being engrained to achieve global quality standards in pharmaceutical industries




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Course wise Cos	

Program	Course name	Course Code	Year	Course Outcomes (COs)	
B PHARM	INSTRUMENTAL METHODS OF ANALYSIS	BP701T	7 TH SEM	CO1	The basic theoretical knowledge of the instrumentation techniques available
				CO2	Theoretically understand the aspects of separation for multi components
				CO3	Practical skills for the analysis of drugs and excipients using various instrumentation techniques
				CO4	To make accurate analysis and report the results in defined formats.
				CO5	To learn documentation and express the observations with clarity
Program	Course name	Course Code	Year	Course Outcomes (COs)	
B PHARM	INDUSTRIAL PHARMACY II	BP702T	7 TH SEM	CO1	Know the various pharmaceutical dosage forms and their manufacturing techniques
				CO2	Know various considerations in development of pharmaceutical dosage forms
				CO3	Formulate solid, liquid and semisolid dosage forms and evaluate them for their quality




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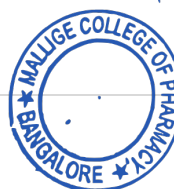
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Course wise Cos	

Program	Course name	Course Code	Year	Course Outcomes (COs)	
B PHARM	PHARMACY PRACTICE	BP703T	7 TH SEM	CO1	Students will demonstrate knowledge of and ability to use principles of therapeutics, quality improvement, communication, economics, health behavior, social and administrative aspects, health policy and legal issues in the practice of pharmacy
				CO2	Students will use knowledge of drug distribution methods in hospital and apply it in the practice of pharmacy.
				CO3	Students will effectively apply principles of drug store management and inventory control to medication use.
				CO4	Students will engage in innovative activities by making use of the knowledge of clinical trials
Program	Course name	Course Code	Year	Course Outcomes (COs)	
B PHARM	NOVEL DRUG DELIVERY SYSTEM	BP704T	7 TH SEM	CO1	The various approaches for development of novel drug delivery systems
				CO2	The criteria for selection of drugs and polymers for the development of NTDS
				CO3	The formulation and evaluation of novel drug delivery systems




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Name of the Program:	B PHARM
Year:	8 TH SEMESTER
Course wise Cos	

Program	Course name	Course Code	Year	Course Outcomes (COs)	
B PHARM	BIOSTATISTICS AND RESEARCH METHODOLOGY	BP801T	8 TH SEM	CO1	Learn general research methodology
				CO2	Understand the basic concepts of biostatistics
				CO3	Learn different parametric and non-parametric tests
				CO4	Understand the functions of ethics committees in medical research
				CO5	Learn the guidelines for developing animal facilities
				CO6	Learn the guidelines for developing animal facilities
				CO7	Learn the guidelines for the experimentation on animals
				CO8	Understand the genesis of bioethics with special reference to Helsinki declaration
Program	Course name	Course Code	Year	Course Outcomes (COs)	
B PHARM	SOCIAL AND PREVENTIVE PHARMACY	BP802T	8 TH SEM	CO1	Recognize the concepts and evaluation of public health
				CO2	Relate food to nutrition health, balanced diet, deficiencies and its prevention
				CO3	Illustrate sociocultural factors and its relation with health
				CO4	Identify avoidable habits for personal hygiene and health
				CO5	Explain the principles on the prevention and control of communicable and non-communicable diseases.
				CO6	Identify National health programs its objectives functioning and outcomes




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Name of the Program:	B PHARM
Year:	8 TH SEMESTER
Course wise Cos	

Program	Course name	Course Code	Year	Course Outcomes (COs)	
B PHARM	QUALITY CONTROL AND STANDARDIZATION OF HERBALS	BP803T	8 TH SEM	CO1	Explain basic tests for drugs to obtain dosage form for pharmaceutical substances and medicinal plants
				CO2	Explain methods for evaluation of pharmaceutical substances, medicinal plants and commercial crude drugs along with WHO guidelines for quality control for herbal drugs
				CO3	Describe guidelines for cGMP, GAP, GMP and GLP for quality assurance of herbal drugs in industry
				CO4	Describe guidelines for quality control of herbal drugs and evaluation of safety and efficacy of herbal medicines.
Program	Course name	Course Code	Year	Course Outcomes (COs)	
B PHARM	COSMETIC SCIENCE	BP804T	8 TH SEM	CO1	Classify and define Cosmetics and Cosmeceuticals as per Indian and EU regulations
				CO2	Describe the role of cosmetic excipients and building blocks in the formulation of cosmetics
				CO3	Explain the structure and function of the skin, hair, teeth and gum
				CO4	Design cosmetics and cosmeceuticals that address the problems of dry skin, acne, dermatitis, prickly heat, wrinkles, blemishes, hair fall, Dandruff, body odour, bleeding gums, mouth odour, teeth discoloration and sensitive teeth.




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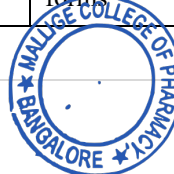
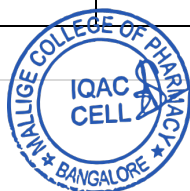
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COURSE OUTCOMES - B PHARM

Name of the Program:	PHARM D
Year:	I
Course wise COs	

Program	Course name	Course Code	Year	Course Outcomes (COs)	
Pharm D	HUMAN ANATOMY ANDPHYSIOLOGY	PD 1.1	I	CO1	Describe the gross morphology, structure and functions of variousorgans of the human body.
				CO2	Illustrate the various homeostatic mechanisms and their imbalances.
				CO3	Identify the various tissues and organs of different systems of human body.
				CO4	Perform the hematological tests like blood cell counts, haemoglobin estimation, bleeding/clotting time etc and also record blood pressure,ECG, heart rate, pulse and respiratory volume
				CO5	Appreciate coordinated working pattern of different organs of each system
Program	Course name	Course Code	Year	Course Outcomes (COs)	
Pham D	PHARMACEUTICS	PD 1.2	I	CO1	Know the historical backgroundand development of profession of pharmacy and introduction to Dosage forms and Handling of Prescription
				CO2	Pharmaceutical calculations and understand basics concepts of powders and liquid dosage forms
				CO3	Understand formulation and evaluation of monophasic liquids and biphasic liquids
				CO4	Explain the formulation requirement and evaluation of suppositories and understand pharmaceutical incompatibility
				CO5	Understand the formulation and evaluation of Semisolid dosage forms



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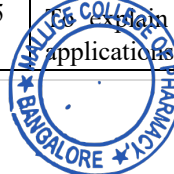
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Name of the Program:	PHARM D
Year:	I
Course wise COs	

Program	Course name	Course Code	Year	Course Outcomes (COs)	
Pharm D	MEDICINAL BIOCHEMISTRY	PD 1.3	I	CO1	To understand the importance of metabolism of substrates.
				CO2	Acquire chemistry and biological importance of biological macromolecules.
				CO3	To acquire knowledge in qualitative and quantitative estimation of the biological macromolecules
				CO4	To know the interpretation of data emanating from a Clinical Test Ladate
				CO5	To know how physiological conditions influence the structures and re-activities of biomolecules.
				CO6	To understand the basic principles of protein and polysaccharide structure
Program	Course name	Course Code	Year	Course Outcomes (COs)	
Pharm D	PHARMACEUTICAL ORGANIC CHEMISTRY	PD 1.4	I	CO1	To recall the nomenclature, properties and isomerism in organic compounds.
				CO2	To explain the preparation, reactions and stability of alkanes and alicyclic compounds.
				CO3	To study the kinetics, mechanism, stereochemistry of free radical, electrophilic, nucleophilic addition reactions and theory of resonance
				CO4	To compare reactivity, orientation and factors influencing aliphatic nucleophilic substitution with aromatic nucleophilic substitution.
				CO5	To explain the mechanism and applications of selected named




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Name of the Program:	PHARM D
Year:	I
Course wise COs	

Program	Course name	Course Code	Year	Course Outcomes (COs)	
Pharm D	PHARMACEUTICAL INORGANIC CHEMISTRY	PD 1.5	I	CO1	an ability to apply knowledge of mathematics, science, and pharmacy
				CO2	an ability to design and conduct experiments, as well as to analyze and interpret data
				CO3	an ability to function on multidisciplinary teams,
				CO4	an ability to identify, formulate, and solve pharmacy problems
				CO5	an understanding of professional and ethical responsibility.
				CO6	an ability to communicate effectively,
				CO7	the broad education necessary to understand the impact of pharmacy solutions in a global, economic, environmental, and societal context,
				CO8	a recognition of the need for, and an ability to engage in life-long learning
				CO9	a knowledge of contemporary issues, and
				CO10	An ability to use the techniques, skills, and modern pharmacy tools necessary for pharmacy practice.




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Name of the Program:	PHARM D
Year:	II
Course wise COs	

Program	Course name	Course Code	Year	Course Outcomes (COs)	
Pharm D	PATHOPHYSIOLOGY	PD 2.1	II	CO1	Knowledge of the structure and function of the major organ systems, including the molecular, biochemical and cellular mechanisms for maintaining homeostasis
				CO2	To describe the path physiological responses to infection, necrosis, stress, carcinogenesis
				CO3	To analyse the processes that lead to cell injury and describe its types and responses for healing, including inflammation.
				CO4	To analyze the concept of inflammation, Repair of wound and factors influencing Healing
				CO5	To study the immune response and evaluate some diseases that affect immunity
Program	Course name	Course Code	Year	Course Outcomes (COs)	
Pharm D	PHARMACEUTICAL MICROBIOLOGY	PD 2.2	II	CO1	Recognize the necessity of classification of microbial world into different groups and describe the structure and function of different external and internal parts of a microbial cell
				CO2	Recognize the importance of different methods of sterilization including sterility testing and validation. Students shall be able to discuss the mechanism of action, applications and evaluation of chemical disinfectants.
				CO3	Interpret signs and symptoms of infectious diseases, their diagnosis and treatment




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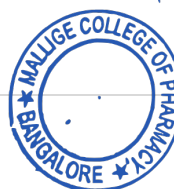
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Name of the Program:	PHARM D
Year:	II
Course wise COs	

Program	Course name	Course Code	Year	Course Outcomes (COs)	
Pharm D	PHARMACOGNOSY AND PHYTOPHARMACEUTICALS	PD 2.3	II	CO1	Recognize the necessity of classification of microbial world into different groups and describe the structure and function of different external and internal parts of a microbial cell
				CO2	Comprehend the nutritional requirements, growth and cultivation of bacteria and virus. In addition discuss the different types of media required for the growth and preservation of aerobic and anaerobic bacteria & fungi and different methods for the isolation and identification of bacteria with emphasis to different staining techniques and biochemical reactions. Also, students can measure the bacteria population- both total and viable counts.
				CO3	Discuss different diagnostic tests, microbiological assay of antibiotics and vitamins, and standardization of vaccines and sera.
				CO4	Interpret signs and symptoms of infectious diseases, their diagnosis and treatment
				CO5	Recognize the importance of different methods of sterilization including sterility testing and validation. Students shall be able to discuss the mechanism of action, applications and evaluation of chemical disinfectants.




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Year:	II
Course wise COs	

Program	Course name	Course Code	Year	Course Outcomes (COs)	
Pharm D	PHARMACOLOGY 1	PD 2.4	II	CO1	Describe the drug discovery and developmental approaches.
				CO2	Explain the Pharmacokinetic and Pharmacodynamic principles.
				CO3	Identify the various factors that may modulate the action of the drug.
				CO4	Write the classification and mechanism of action of various drugs and their effect on different systems.
				CO5	Explain the therapeutic uses and possible adverse reactions of drugs used in systemic illness of nervous, cardiac, respiratory and endocrine systems.
Program	Course name	Course Code	Year	Course Outcomes (COs)	
Pharm D	COMMUNITY PHARMACY	PD 2.5	II	CO1	Students will provide patient centered care to diverse patients using the best available evidence and in consideration of patients' circumstances to devise, modify, implement, document and monitor pharmacotherapy care plans, either independently or as part of healthcare team
				CO2	Students will demonstrate knowledge of the business and professional practice management skills in community pharmacies.
				CO3	Students will educate patients through counseling & provide health screening services to public
				CO4	Students will identify symptoms of minor ailments and provide appropriate medication




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Name of the Program:	PHARM D
Year:	III
Course wise COs	

Program	Course name	Course Code	Year	Course Outcomes (COs)	
Pharm D	PHARMACOLOGY 2	PD 3.1	III	CO1	The students would have learnt about drugs used to treat coagulation disorders includes thrombosis, MI , DVT , PE and stroke
				CO2	The students would have learnt about drugs used to treat coagulation disorders includes thrombosis, MI , DVT , PE and stroke
				CO3	Apply the pharmacological knowledge in the prevention and treatment of various diseases caused by microbes including cancer and also understand the adverse effects of drugs & drug interactions.
				CO4	Students would have understood the principles of immunopharmacology, animal toxicology
				CO5	Students would have learnt in depth knowledge on cell, macromolecules, cell signaling, DNA replication and cell cycle
				CO5	Students will participate in prevention programs of communicable diseases
				CO6	They would have learnt the importance of gene and its structure, genome, gene expression, gene sequencing, mapping and cloning of human




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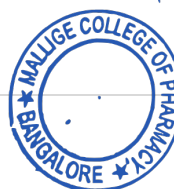
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Name of the Program:	PHARM D
Year:	III
Course wise COs	

Program	Course name	Course Code	Year	Course Outcomes (COs)	
Pharm D	PHARMACEUTICAL ANALYSIS	PD 3.2	III	CO1	Describe the theoretical principles and procedures for Electrometric methods of analysis such as potentiometry and conductometry. They can also apply the knowledge
				CO2	Assess and assure the quality of pharmaceutical processes by applying the knowledge of validation techniques
				CO3	Interpret the analytical data for the determination of kinetic studies, structure correlation, separation, identification and estimation of pharmaceutical compounds by using instrumental methods of analysis mainly IR, NMR, Mass and X-ray diffraction.
				CO4	Illustrate the theory, construction and working of instrumentation in absorption spectrophotometric techniques like UV-Visible, IR spectroscopy, atomic absorption, fluorimetry, scattering methods like Nephelo-Turbidometry, emission spectrophotometric techniques such as flame photometry for the quantitative and qualitative analysis of pharmaceuticals




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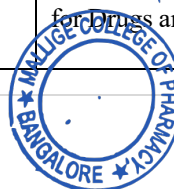
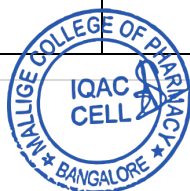
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Name of the Program:	PHARM D
Year:	III
Course wise COs	

Program	Course name	Course Code	Year	Course Outcomes (COs)	
Pharm D	PHARMACOTHERAPEUTIC S2	PD 3.3	III	CO1	Able to describe the pathophysiology and management of infectious disease, musculoskeletal, cancer, renal and skin diseases Able to develop patient case based assessment skills
				CO2	Able to describe the quality use of medicines issues surrounding the therapeutic agents in the treatment of these diseases
				CO3	Able to develop clinical skills in the therapeutic management of these conditions
				CO4	Continue to develop communication skills and will provide patient – centered care to diverse patients using the evidence based medicine
Program	Course name	Course Code	Year	Course Outcomes (COs)	
Pharm D	PHARMACEUTICAL JURISPRUDENCE	PD 3.4	III	CO1	About Professional ethics
				CO2	They understood the various concepts of the Pharmaceutical Legislation in India.
				CO3	. They understood the various parameters in the Drug and Cosmetic Act and rules
				CO4	They understood the various concepts of Drug policy, DPCO, Patent and Designing act
				CO5	They came to know about the labelling requirements and packaging guidelines for Drugs and Cosmetics.




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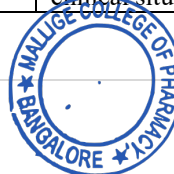
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Name of the Program:	PHARM D
Year:	III
Course wise COs	

Program	Course name	Course Code	Year	Course Outcomes (COs)	
Pharm D	MEDICINAL CHEMISTRY	PD 3.5	III	CO1	To understand the chemistry of drugs with respect to their biological activity
				CO2	To know the metabolism, adverse effect and therapeutic activity of drugs.
				CO3	To understand the different modern techniques of drug design
				CO4	To appreciate the SAR of some important drug classes
				CO5	To acquire knowledge in the chemotherapy for cancer and microbial diseases and different anti-viral agents.
				CO6	To have been introduced to a variety of drug classes and some pharmacological properties
Program	Course name	Course Code	Year	Course Outcomes (COs)	
Pharm D	PHARMACEUTICAL FORMULATIONS	PD 3.6	III	CO1	Upon completion of the subject, the student shall be able to understand
				CO2	principle involved in the formulation of various pharmaceutical dosage forms
				CO3	prepare various pharmaceutical formulations
				CO4	perform an evaluation of pharmaceutical dosage forms
				CO5	understand and appreciate the concept of bioavailability and bioequivalence, their role in clinical situations




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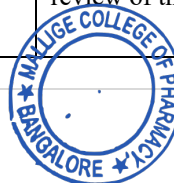
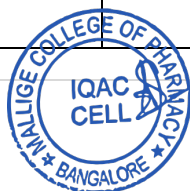
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Name of the Program:	PHARM D
Year:	IV
Course wise COs	

Program	Course name	Course Code	Year	Course Outcomes (COs)	
Pharm D	PHARMACOTHERAPEUTIC S3	PD 4.1	IV	CO1	Gastrointestinal system: (Peptic ulcer disease, Gastro Esophageal Reflux Disease, Inflammatory bowel disease, Liver disorders - Alcoholic liver disease, Viral hepatitis including jaundice, and Drug induced liver disorders.
				CO2	List of drugs available, pharmacological actions, selection of drugs, therapeutic intervention and review of therapy
				CO3	. List of drugs available, pharmacological actions, selection of drugs, therapeutic intervention and review of therapy. Nervous system: (Epilepsy, Parkinsonism, Stroke, Alzheimer's disease,)
				CO4	List of drugs available, pharmacological actions, selection of drugs, therapeutic intervention and review of therapy.
				CO5	Psychiatry disorders: (Schizophrenia, Affective disorders, Anxiety disorders, Sleep disorders, Obsessive Compulsive disorders)
				CO6	List of drugs available, pharmacological actions, selection of drugs, therapeutic intervention and review of therapy.




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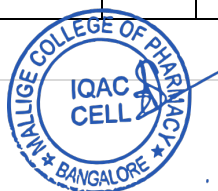
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Name of the Program:	PHARM D
Year:	IV
Course wise COs	

Program	Course name	Course Code	Year	Course Outcomes (COs)	
Pharm D	HOSPITAL PHARMACY	PD 4.2	IV	CO1	An ability to apply knowledge of mathematics, science, and pharmacy
				CO2	An ability to design and conduct experiments, as well as to analyze and interpret data,
				CO3	An ability to function on multidisciplinary teams
				CO4	An ability to identify, formulate, and solve pharmacy problems
				CO5	An understanding of professional and ethical responsibility
				CO6	An ability to communicate effectively
Program	Course name	Course Code	Year	Course Outcomes (COs)	
Pharm D	CLINICAL PHARMACY	PD 4.3	IV	CO1	Actively participate and engage as a healthcare team member to understand and value patient care needs
				CO2	Assure that patients' best interests are represented for potential medication use by integrating disease and drug knowledge
				CO3	Undertake drug therapy monitoring to Identify problems; explore and prioritize potential strategies to design, evaluate and implement a care plan
				CO4	Demonstrate the ability to retrieve, interpret, synthesise and summarise scientific information critically
				CO5	Apply standards, guidelines, best practices, and established processes related to safe and effective medication use for patient-centred care as the medication expert




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Name of the Program:	PHARM D
Year:	IV
Course wise COs	

Program	Course name	Course Code	Year	Course Outcomes (COs)	
Pharm D	BIostatISTICS AND RESEARCH METHODOLOGY	PD 4.4	IV	CO1	Learn general research methodology
				CO2	Understand the basic concepts of biostatistics
				CO3	Learn different parametric and non-parametric tests
				CO4	Understand the functions of ethics committees in medical research.
				CO5	Construction and labeling of graphs.
				CO6	Computer applications in pharmacy.
Program	Course name	Course Code	Year	Course Outcomes (COs)	
Pharm D	BIOPHARMACEUTICS AND PHARMACOKINETICS	PD 4.5	IV	CO1	Broader understanding about the concepts of biopharmaceutics and pharmacokinetics
				CO2	Ability to calculate the various pharmacokinetic parameters by using various mathematical models
				CO3	Ability to design a basic protocol for the conduct of BA/BE study and the interpretation of the BA/BE data
				CO4	Prepared to use the concepts of pharmacokinetic principles in the clinical contexts
				CO5	Ability to design and perform <i>in-vitro</i> dissolution studies for various drugs as per the standards of official monographs




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	Name of the Program:			PHARM D	
	Year:			IV	
	Course wise COs				
Program	Course name	Course Code	Year	Course Outcomes (COs)	
Pharm D	Clinical Toxicology	PD 4.6	IV	CO1	Demonstrate and understanding of the health and economic implications of toxic exposures, general toxicology principles and clinical management practice
				CO2	Contrast the pharmacologic actions of organophosphate insecticides, pralidoxime
				CO3	Categorize the signs and symptoms of poisoning from antidepressant drugs with their pharmacologic actions, Radiation Poisoning, acid-base poisoning, plant poisoning, food poisoning etc
				CO4	Compare the rationale, indications, and adverse effects for the overdose of Heavy Metals (Arsenic, Lead, Mercury, Iron and Copper) and treatment
				CO5	Describe the general treatment measures with Venomous snake poisoning, first aid, and management of for snake poisoning
				CO6	Evaluate the general treatment measures with Substance abuse: Opioids, CNS stimulants - Amphetamine, CNS depressants, Etc,




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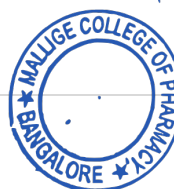
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Name of the Program:	PHARM D
Year:	V
Course wise COs	

Program	Course name	Course Code	Year	Course Outcomes (COs)	
Pharm D	Clinical Research	PD 5.1	V	CO1	To understand the new drug development process.
				CO2	To evaluate the regulatory and ethical requirements
				CO3	To evaluate the regulatory and ethical requirements
				CO4	To analyze the safety monitoring and reporting in clinical trials
				CO5	To evaluate the Management of trial coordination process
				CO6	To create the Designing of clinical trial documents and the ethical values to be observed during clinical trials
Program	Course name	Course Code	Year	Course Outcomes (COs)	
Pharm D	PHARMACOEPIDEMIOLGY AND PHARMACOECONOMICS	PD 5.2	III	CO1	Able to describe the methods used in Pharmacoepidemiology.
				CO2	Able to demonstrate competency in the design, conduct and evaluation of Pharmacoepidemiology studies
				CO3	Able to describe the methods used in Pharmacoeconomic analysis
				CO4	Able to demonstrate competency in the design, conduct and evaluation of Pharmacoeconomic studies
				CO5	Able to describe the methods used in Pharmacoeconomic evaluation




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Name of the Program:	PHARM D
Year:	V
Course wise COs	

Program	Course name	Course Code	Year	Course Outcomes (COs)	
Pharm D	CLINICAL PHARMACOKINETICS AND PHARMACOTHERAPUTIC DRUG MONITORING	PD 5.3	V	CO1	Ability to apply the concepts of Pharmacokinetics to individualize the drug dosageregimen in clinical settings
				CO2	Ability to design a dosage regimen of a drug based on its route of administration
				CO3	Ability to design and implement pharmacokinetics services such as Intravenous to Oral conversion of dosageregimens
				CO4	Broader understanding about the significance of altered pharmacokinetics, Pharmacogenetics and Pharmacometrics
				CO5	Ability to adjust the dosageregimen for patients with renal / hepatic impairments
				CO6	Ability to assess the drug interaction issues in the clinical settings




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COURSE OUTCOMES - M PHARM

Name of the Program:	M PHARM PHARMACEUTICS
Year:	1 st SEMESTER
Course wise COs	

Program	Course name	Course Code	Year	Course Outcomes (COs)	
M PHARM	MODERN PHARMACEUTICAL ANALYTICAL TECHNIQUES	MPA101	1 st SEM	CO1	Apply fundamentals of pharmaceutical chemistry, Pharmaceutics, Pharmaceutical technology, Pharmacy practice, Pharmacology, Pharmacognosy and Quality assurance to elucidate and regulate drug discovery, drug development care practice
				CO2	An ability to design and conduct experiments, as well as to analyze and interpret data of appropriate pharmaceutical system or process
				CO3	An ability to design, synthesis, isolate a drug and drug formulation system, component, or drug use process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
				CO4	An ability to function on multidisciplinary teams, at different organizational levels of academic, industry, research and health care
				CO5	An ability to identify, formulate and solve pharmaceutical problems meeting professional challenges
				CO6	An understanding of pharmacy professional values and ethical responsibility in discharging professional obligations at society, national and global perspectives
				CO7	An ability to communicate effectively both verbal and written to gain recognition at professional circle and societal level.
				CO8	Ability to comprehend the impact of practice of Pharmacy in a global, economic, environmental, and societal context




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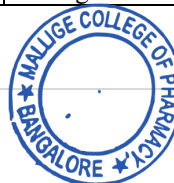
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Name of the Program:	M PHARM PHARMACEUTICS
Year:	1 st SEMESTER
Course wise Cos	

Program	Course name	Course Code	Year	Course Outcomes (COs)	
M PHARM	MODIFIED DRUG DELIVERY SYSTEM	MPH101	1 st SEM	CO1	Vaccine delivery and different mode of application approach for clinical use
				CO2	Drug delivery system give a detailed information transporting a pharmaceutical compound in the body as needed to safely achieve its desired therapeutic effect
				CO3	They know the different types of Drug carrier used in the process of drug delivery which serves to improve the selectivity, effectiveness, and/or safety of drug administration.
				CO4	Recent developments in protein and peptide for parenteral delivery approaches will give new dimension of drug deliver for antibiotics, insulin, etc.
Program	Course name	Course Code	Year	Course Outcomes (COs)	
M PHARM	MODERN PHARMACEUTICS	MPH102	1 st SEM	CO1	To apply the knowledge of preformulation studies for the dosage form development.
				CO2	To apply the knowledge of optimization techniques to formulation processing and development.
				CO3	To use the knowledge of validation techniques as per internationally accepted guidelines.
				CO4	To demonstrate the principles of cGMP and industrial management during planning of industrial Quality management.




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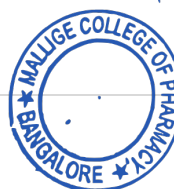
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Name of the Program:	M PHARM PHARMACEUTICS
Year:	1 st SEMESTER
Course wise COs	

Program	Course name	Course Code	Year	Course Outcomes (COs)	
M PHARM	PHARMACEUTICS REGULATORY AFFAIR	MPH103	1 st SEM	CO1	The Concepts of innovator and generic drugs, drug development process
				CO2	The Regulatory guidance's and guidelines for filing and approval process
				CO3	Preparation of Dossiers and their submission to regulatory agencies in different countries
				CO4	Post approval regulatory requirements for actives and drug products
				CO5	Submission of global documents in CTD/ eCTD formats
				CO6	Clinical trials requirements for approvals for conducting clinical trials
				CO7	Pharmacovigilance and process of monitoring in clinical trials




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Name of the Program:	M PHARM PHARMACEUTICS
Year:	2 ND SEMESTER
Course wise Cos	

Program	Course name	Course Code	Year	Course Outcomes (COs)	
M PHARM	Molecular Pharmaceutics (Nano Tech and Targeted DDS)	MPH201	2 ND SEM	CO1	Molecular Pharmaceutics (Nano Tech and Targeted DDS)
				CO2	Advanced Biopharmaceutics & Pharmacokinetics
				CO3	Computer Aided Drug Delivery System
				CO4	Cosmetic and Cosmeceuticals
Program	Course name	Course Code	Year	Course Outcomes (COs)	
M PHARM	Advanced Biopharmaceutics & Pharmacokinetics	MPH202	2 ND SEM	CO1	The basic concepts in biopharmaceutics and pharmacokinetics.
				CO2	The use raw data and derive the pharmacokinetic models and parameters the best describe the process of drug absorption, distribution, metabolism and elimination
				CO3	The critical evaluation of biopharmaceutic studies involving drug product equivalency
				CO4	The potential clinical pharmacokinetic problems and application of basics of pharmacokinetic




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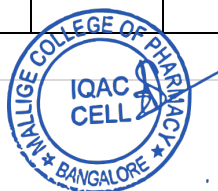
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Name of the Program:	M PHARM PHARMACEUTICS
Year:	2 ND SEMESTER
Course wise Cos	

Program	Course name	Course Code	Year	Course Outcomes (COs)	
M PHARM	Computer Aided Drug Delivery System	MPH203	2 ND SEM	CO1	To Overview the concepts of computers in pharmaceutical research and development and QBD
				CO2	To study the basic concepts of computational modeling of drug disposition and introduction to modeling techniques including drugabsorption, solubility, permeation, ADME, Active transport.
				CO3	To gain the knowledge of computer aided formulation development and to know the optimization parameters and factorial design.
				CO4	To understand the aspects of biopharmaceutical characterization through computer aided techniques.
				CO5	To go through the advantages and disadvantages of artificial intelligence and robotics and to understand the basics of fluid dynamics and the challenges and opportunities.
Program	Course name	Course Code	Year	Course Outcomes (COs)	
M PHARM	Cosmetic and Cosmeceuticals	MPH204	2 ND SEM	CO1	Know regulatory requirements relating to manufacture of cosmetics,import of cosmetics and misbranded. and spurious cosmetics.
				CO2	Understand the biological aspects of structure of skin relating problems and structure of hair and hair growthcycle and common problems associated with oral cavity
				CO3	Explain and understand buildingblocks for different product formulations of cosmetics and cosmeceuticals
				CO4	Understand and design the different cosmetical products addressing skin, hair and oral cavity




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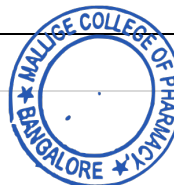
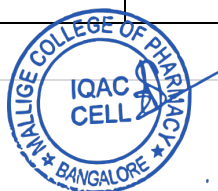
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Name of the Program:	M PHARM Pharmacology
Year:	1 st SEMESTER
Course wise COs	

Program	Course name	Course Code	Year	Course Outcomes (COs)	
M PHARM	MODERN PHARMACEUTICAL ANALYTICAL TECHNIQUES	MPA101	1 st SEM	CO1	Apply fundamentals of pharmaceutical chemistry, Pharmaceutics, Pharmaceutical technology, Pharmacy practice, Pharmacology, Pharmacognosy and Quality assurance to elucidate and regulate drug discovery, drug development care practice
				CO2	An ability to design and conduct experiments, as well as to analyze and interpret data of appropriate pharmaceutical system or process
				CO3	An ability to design, synthesis, isolate a drug and drug formulation system, component, or drug use process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
				CO4	An ability to function on multidisciplinary teams, at different organizational levels of academic, industry, research and health care
				CO5	An ability to identify, formulate and solve pharmaceutical problems meeting professional challenges
				CO6	An understanding of pharmacy professional values and ethical responsibility in discharging professional obligations at society, national and global perspectives
				CO7	An ability to communicate effectively both verbal and written to gain recognition at professional circle and societal level.




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Name of the Program:	M PHARM Pharmacology
Year:	1 ST SEMESTER
Course wise COs	

Program	Course name	Course Code	Year	Course Outcomes (COs)	
M PHARM	ADVANCED PHARMACOLOG Y-1	MPL101	1 ST SEM	CO1	Discuss the pathophysiology and pharmacotherapy of certain diseases
				CO2	Explain the mechanism of drug actions at cellular and molecular level
				CO3	Understand the adverse effects, contraindications and clinical uses of drugs used in treatment of diseases
Program	Course name	Course Code	Year	Course Outcomes (COs)	
M PHARM	PHARMACOLOGICAL AND TOXICOLOGICAL SCREENING METHODS-I	MPL102	1 ST SEM	CO1	Appraise the regulations and ethical requirement for the usage of experimental animals.
				CO2	Describe the various animals used in the drug discovery process and good laboratory practices in maintenance and handling of experimental animals
				CO3	Describe the various newer screening methods involved in the drug discovery process
				CO4	Appreciate and correlate the preclinical data to humans




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Name of the Program:	M PHARM Pharmacology
Year:	1 st SEMESTER
Course wise COs	

Program	Course name	Course Code	Year	Course Outcomes (COs)	
M PHARM	Cellular and Molecular Pharmacology	MPL103	1 st SEM	CO1	Explain the receptor signal transduction processes.
				CO2	Explain the molecular pathways affected by drugs.
				CO3	Appreciate the applicability of molecular pharmacology and biomarkers in drug discovery process.
				CO4	Demonstrate molecular biology techniques as applicable for pharmacology




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Name of the Program:	M PHARM Pharmacology
Year:	2 ND SEMESTER
Course wise COs	

Program	Course name	Course Code	Year	Course Outcomes (COs)	
M PHARM	Advanced Pharmacology-II	MPL201	2 nd Sem	CO1	Explain the mechanism of drug actions at cellular and molecular level
				CO2	Discuss the Pathophysiology and pharmacotherapy of certain diseases
				CO3	Understand the adverse effects, contraindications and clinical uses of drugs used in treatment of diseases
Program	Course name	Course Code	Year	Course Outcomes (COs)	
M PHARM	Pharmacological and Toxicological Screening Methods-II	MPL202	2 nd Sem	CO1	Explain the various types of toxicity studies.
				CO2	Appreciate the importance of ethical and regulatory requirements for toxicity studies.
				CO3	Demonstrate the practical skills required to conduct the preclinical toxicity studies.




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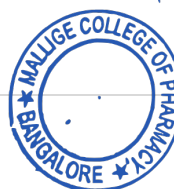
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Name of the Program:	M PHARM Pharmacology
Year:	2 ND SEMESTER
Course wise COs	

Program	Course name	Course Code	Year	Course Outcomes (COs)	
M PHARM	Principles of Drug Discovery	MPL203	2 nd SEM	CO1	Explain the various stages of drug discovery
				CO2	Appreciate the importance of the role of genomics, proteomics and bioinformatics in drug discovery
				CO3	Explain various targets for drug discovery
				CO4	Explain various lead seeking method and lead optimizations




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