GNCP

Subjectwise Course Outcome - [B. Pharmacy - 2021-22]

THIRD SEMESTER	
BP 303 T Pharmaceutical Microbiology [Theory | Regular]	
CO ID.	**Course Outcome**
CO-1	Know about new world of microorganisms and understand methods of identification, cultivation and preservation of them.
CO-2	Understand the importance, various methods and application of sterilization inpharmaceutical products and industry.
CO-3	Demonstrate theory and practical skills in microscopy and handling of compound microscope and staining procedures
CO-4	Understand and apply the knowledge about aseptic area, sterilization equipment and clean room in pharmaceutical industry
CO-5	Demonstrate and learn about various techniques of sterility testing, microbial assay, preservation of pharmaceutical products and cell culture.
BP301T Pharmaceutical Organic Chemistry - II [Theory | Regular]	
CO ID.	**Course Outcome**
CO1	Explain basic knowledge regarding general method of preparation of organic compounds.
CO2	Summarize reactions of organic compounds including synthesis, mechanism, orientation & reactivity.
CO3	Illustrate knowledge of organic compounds in synthesis of some drugs.
CO4	Explain chemistry of fats & oils.
CO5	Differentiate polynuclear organic compounds with respect to their chemistry.
CO6	Structure and uses of important organic compounds.
BP302T Physical Pharmaceutics - I [Theory | Regular]	
CO ID.	**Course Outcome**
CO1	Define and remember various physico-chemical properties (partition coefficient, solubility, Rf etc) of drug molecules, drug Protein complexation, pH buffers and Surface tension of liquids used in the pharmaceutical formulations.
CO4	Identify and interpret the physico-chemical properties, pH-buffers, factors affecting surface tension and complexation properties of drug molecules in the pharmaceutical application.
CO3	Understand the concept of Raults law, surface tension and HLB and apply them in pharmaceutical practices.
CO2	Describe the role of distribution law, diffusion, surfactants, interfacial phenomenon, pharmaceutical buffers, tonicity and concept of complexation.
BP304T Pharmaceutical Engieenring [Theory | Regular]	
CO ID.	**Course Outcome**
CO1	To know various unit operations used in Pharmaceutical industries.
CO2	To understand the material handling techniques.
CO3	To perform various processes involved in the pharmaceutical manufacturing process.
CO4	To carry out various tests to prevent environmental pollution.
CO5	To appreciate and comprehend the significance of plant layout design for optimum use of resources.
CO6	To appreciate the various preventive methods used for corrosion control inPharmaceutical industries.
BP305P Pharmaceutical Organic Chemistry -II [Practical | Regular]	
CO ID.	**Course Outcome**
CO1	How to perform laboratory work in safe & tidy manner.
CO2	How to purify and separate an organic compound by way of seam distillation, recrystallization techniques.
CO3	How to identify the purity of fats and oils by acid value, saponification value and iodine value (including standardization of reagents)..
CO4	How to perform synthesis of organic compounds using diazotization, oxidation reactions and EAS reactions like nitration, halogenation etc.
CO5	How to analyze named reactions like perkin and claisen schmidt reactions by using carbonyl compounds.
BP306P Physical Pharmaceutics [Practical | Regular]	

CO ID.	Course Outcome
CO1	To determine the various properties like solubility, partition coefficient, pKa of the drug.
CO2	To compare the surface tension determined by drop number and drop count methods.
CO3	To correlate the effect of different factors on surface tension, partition coefficient and CMC value
CO4	Demonstrate the procedural parts of practicals
BP307P Pharmaceutical Microbiology and Immunology [Practical | Regular]	
CO ID.	Course Outcome
COP-1	Know about various instruments and equipment, their working and uses, used in pharmaceutical microbiology laboratory.
COP-2	Demonstrate practical skills in fundamental microbiological techniques like media preparation, subculturing, streaking staining etc.
COP-3	Learn various methods of sterilization used for different type of materials, surfaces and environment.
COP-4	Perform specialized methods for their isolation, detection, observation and identification of microorganisms in various samples.
COP-5	Acquire and apply the theories and principles of microbiology in practical, professional life, real-world situations and problems.
BP308P Pharmaceutical Engineering [Practical | Regular]	
CO ID.	Course Outcome
CO1	Operate various equipment used in unit operations such as ball mill, sieve-shaker, hot air oven etc.
CO2	Study effect of various parameters affecting unit operations like filtration and evaporation.
CO3	Understand the importance of various unit operations by using various instruments
CO4	Determination of various constants, values used in various unit operations
CO5	Record data and interpret it
TY - FIFTH SEMESTER	
Pharmaceutical Jurisprudence [Theory | Regular]	
CO ID.	Course Outcome
CO1	Understand meaning of legislation in India and about pharmaceutical legislation also their implications in the manufacture, import, sale, distribution and marketing of pharmaceuticals.
CO2	Know Indian pharmaceutical Acts and Laws, their constututional bodies, their functions and rules.
CO3	Learn about various regulatory authorities and agencies governing the manufacture and sale of pharmaceuticals also various powers they can enforce.
CO4	Know the code of ethics during the pharmaceutical practices such as in relation to his job, in relation to pharmacy profession, in relation to the society etc.
CO5	Aware about various offences in relation with pharmacy profession and pratice and the penalties and punishments subject to related offences or misdeeds.
BP 504 T Pharmacognosy and Phytochemistry - II [Theory | Regular]	
CO ID.	Course Outcome
CO1	Explain the metabolic pathways leading to biosynthesis of various classes of natural products
CO2	Critically assess the utilization of radioactive isotopes in the investigation of biosynthetic pathways
CO3	Describe the source, chemistry, therapeutic uses of various secondary metabolites containing drugs.
CO4	Demonstrate the methods of isolation, identification and analysis of various phytoconstituents
CO5	Describe the methods for industrial production, estimation and utilization of some therapeutically important phytoconstituents
CO6	Learn about modern extraction technique, characterization and identification of the herbal drug and phytoconstituents
CO7	Understand the utility of latest techniques for analysis of phytoconstituents
BP 508 P Pharmacognosy and Phytochemistry - II [Practical | Regular]	
CO ID.	Course Outcome
CO1	Remember the morphological and microscopical characteristics of Crude Drugs
CO2	Create method for isolation of phytoconstituents from crude drugs
CO3	Analysis of isolated phytoconstituents from crude drugs
CO4	Demonstrate and understand the Concept of Paper and Thin Layer Chromatography of Herbal Extracts
CO5	Understand the principle involved in Isolation and analysis of volatile oils

CO6	Implement different chemical tests for the identification of unorganized crude drugs
BP501T Medicinal Chemistry -II [Theory | Regular]	
CO ID.	Course Outcome
CO1.	Understand the chemistry of drugs with respect to their pharmacological activity.
CO2	Understand the drug metabolic pathways, adverse effect and therapeutic value of drugs.
CO3	Know the Structural Activity Relationship of different class of drugs.
CO4	Study the chemical synthesis of selected drugs.
BP502 T Industrial Pharmacy -I [Theory | Regular]	
CO ID.	Course Outcome
CO1	Relate the physicochemical properties of drugs to the characteristics of dosage form
CO2	Appreciate the influence of drug properties and Pharmaceutical additives on performance of drug product
CO3	Propose the formulation of a specific dosage form for a particular drug
CO4	Formulate and prepare tablets, capsules and liquid orals using established procedures and technology.
CO5	Describe the facilities and standards necessary for the industrial production of sterile dosage forms.
CO6	Formulate and prepare different types of parenteral and ophthalmic dosage forms
CO7	Evaluate the pharmaceutical dosage forms for quality and stability and compare with standards prescribed in the pharmacopoeia
CO8	Select ingredients and formulate cosmetics such as lipsticks, shampoos, cold cream and vanishing cream, tooth pastes, hair dyes and sunscreens
CO9	Identify containers, closures, valves and propellants for different types of aerosol systems.
CO10	Select and evaluate appropriate packaging materials for various pharmaceutical dosage forms.
BP503.T. Pharmacology - II [Theory | Regular]	
CO ID.	Course Outcome
CO1,	understand the mechanism of action of drug action from different class and categories.
CO2	Know drug relevance in the treatment of various diseases and disorders.
CO3	Understand the clinical uses and adverse effects and contraindications of drugs acting on varoius systems of the body.
CO4	Understand basic concept of bioassay.
CO5	Appreciate correlation of pharmacology with related medical sciences
BP506P Industrial Pharmacy - I [Practical | Regular]	
CO ID.	Course Outcome
CO1	Prepare formulations of different dosage forms as per the formula and select ingredients according to type of Tablets
CO2	Select suitable packaging container for a dosage form
CO3	Relate the physicochemical properties of drugs to dosage form characteristics
CO4	Evaluate different dosage forms by performing quality control tests
CO5	Create a new formula for preparation of dosage form and make use of different equipments
CO6	Prepare and evaluate Injections
CO7	Prepare cold cream and Vanishing cream
BP507 P. Pharmacology - II [Practical | Regular]	
CO ID.	Course Outcome
CO1	Understand in-vitro pharmacology and various physiological salt solutions.
CO2	Demonstrate isolation of different organs/tissues from the laboratory animals by computer simulation experiments, and various bioassay methods in experimental pharmacology.
CO3	Demonstrate the various receptor actions using isolated tissue preparation.
CO4	Understand different screening techniques of drugs from category of NSAIDs, by using computer simulation method.
CO5	Understand the effects of ions and drugs on isolated tissue/organ preparation.
FINAL YEAR - SEVENTH SEMESTER	

Industrial Pharmacy - II [Theory | Regular]	
CO ID.	**Course Outcome**
IP.CO1	Know the process of pilot plant and scale up of pharmaceutical dosage forms
IP.CO2	Understand the process of technology transfer from lab scale to commercial batch
IP.CO3	Know different Laws and Acts that regulate pharmaceutical industry
IP.CO4	Understand the approval process and regulatory requirements for drug products
IP.CO5	Know the principals of modern quality management principles
BP 703T Pharmacy Practice [Theory | Regular]	
CO ID.	**Course Outcome**
CO1	To understand the elements of hospital and hospital pharmacy
CO2	To know various drug distribution methods in a hospital
CO3	To grasp the significance of pharmaceutical services, clinical services and patient care services
CO4	To understand the community pharmacy management and inventory control
CO5	To appreciate the concept of Rational drug therapy
CO6	To provide integrated, critically analysed drug and poison information to enable healthcare professionals in the efficient patient management
CO7	To Interpret the laboratory results to aid the clinical diagnosis of various disorders
BP 706PS Practice School: cosmetic science/Quality Control &Standardization of Herbals/Pharmaceutical Marke [Practical | Elective]	
CO ID.	**Course Outcome**
CO1	Gain updated information on cosmetic science; properties of the skin, hair and nails and the cosmetic products and ingredients that may actively affect these properties.
CO2	Apply information gained to make cosmetic formulations correctly and effectively for probable commercial use
CO3	Recognize the ingredient(s) that can be effective or problematic for an individual with specific needs or complaint.
CO4	Make comparisons between the cosmetic products and evaluate their suitability for a particular need.
CO5	Critically review, analyse, and evaluate scientific data and basic research in cosmetic science.
BP701T Instrumental Methods of Analysis [Theory | Regular]	
CO ID.	**Course Outcome**
CO1	1. Understand the chromatographic separation and analysis of drug.
CO2	Perform quantitative and qualitative analysis of drugs using chromatographic techniques.
CO3	Perform qualitative and quantitative analysis of substances using chromatographic instruments.
CO4	To understand the interaction of matters with electromagnetic radiations and its application in drug analysis.
BP704T Novel Drug Delivery System [Theory | Regular]	
CO ID.	**Course Outcome**
CO1	Upon completion of NDDS course, students shall be able to understand various approaches for development of novel drug delivery systems
CO2	Upon completion of NDDS course, students shall be able to To understand the criteria for selection of drugs and polymers for the development of Novel drug delivery systems, their formulation and evaluation
CO3	Upon completion of NDDS course, students shall be able to correlate various factors influencing formulation and development of novel drug delivery systems.
CO4	The students will be able to apply strategies in selecting physical form of the formulation, formulation technologies and evaluation tests.
BP705P Instrumental Methods of Analysis [Practical | Regular]	
CO ID.	**Course Outcome**
CO1	identification and separation of compounds by chromatography
CO2	Separation and purification of compounds by different chromatographic techniques
CO3	understand the interaction of matter with electromagnetic radiations and its application in drug analysis
CO4	understand the chromatographic separation and analysis of drug
CO5	Perform quantitative and qualitative analysis of drugs using various analytical instruments

B.Pharm.Direct Second Year (Third Sem.)	
Pharmaceutical Organic Chemistry - II [Theory | Regular]	
CO ID.	Course Outcome
Course outcome not yet added by the respective faculty.(Ms. Pradnya Gondane)	
Physical Pharmaceutics - I [Theory | Regular]	
CO ID.	Course Outcome
Course outcome not yet added by the respective faculty.(Dr. Govind Lohiya)	
Pharmaceutical Microbiology [Theory | Regular]	
CO ID.	Course Outcome
CO-1	Know about new world of microorganisms and understand methods of identification, cultivation and preservation of them.
CO-2	Understand the importance, various methods and application of sterilization inpharmaceutical products and industry.
CO-3	Demonstrate theory and practical skills in microscopy and handling of compound microscope and staining procedures
CO-4	Understand and apply the knowledge about aseptic area, sterilization equipment and clean room in pharmaceutical industry
CO-5	Demonstrate and learn about various techniques of sterility testing, microbial assay, preservation of pharmaceutical products and cell culture.
Pharmaceutical Engineering [Practical | Regular]	
CO ID.	Course Outcome
Pharmaceutical Organic Chemistry -II [Practical | Regular]	
CO ID.	Course Outcome
Pharmaceutical Microbiology and Immunology [Practical | Regular]	
CO ID.	Course Outcome
Physical Pharmaceutics [Practical | Regular]	
CO ID.	Course Outcome
BP304T Pharmaceutical Engieenring [Theory | Regular]	
CO ID.	Course Outcome
CO1	To know various unit operations used in Pharmaceutical industries.
CO2	To understand the material handling techniques.
CO3	To perform various processes involved in the pharmaceutical manufacturing process.
CO4	To carry out various tests to prevent environmental pollution.
CO5	To appreciate and comprehend the significance of plant layout design for optimum use of resources.
CO6	To appreciate the various preventive methods used for corrosion control inPharmaceutical industries.
FY- FIRST SEMESTER	
Pharmaceutics-I [Theory | Regular]	
CO ID.	Course Outcome
CO1	To know the history of profession of pharmacy.
CO2	To understand the basics off different dosage forms, pharmaceutical incompatibilities and pharmaceutical calculations.
CO3	To understand the professional way of handling the prescriptions.
CO4	Preparation of various conventional dosage forms.
Pharmaceutical Inorganic Chemistry [Theory | Regular]	
CO ID.	Course Outcome
CO1	know the sources of impurities and methods to determine the impurities in inorganic drugs and pharmaceuticals
CO2	understand the medicinal and pharmaceutical importance of inorganic compounds
Pharmaceutical Analysis-I [Practical | Regular]	

CO ID.	Course Outcome
CO1	Understand the fundamental concept of pharmaceutical analysis
CO2	Learn methods to prepare different strengths of solutions
CO3	Understand sources of errors
CO4	Learn the fundamentals of volumetric analytical skills
CO5	Understand principles of volumetric and electro-chemical titrations

Pharmaceutics-I [Practical | Regular]

CO ID.	Course Outcome
CO1	Formulation of various liquid pharmaceutical dosage forms.
CO2	Fofrmulation and preparation of semisolid dosage forms.
CO3	Formulation and preparation of solid dosage forms.
CO4	Design proper labels for the prepared formulations

Pharmaceutical Inorganic Chemistry [Practical | Regular]

CO ID.	Course Outcome
CO1	To explain the general principles and procedures for limit tests for chlorides, sulphates, iron, arsenic, lead, heavy metals.
CO2	To describe the sources of impurities in pharmacopoeial substances with example

Communication Skills [Practical | Regular]

CO ID.	Course Outcome
Course outcome not yet added by the respective faculty.(No faculty assigned.)	

Remedial Biology [Practical | Regular]

CO ID.	Course Outcome
Course outcome not yet added by the respective faculty.(No faculty assigned.)	

BP101T Human Anatomy & Physiology - I [Theory | Regular]

CO ID.	Course Outcome
CO1	Identify the various tissues and organs of different systems of human body.
CO2	. Appreciate coordinated working pattern of different organs of each system
CO3	Describe the various homeostatic mechanisms and their imbalances.
CO4	Explain the gross morphology, structure and functions of various organs of the humanbody.
CO 5	UNDERSTAND THE MECHANISMS UNDERLYING THE PHYSIOLOGY OF THE BODY STRUCTURES

BP102T Pharmaceutical Analysis-I [Theory | Regular]

CO ID.	Course Outcome
CO1	Understand the fundamental concept of pharmaceutical analysis
CO2	Learn methods to prepare different strengths of solutions
CO3	Understand sources of errors
CO4	Learn the fundamentals of volumetric analytical skills
CO5	Understand principles of volumetric and electro-chemical titrations

BP105T Communication Skills [Theory | Regular]

CO ID.	Course Outcome
CO1	Students should be able to define communication skills, barriers in communication, self awareness.
CO2	Communicate effectively (Verbal and Non Verbal)
CO3	Elaborate the communication process, the process of return communication.
CO4	Explain various interview skills, presentation skills, and the process of return communication.

BP106RBT Remedial Biology Elective [Theory | Elective]

CO ID.	Course Outcome

CO1	know the classification and salient features of five kingdoms of life
CO2	Understand the basic components of anatomy & physiology of plant
CO3	To understand the basic components of anatomy & physiology animal with special reference to human
BP106RMT Remedial Maths [Theory | Elective]	
CO ID.	Course Outcome
CO1	Know the theory and their application in Pharmacy
C02	Solve the different types of problems by applying theory
C03	Appreciate the important application of mathematics in Pharmacy
BP107P Human Anatomy & Physiology [Practical | Regular]	
CO ID.	Course Outcome
CO1	know the instruments used in measurement of blood parameters
CO2	know the normal values of blood constituents
CO3	ability to identify different tissues and organs of human body systems
CO4	ability to determine various blood parameters by performing experimental procedures.

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Subjectwise Course Outcome - [Pharmaceutical Chemistry - 2021-22]

SY - THIRD SEMESTER	
Proposal Presentation [Theory | Regular]	
CO ID.	Course Outcome
Course outcome not yet added by the respective faculty.(Dr. Sumit Arora , Dr. Nidhi Sapkal , Mrs. Archana Mungle , Dr. Subhash Yende)	
RESEARCH WORK [Practical | Regular]	
CO ID.	Course Outcome
CO1	To understand the structure of research and review articles
CO2	To be able to interpret the results and discussion of a research problem
CO3	To be able to form meaningful research problems
CO4	To learn the communication skills required for delivering effective seminars
Not assigned Journal Club [Theory | Regular]	
CO ID.	Course Outcome
CO1	To understand the structure of research and review articles
CO2	To be able to interpret the results and discussion of a research problem
CO3	To be able to form meaningful research problems
CO4	To learn the communication skills required for delivering effective seminars
FY-FIRST SEMESTER	
Seminar [Practical | Regular]	
CO ID.	Course Outcome
CO1	To understand the structure of research and review articles
CO2	To be able to interpret the results and discussion of a research problem
CO3	To be able to form meaningful research problems
CO4	To learn the communication skills required for delivering effective seminars
MPC 101T Modern Pharmaceutical Analytical Techniques [Theory | Regular]	
CO ID.	Course Outcome
CO1	To understand Analytical techniques for identification, characterization and quantification of drugs
CO2	To learn theoretical and practical skills of instrument handling and use.
CO3	To perform structural Elucidation of organic compounds using spectroscopic tools
CO4	To apply knowledge of spectroscopy, chromatography and other techniques for quantitation, identification and structural elucidation of compounds.
MPC 102T Advanced Organic Chemistry -I [Theory | Regular]	
CO ID.	Course Outcome
CO1	Explain the different organic intermediates involved in determining the reaction mechanism such as SN1, SN2 and E1, E2 mechanism.
CO2	Discuss the mechanism and applications of various named reactions
CO3	Explain the applications of various synthetic reagents
CO4	Explain the various protecting and de-protecting groups
CO5	Explain the chemistry, synthesis and mechanism of reactions in heterocyclic compounds
CO6	Explain the principle, applications of retrosynthesis and disconnection approach to develop synthetic routes for small target molecule
MPC 103T Advanced Medicinal chemistry [Theory | Regular]	
CO ID.	Course Outcome

CO1	To understand different stages of drug discovery
CO2	To understand the role of medicinal chemistry in drug research
CO3	To understand different techniques of drug discovery
CO4	To understand the various strategies to design and develop new drug like molecules for biological targets
CO5	To understand the peptidomimetics and its role in drug discovery
CO6	To understand the impact of the professional pharmacy solutions in societal and environmental contexts, and need for sustainable development.
MPC 104T Chemistry of Natural Products [Theory | Regular]	
CO ID.	Course Outcome
CO 1	Students will be able to understand different types of natural compounds and their chemistry and medicinal importance
CO 2	Students will be able to understand the importance of natural compounds as lead molecules for new drug discovery.
CO 3	Students will be able to understand the concept of rDNA technology tool for new drug discovery
CO 4	Students will be able to understand general methods of structural elucidation of compounds of natural origin
CO 5	Students will be able to understand Isolation, purification and characterization of simple chemical constituents from natural source
MPC 105P Pharmaceutical Chemistry Practical I [Practical | Regular]	
CO ID.	Course Outcome
CO1	To learn the use of modern analytical techniques like spectroscopy, chromatography, flurimetry, flame photometry, etc.
CO2	To learn the techniques involved in the synthesis of organic/medicinal compounds utilising some principles of organic chemistry.
CO3	To learn the techniques involved in isolation, purification and identification of phytoconstituents.

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Subjectwise Course Outcome - [Pharmaceutics - 2021-22]

SY- SEM III (RM and B)	
Research Project [Practical | Regular]	
CO ID.	Course Outcome
Course outcome not yet added by the respective faculty.(No faculty assigned.)Course outcome not yet added by the respective faculty.()Course outcome not yet added by the respective faculty.()Course outcome not yet added by the respective faculty.()Course outcome not yet added by the respective faculty.()Course outcome not yet added by the respective faculty.()	
MRM 301T - Research Research Methodology and Biostatistics [Theory | Regular]	
CO ID.	Course Outcome
CO1	Discuss different methodologies and techniques used in research work.
CO3	Describe the appropriate statistical methods required for a particular research design
CO2	Explain basic computer skills necessary for the conduct of research.
CO4	Develop a appropriate framework for research studies
FY-FIRST SEMESTER	
Seminar/Assignment [Theory | Regular]	
CO ID.	Course Outcome
CO1	Enhance the communication skills and knowledge
CO2	Explore certain topic in depth
CO3	Improve organizational skills
MPH 101T Modern Pharmaceutical Analytical Techniques [Theory | Regular]	
CO ID.	Course Outcome
CO1	To understand Analytical techniques for identification, characterization and quantification of drugs
CO2	To learn theory and practical skills of instrument handling and use.
CO3	To analyze analytical tools for identification, characterization and quantification of drugs.
CO4	To apply knowledge of spectroscopy, chromatography and other techniques for quantitation, identification and structural elucidation of compounds.
MPH 102T Drug Delivery Systems [Theory | Regular]	
CO ID.	Course Outcome
CO1	To understand the various approaches for development of novel drug deliverysystems
CO2	To correlate the the criteria for selection of drugs and polymers for the development of delivering system
CO3	The formulation and evaluation of Novel drug delivery systems
MPH 104T Regulatory Affairs [Theory | Regular]	
CO ID.	Course Outcome
C01	Understand the approval process and regulatory requirements for drugs, medical devices, biologicals. Prepare the documentation for filing Investigational New Drug Application (INDA), New Drug Application (NDA), Abbreviated New Drug Application (ANDA), and Biologic Licence Application (BLA). Know the significance of BA, BE studies.
C02	Summarize the Concepts of innovator and generic drugs development process. Understand the regulatory requirements for medical devices and combination products. Know the regulatory requirements of EU, MHRA, TGA, and ROW pharma markets. Search and use appropriate ICH guidelines for regulatory filing.
C03	Explain the meaning of investigational New Drug and know the significance of the preparation of Investigational Medical Product Brochure and Investigator brochure and its format as per Good Clinical Practice Guidelines.
C04	Preparation of Dossiers and their submission to regulatory agencies in different countries

C05	Know the regulatory requirements for conducting clinical trials. Understand the preparation and procedure for approval of clinical trial protocols. Requirements of HIPAA and pharmacovigilance during clinical trials.
MPH103T Modern Pharmaceutics [Theory | Regular]	
CO ID.	Course Outcome
CO1	Understand the elements of pre-formulation studies
CO2	The Active Pharmaceutical Ingredient and Generic drug development
CO3	Know industrial management and GMP considerations
CO4	Understand the concept of Optimization techniques and apply those for the preparation of pharmaceutical formulations
CO5	Understand physics of tablet compression and know various consolidation parameters for tablets
MPH105P Pharmaceutics practical-I [Practical | Regular]	
CO ID.	Course Outcome
CO1	Perform pre formulation study for successful formulation of pharmaceuticals
CO2	Know the effect of micromeritic properties, compressional force, particle size on tablet dissolution as well as disintegration.
CO3	Formulate and evaluate various sustained release dosage forms.
CO4	Perform in-process and finished product quality control tests for tablets, capsules, parenteral and semisolid dosage forms
CO5	Estimation of drug in pharmaceutical by using modern analytical techniques
SY- SEM III	
Discussion/Presentation (Proposal presentation) [Theory | Regular]	
CO ID.	Course Outcome
CO1	Understand the research topic .
CO2	State the importance of the problem.
CO3	Derive planned methods for data collection and analysis.
CO4	Justify that the Aim and Objectives of the topic meet the title of the project.
Journal Club [Theory | Regular]	
CO ID.	Course Outcome
CO1	Prioritize useful resources among a multitude of publications.
CO2	Find and use the recently published literature for carrying out research on the selected topic.
CO3	Able to improve presention and communication skills.
CO4	Improve critique skills, as well as keep up-to-date with the current knowledge in the respective research area.
CO5	Able to interpete and discuss the results.
CO6	To provide a background for the research, explain the different techniques, processes and present important findings
CO7	To improve reading habits, promotion of critical thinking and acquisition of critical appraisal skills.
CO8	To strengthening of collegial relationships and team work.

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Subjectwise Course Outcome - [Pharmaceutical Quality Assurance - 2021-22]

SY - THIRD SEMESTER	
Seminar [Theory | Regular]	
CO ID.	Course Outcome
CO1	Understand the research topic .
CO2	State the importance of the problem.
CO3	Derive planned methods for data collection and analysis.
CO4	Justify that the Aim and Objectives of the topic meet the title of the project.
Journal Club journal club [Theory | Regular]	
CO ID.	Course Outcome
CO-1	Prioritize useful resources among a multitude of publications.
CO2	Find and use the recently published literature for carrying out research on the selected topic.
CO3	Able to improve presentation and communication skills.
Research Methodology Research Methodology [Theory | Regular]	
CO ID.	Course Outcome
CO1	Discuss different methodologies and techniques used in research work.
CO3	Describe the appropriate statistical methods required for a particular research design
CO2	Explain basic computer skills necessary for the conduct of research.
CO4	Develop a appropriate framework for research studies
FY-SEM I	
Seminar [Practical | Regular]	
CO ID.	Course Outcome
Course outcome not yet added by the respective faculty.(No faculty assigned.)Course outcome not yet added by the respective faculty.()Course outcome not yet added by the respective faculty.(Dr. Suhas Padmane, Dr. Sheelpriya Walde)Course outcome not yet added by the respective faculty.(Dr. Suhas Padmane, Dr. Sheelpriya Walde)	
MQA 101T Modern Pharmaceutical Analytical Techniques [Theory | Regular]	
CO ID.	Course Outcome
CO1	To understand Analytical techniques for identification, characterization and quantification of drugs
CO2	To learn theory and practical skills of instrument handling and use.
CO3	To perform structural Elucidation of organic compounds using spectroscopic tools
CO4	To apply knowledge of spectroscopy, chromatography and other techniques for quantitation, identification and structural elucidation of compounds.
MQA 102 T Quality Management System [Theory | Regular]	
CO ID.	Course Outcome
CO1	Understand and define quality and its concept
CO2	learn strategic planning and implementation of quality systems
CO3	Understand keys to know customer need and satisfaction
CO4	Describe various tools and systems for quality management
CO5	Understand importance of ICH guidelines and concept of statistical process control

CO6	Learn the concept of benchmarking in quality management

MQA 103T Quality Control and Quality Assurance [Theory | Regular]	
CO ID.	**Course Outcome**
CO1	Explain the cGMP aspects in a pharmaceutical industry
CO2	Describe the importance of documentation
CO3	Understand the scope of quality certifications applicable to Pharmaceuticalindustries
CO4	Understand the responsibilities of QA & QC departments

MQA 104 T Product Development and Technical Transfer [Theory | Regular]	
CO ID.	**Course Outcome**
CO1	Understand the principles of drug discovery and development as well as know the requirements of filing INDA, NDA, and ANDA. Know the procedure and guidance available for post-approval changes in the product.
CO2	Understand the concept and significance of pre-formulation studies to be carried out during drug product development. Know the techniques for the study of various characteristics of drugs and excipients.
CO3	Know the concept of Pilot Plant Scale-up and design layout for various dosage form manufacturing.
CO4	Understand the responsibilities of R&D, F&D, Quality Assurance, and Quality Control department in selecting a suitable pack for the drug product and also their role in successful Technology transfer

MQA 105P Pharmaceutical Quality Assurance I [Practical | Regular]	
CO ID.	**Course Outcome**
CO-1	Perform in-process and finished product quality control tests for tablets, capsules, parenteral and semisolid dosage forms
CO-2	Analyze and evaluate drug in pharmaceutical by using modern analytical techniques
CO-3	Analyze and develop Stability study protocol for pharmaceuticals
CO-4	Perform pre formulation study for successful formulation of pharmaceuticals