PROGRAM: B.PHARMACY					
S. NO	**COURSE/CODE**	**GENDER**	**ENVIRONMENT AND SUSTAINABILITY**	**HUMAN VALUES**	**PROFESSIONAL ETHICS**
01	Pharmaceutical Analysis **(BP102T)**			Sources of errors, types of errors, methods of minimizing errors, accuracy, precision and significant figures. Pharmacopoeia, Sources of impurities in medicinal agents, limit tests.	
02	Pharmaceutics-1 **(BP103T)**	Definition, Factors affecting posology. Pediatric dose calculations based on age, body weight and body surface area.			
03	Pharmaceutical inorganic chemistry **(BP104T)**		Radio activity, Measurement of radioactivity, Properties of α, β, γ radiations,	History of Pharmacopoeia, Sources and types of impurities, principle Involved in the limit	

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			Half life, radio isotopes and study of radioisotopes- Sodium iodide I^{131}, Storage conditions, precautions & Pharmaceutical application of radioactive substances.	Test for Chloride, Sulphate, Iron, Arsenic, Lead and Heavy metals, modified limit test for Chloride and Sulphate.	
04	Remedial Biology **(BP106RBT)**	Parts of female reproductive system Parts of male reproductive system Spermatogenesis and Oogenesis, Menstrual cycle		Definition and characters of living organisms. Diversity in the living world. Binomial nomenclature Five kingdoms of life and basis of classification. Salient features of Monera, Potista, Fungi, Animalia and Plantae,Virus.	
05	Remedial Biology **(BP112RBP)**				Determination of blood group, Determination of blood pressure, Determination of tidal

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					Volume.
06	Remedial Mathematics **(BP106RMT)**				Application in solving chemical kinetics and pharmacokinetics data.
07	Human anatomy and physiology-II **(BP201T)**	Anatomy of male and female reproductive system, Functions of male and female reproductive system, sex hormones, physiology of menstruation, fertilization, spermatogenesis, oogenesis, pregnancy and parturition			Formation and role of ATP, Creatinine Phosphate and BMR. Chromosomes, genes and DNA, protein synthesis, genetic pattern of inheritance
08	Human anatomy and physiology **(BP207P)**			Determination of tidal volume and vital capacity. Study of digestive, respiratory, cardio vascular systems, urinary and reproductive systems with the help of models, charts and specimens. Recording of basal mass index.	Study of family planning devices and pregnancy diagnosis test. Demonstration of total blood count by cell analyser. Permanent slides of vital organs and gonads.

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09	Biochemistry **(BP203T)**				Classification; biological significances of ATP and cyclic AMP Hormonal regulation of blood glucose level and Diabetes mellitus.
10	Biochemistry **(BP209P)**				Determination of blood creatinine. Determination of blood sugar. Determination of serum total cholesterol.
11	Pathophysiology **(BP204T)**			Asthma, Chronic obstructive airways diseases. Acute and chronic renal failure. Diabetes, thyroid diseases, disorders of sex hormones.	Pathophysiology of Atherosclerosis, Meningitis, Typhoid, Leprosy, Tuberculosis, AIDS, Syphilis, Gonorrhea.
12	Computer applications in pharmacy **(BP205T)**				Chromatographic data Analysis (CDS), Laboratory Information Management System (LIMS) and Text Information Management System (TIMS), Patient Monitoring System, Pharma Information System. Impact of

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					Bioinformatics in Vaccine discovery, Pharmacy Drug database.
13	Computer applications in Pharmacy **(BP205P)**				Design a form in MS Access to view, add, delete and modify the Patient record in the database
14	Environmental sciences **(BP206T)**		The Multidisciplinary nature of environmental studies, Natural resources and associated problems, Ecosystems, Environmental Pollution: Air pollution; Water pollution; Soil pollution		
15	Pharmaceutical organic chemistry II **(BP301T)**				Analytical constants: Acid value, Saponification value, Ester value, Iodine value, Acetyl value, Reichert Meissl (RM) value–significance and principle involved in their determination.

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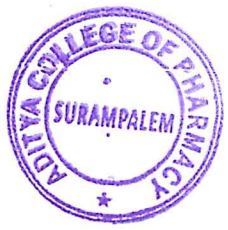
16	Pharmaceutical organic chemistry II **(BP301P)**				Iodine value, acid value, and saponification value.
17	Pharmaceutical Microbiology **(BP303T)**	Study of morphology, classification, reproduction/ replication and Cultivation of Fungi and Viruses.			Sterility testing of solids, liquids, ophthalmic and other sterile products according to IP, BP and USP. Assessment of a new antibiotic. Application of cell cultures in pharmaceutical Sector and research.



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18	Pharmaceutical Microbiology **(BP303P)**				Microbiological assay of antibiotics using cup platemethodandothermethods. Sterilitytestingproceduresofpharmaceuticals. Bacteriological examination of water. Biochemical tests.
19	Pharmaceutical Engineering **(BP304T)**		Factors affecting during materials selected for Pharmaceutical plant Construction. Theories of corrosion, types of corrosion and there prevention. Ferrous and non ferrous metals, inorganic and organic nonmetals, basic of material handling systems.		

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20	Pharmaceutical Organic Chemistry-III **(BP401T)**				Stereo specific and stereo selective reactions.
21	Medicinal Chemistry-I **(BP406P)**				Determination of partition coefficient for any two drugs.
22	Physical Pharmaceutics-II **(BP403T)**		Reaction kinetics: zero, pseudo-zero, first & second order, units of basic rate constants, determination of reaction order. Physical and chemical factors influencing the chemical degradation of pharmaceutical product: temperature, solvent, ionic strength, dielectric		Accelerated stability testing in expiration dating of pharmaceutical dosage forms. Photolytic degradation and its prevention.

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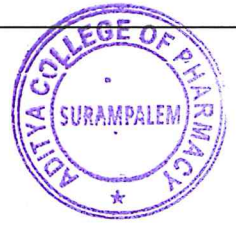
			Constant, specific & general acid base catalysis, Simple numerical problems. Stabilization of medicinal agents against common reactions like hydrolysis & oxidation.		
23	Physical pharmaceutics-II **(BP407P)**				Accelerating stability studies.
24	Pharmacology **(BP404T)**			Drug addiction, drug abuse, tolerance, dependence tachyphylaxis, idiosyncrasy, and allergy. Pharmacological interactions and adverse drug reactions (pharmacokinetic and pharmacodynamics). Drug discovery and	



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				Clinical evaluation of new drugs-Drug discovery phase, preclinical evaluation phase, clinical trial phase, phases of clinical trials and Pharmacovigilance, alcohols and disulfiram.	
25	Pharmacology-I **(BP408P)**		Maintenance of laboratory animals in accordance with CPCSEA Guidelines.		
26	Pharmacognosy and Phytochemistry-I **(BP405T)**		Definition, history, scope and development of pharmacognosy.	Adulteration of drugs of natural origin. Evaluation by organoleptic, microscopic, physical, chemical and biological methods and properties. Quantitative microscopy of crude drugs including lycopodium spore	Edible vaccines. Role of Pharmacognosy in allopathy and traditional systems of medicine namely, Ayurveda, Unani, Siddha, Homeopathy and Chinese systems of medicine. Novel medicinal agents from marine sources.

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				method, leaf constants, camera lucida and diagrams of microscopic objects to scale with camera lucida.	
27	Pharmacognosy and Photochemistry-I **(BP408P)**				Determination of Fiber length and width Determination of number of starch grains by Lycopodium spore method Determination of Ash value Determination of Extractive values of crude drugs Determination of moisture content of crude drugs Determination of swelling index and foaming
28	Medicinal Chemistry-II **(BP501T)**	Nomenclature, Stereo chemistry and metabolism of steroids Testosterone, Nandralone,			

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		Progestrones, Oestriol, Oestradiol, Oestrione, Diethyl stilbestrol. Sildenafil, Tadalafil. Mifepristone, Norgestril, Levonorgestrol Cortisone, Hydrocortisone, Prednisolone, Betamethasone, Dexamethasone.			
29	Industrial Pharmacy-I **(BP502T)**		Application of preformulation considerations in the development of solid, liquid oral and parenteral dosage forms and its impact on stability of dosage forms. Stability studies Materials used for packaging of pharmaceutical products,		

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			Factors influencing choice of containers, legal and official requirements for containers, stability aspects of packaging materials, quality control tests.		
30	Industrial Pharmacy-I **(BP506P)**				Preformulation studies on paracetamol /aspirin/ or any other drug. Preparation and evaluation of Paracetamol tablets. Preparation and evaluation of Aspirin tablets. Coating of tablets-film coating of tables/granules. Preparation and evaluation of Tetracycline capsules. Preparation of Calcium Gluconate injection. Preparation of Ascorbic Acid injection. Qulaity control test of (as

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					Per IP) marketed tablets and capsules. Preparation of Eye drops/and Eye ointments. Preparation of Creams (cold/vanishingcream). Evaluation of Glass containers (as per IP).
31	Pharmacology-II **(BP503T)**	Androgens and Anabolic steroids. Estrogens, progesterone and oral contraceptives. Drugs acting on the uterus.			Principles and applications of bioassay. Types of bioassay Bioassay of insulin, oxytocin, vasopressin, ACTH, d-tubocurarine, digitalis, histamine and 5-HT.
32	Pharmacognosy and Phytochemistry-II **(BP504T)**		Study of utilization of radioactive isotopes in the investigation of Biogenetic studies.		
33	Pharmaceutical Jurisprudence **(BP505T)**	Objectives, definitions, institutional animal ethics committee, CPCSEA standards for breeding and stocking			A brief study of drugs enquiry committee, health survey and development committee, Hathi committee and mudaliar committee. Pharmacist relation to medical profession and pharmacist's oath.

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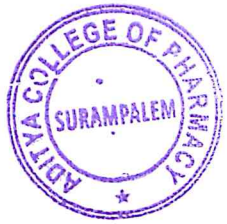
		Of animals, performance of experiments, transfer and acquisition of animals for experiment, records, rights to suspend or revoke registration, offences and penalties.			
34	Medicinal Chemistry-III **(BP601T)**				Types and applications of combinatorial chemistry: solid phase and solution phase synthesis.
35	Medicinal Chemistry-III **(BP607P)**	Preparation of medicinally important compounds or intermediates by microwave irradiation technique.			
36	Herbal drug technology **BP603T)**		**Herbal drugs industry:** Present scope and future prospects A brief account of plant based industries and institutions Involved in work on medicinal and aromatic plants in India.		Good manufacturing practices (GMP), patenting and regulatory issues of herbal drugs. Conventional herbal formulations like syrups, mixtures and tablets and novel dosage forms like phytosomes. WHO and

					ICH guidelines for the assessment of herbal drugs stability testing of herbal drugs. Definition of the terms: Patent, IPR, Farmers right, Breeder's right, Bio prospecting and Bio piracy Patenting aspects of traditional knowledge and natural products. Case study of Curcuma and Neem Regulations in India (ASU,DTAB,ASU, DCC), Regulation of manufacture of ASU drugs-Schedule Z of drugs and cosmetics act for ASU drugs.
37	Biopharmaceutics and Pharmacokinetics **(BP604T)**	Factors influencing drug absorption.			
38	Pharmaceutical Biotechnology **(BP605T)**				Biosensors-Working and applications of biosensors in pharmaceutical industries. Brief introduction of PCR



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					General method of the preparation of bacterial vaccines, toxoids, viral vaccine, antitoxin, serum-immune blood derivatives and other products relative to immunity. Immune blotting techniques-ELISA, Western blotting, southern blotting.
39	Pharmaceutical Quality Assurance **(BP606T)**		Personnel responsibilities, training hygiene and personal records. Design, construction and plant layout, maintenance, sanitation, environmental control) utilities and maintenance of sterile areas, control of contamination. Equipment selection,		Definition and concept of Quality control, quality assurance and GMP Definition, elements, philosophies, Purpose, participants, process of harmonization, brief overview of QSEM, with special emphasis on Q series guidelines, ICH stability testing guidelines. Definition, Overview, elements of QbD program, tools Overview, benefits, elements steps for registration. Principles And procedures.

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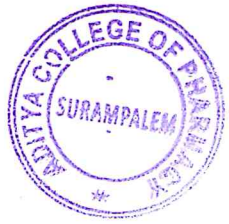
			purchase, specification,maintenance,purchase. Specifications and maintenance of stores for raw materials.		
40	Industrial Pharmacy-II **(BP702T)**		Space requirements, raw materials, pilot plant scale up considerations for solids, liquid orals, semisolids and relevant documentations,SUPAC guidelines, introduction to platform technology.	Personnel requirements.	WHO guidelines for technology transfer(TT): Terminology, technology transfer protocol, quality risk management, transfer from R&D to production (Process, packaging and cleaning), Granularity of TT process (API, Excipients, finished products, packaging materials) Documentation, premises and equipment's, qualification and validation, quality control, analytical method transfer, approved regulatory bodies and agencies, Commercialization-practical aspects and problems (case studies),



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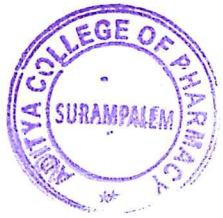
					TT agencies in India APCTD, NRDC, TIFAC, BCIL, TBSE/SIDBI; TT Related documentation- Introduction Historical overview of regulatory affairs, regulatory authorities, role of regulatory affairs department, and responsibility of regulatory affairs professionals. Drug development teams, Non-clinical drug development, pharmacology, drug metabolism and toxicology, General consideration of investigational new drug (IND) application, investigator's brochure (IB) and New Drug application (NDA),



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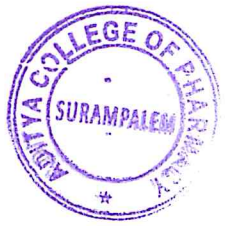
					Clinical research/BE studies, Clinical research protocols, Biostatistics in Pharmaceutical product development, data presentation for FDA submissions, management of clinical studies. Quality management and certification's: Concept of quality, total quality management, quality by design(QbD), Six sigma concept, out of specifications (OOS),change control, introduction to ISO 9000 series of quality system sstandards, ISO14000, NABL, GLP Central drug standard control organization (CDSCO) and state licensing authority: Organization, Responsibilities, certificate of Pharmaceutical product (COPP), Regulatory requirements and Approval procedures for New Drugs.



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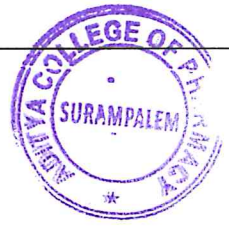
41	Pharmacy Practice **(BP703T)**			Definition, Classification of hospital-Primary, Secondary and Tertiary hospitals, Classification based on clinical and non-clinical basis, Organization Structure of a Hospital, and Medical staffs involved in the hospital and their functions. Classifications-Excessive pharmacological effects, secondary pharmacological effects, idiosyncrasy, allergic drug reactions, genetically determined toxicity, toxicity following sudden withdrawal of drugs, Drug interaction beneficial interactions,	



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				adverse interactions, and pharmacokinetic drug interactions, Methods for detecting drug interactions, spontaneous case reports and record linkage studies, and Adverse drug reaction reporting and management. Organization and structure of retail and wholesale drug store, types and design, Legal requirements for establishment and maintenance of a drug store, Dispensing of proprietary products, maintenance of records of retail and wholesale drug store. Financial, materials, staff, and infrastructure requirements.	

42	Novel Drug Delivery systems **(BP704T)**				Definition, advantages and disadvantages, microspheres/microcapsules, microparticles, methods of microencapsulation, applications Introduction, Principles of bioadhesion/mucoadhesion, concepts, advantages and disadvantages, transmucosal permeability and formulation considerations of buccal delivery systems.
43	Social and Preventive Pharmacy **(BP802T)**			Definition, concepts and evaluation of public health. Understanding the concept of prevention and control of disease, social causes of diseases and social problems of the sick. Food in relation to nutrition and health, Balanced diet, Nutritional	Classification, product line and product mix decisions, product lifecycle, product portfolio analysis; product positioning; New product decisions; Product branding, packaging and labeling decisions, Product management in pharmaceutical industry. Methods, determinants of promotional mix,

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				deficiencies, Vitamin deficiencies, Malnutrition and its prevention. Sociocultural factors related to health and disease, Impact of urbanization on health and disease, Poverty and health personal hygiene and health care; avoidable habits General principles of prevention and control of diseases such as cholera, SARS, Ebolavirus, influenza, acute respiratory infections, malaria, chickenguinea, dengue, lymphatic filariasis, pneumonia ,hypertension, diabetes mellitus, cancer, drug addiction-drug substance abuse HIV AND AIDS control program, TB, Integrated disease	Promotional budget; An overview of personal selling, advertising, direct mail, journals, sampling, retailing, medical exhibition, public relations, online promotional techniques for OTC Products. Designing channel, channel members, selecting the appropriate channel, conflict in channels, physical distribution management: Strategic importance, tasks in physical distribution management. Duties of PSR, purpose of detailing, selection and training, supervising, norms for customer calls, motivating, evaluating, compensation and future prospects of the PSR. Meaning, importance, objectives, determinants of price; pricing methods and strategies, issues in The Market; Role of market research.

				surveillance program (IDSP), National leprosy control program, National mental health program, National program for prevention and control of deafness, Universal immunization program, National program for control of blindness, Pulse polio program. National health intervention program for mother and child,National family welfare program, National tobacco control program, National Malaria Prevention Program, National program for the health care for the elderly, Social health program; role of WHO in Indian national program Community services in rural, urban and school health:	

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				Functions of PHC, Improvement in rural sanitation, national urban health mission, Health promotion and education in school.	
44	Pharma Marketing Management **(BP803ET)**				Definition, general concepts and scope of marketing; Distinction between marketing & selling; Marketing environment; Industry and competitive analysis; Analyzing consumer buying behavior; industrial buying behavior. Quantitative and qualitative aspects; size and composition of the market;demographic descriptions and sociopsychological characteristics of the consumer; market segmentation & targeting. Consumer profile; Motivation and Prescribing habits of the physician;

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					patients' choice of physician and retail pharmacist. Analyzing price management in pharmaceutical industry. An overview of DPCO (DrugPrice Control Order and NPPA (National Pharmaceutical Pricing Authority).Vertical, Horizontal, Rural, Industrial, Global Marketing, Consumerism.
45	Pharmaceutical Regulatory Science **(BP804ET)**				Stages of drug discovery, Drug development process, pre-clinical studies, non-clinical activities, clinical studies, Innovator and generics, Concept of generics, Generic drug product development. Approval processes and timelines involved in Investigational New Drug (IND), New Drug Application (NDA),

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					Abbreviated New Drug Application (ANDA). Changes to an approved NDA, ANDA. Overview of regulatory authorities of India, United States, European Union, Australia, Japan, Canada (Organization structure and types of applications) Procedure for export of pharmaceutical products, Technical documentation, Drug Master Files (DMF), Common Technical Document (CTD), electronic Common Technical Document (ECTD), ASEAN Common Technical Document (ACTD) research. Developing clinical trial protocols, Institutional Review Board/Independent Ethics committee-formation and working procedures, Informed

					Consent process and procedures, GCP obligations of Investigators, sponsors & Monitors, Managing and Monitoring clinical trials, Pharmacovigilance-safety monitoring in clinical trials Basic terminology, guidance, guidelines, regulations, Laws and Acts, Orange book, Federal Register, Code of Federal Regulatory, Purple book.
46	Pharmacovigilance (**BP805T**)			History and development of Pharmacovigilance Importance of safety monitoring of Medicine. WHO: international drug monitoring program. PharmacovigilancePro gram of India (PvPI). Definitions and classification of ADRS. Detection and reporting methods in Causality	Anatomical, therapeutic and chemical classification of drugs. International classification of diseases. Daily defined doses. International non-proprietary names of drugs.WHOadverse reaction terminologies. MedDRA and Standardized MedDRA

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				assessment, Severity and seriousness assessment, Predictability And preventability assessment. Management of adverse drug reactions. Terminologies of adverse medication related events Regulatory terminologies Vaccine Pharmacovigilance Vaccination failure Adverse events following immunization Passive surveillance-Spontaneous reports and case series Stimulated reporting Active surveillance-Sentinel sites, drug event monitoring and registries. Comparative observational studies-Cross sectional study, case control study and cohort study.	WHO drug dictionary. Basic drug information resources. Specialized resources for ADRS. Establishing in a hospital Establishment & operation of drug safety department in industry Contract Research Organizations (CROS) Establishing a national program. Pre clinical phase Clinical phase Post approval phase (PMS) Organization and objectives of ICH Expedited reporting Individual case safety reports. Periodic safety update reports Post approval expedited reporting Pharmacovigilance planning Good clinical practice in pharmacovigilance studies

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				Targeted clinical investigations Effective communication in Pharmacovigilance Communication in Drug Safety Crisis management Communicating with Regulatory Agencies, Business Partners, Health care facilities & Media.	Genetics related ADR with example focusing PK parameters. Pediatrics Pregnancy and lactation Geriatrics CIOMSWorking Groups CIOMS Form D&C Act and Schedule Y. Differences in Indian and global pharmacovigilance requirements.

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47	Quality control and standardization of herbals **(BP806ET)**		Stability testing of herbal medicines. Application of various chromatographictec hniques in standardization of herbal products. Preparation of documents for new drug application and export registration GMP requirements and Drugs & Cosmetics Act provisions		Basic tests for drugs– pharmaceutical substances, medicinal plant materials and dosage forms WHO guidelines for quality control of herbal drugs. Evaluation of commercial crude drugs intended for use in CGMP, GAP, GMP and GLP in the traditional system of medicine. WHO Guidelines on current good manufacturing Practices (CGMP) for Herbal Medicines WHO Guidelines on GACP for Medicinal Plants. EU and ICH guidelines for quality control of herbal drugs. Research Guidelines for Evaluating the Safety and Efficacy of Herbal Medicines Regulatory requirements for herbal medicines.

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					WHO guidelines on safety monitoring of herbal medicines in pharmacovigilance systems Comparison of various Herbal Pharmacopoeias. Role of chemical and biological markers in standardization of herbal Products.

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48	Computer aided drug design **(BP807ET)**				Stages of drug discovery and development. Rational approaches to lead discovery based on traditional medicine. Random screening, Non-Random screening, serendipitous drug discovery, lead discovery based on drug and Conformational Analysis, global conformational minima determination.

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49	Cell and Molecular biology **(BP808ET)**	a) Cell and Molecular Biology: Definitions, theory, basics and Applications. b) Cell and Molecular Biology: History and Summation. c) Properties of cells and cell membrane. d) Prokaryotic versus Eukaryotic e) Cellular Reproduction Chemical Foundations - an Introduction and Reactions (Types).			

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50	Cosmetic Science **(BP809ET)**				Classification of cosmetic and cosmeceutical products. Definition of cosmetics as per Indian and EU regulations, Evolution of cosmeceuticals from cosmetics, cosmetics as quasi and OTC drugs. Surfactants, rheology modifiers, humectants, emollients, preservatives Classification and application. Basic structure and function of skin. Basic structure of hair, Hair growth cycle. Common problems associated with teeth and gums. Face wash, Moisturizing cream, Cold Cream, Vanishing cream and their advantages and disadvantages. Application of these products in formulation of cosmeceuticals. Actives & mechanism of action. Conditioning shampoo, Hair conditioner, anti-dandruff shampoo, Hair oil. Chemistry and formulation of Para phenyl diamine based hair dyes.

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					Principles of formulation and building blocks of oral care products: Toothpaste for bleeding gums, sensitive teeth, Teeth whitening, Mouthwash. Sun protection, Classification of Sunscreens and SPF. Skin care: Aloe and turmeric. Hair care: Henna and amla. Oral care: Neem and clove. BIS specification and analytical methods for shampoo, skin cream and toothpaste. Principles of Cosmetic Evaluation: Principles of sebumeter, corneometer. Measurement of TEWL, Skin Colour, Hair tensile strength, Hair combing properties Soaps, and

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					syndet bars. Evaluation and skin benefits. Oily and dry skin, causes leading to dry skin, skin moisturisation. Basic understanding of the terms carcinogenic, dermatitis. Cosmetic problems associated with Hair and scalp: Dandruff, Hair fall causes. Cosmetic problems associated with skin: Blemishes, wrinkles, acne, prickly heat and body odour. Antiperspirants and Deodorants-Actives and mechanism of action.

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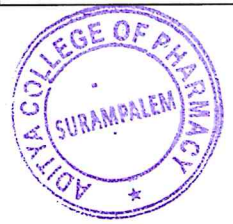
51	Pharmacological Screening Methods **(BP810ET)**			Study of CPCSEA and OECD guidelines for maintenance, breeding and conduct of experiments on laboratory animals, Common lab animals: Description and applications of different species and strains of animals. Techniques for collection of blood and common routes of drug administration in laboratory animals, Techniques of blood collection and euthanasia. a. Introduction: Dose selection, calculation and conversions, preparation of drug solution/suspensions, grouping of animals and importance of sham negative and positive control groups. Rationale for selection of animal species and sex for the study. b. Diuretics, nootropics, anti-Parkinson's, antiasthmatics, Preclinical screening models: for CNS activity- analgesic, antipyretic, anti-	Selection of research topic, review of literature, research hypothesis and study design Pre-clinical data analysis and interpretation using. Popular transgenic and Students t test and mutant animals. One-way ANOVA. Graphical representation of data.

				inflammatory, general anaesthetics, sedative and hypnotics, antipsychotic, antidepressant, antiepileptic, ant parkinsonism, Alzheimer's disease Preclinical screening models: for ANS activity, sympathomimetics, sympatholytics, parasympathomimetics, parasympatholytics, skeletal muscle relaxants, drugs acting on eye, local anaesthetics Preclinical screening models: for CVS activity antihypertensives, diuretics, antiarrhythmic, antidyslepidemic, anti aggregatory, coagulants, and anticoagulants Preclinical screening models for other important drugs like antiulcer, antidiabetic, anticancer and antiasthmatics.	



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52	Advanced Instrumentation Techniques (**BP811ET**)		Importance, various components, Principle, different methods, Limitation.		Calibration and validation-as per ICH and USFDA guidelines. Electronic balance, UV Visible spectrophotometer, IR spectrophotometer, Fluorimeter, Flame Photometer, HPLC and GC.
53	Dietary Supplements and Nutraceuticals (**BP812ET**)				a) Effect of processing, storage and interactions various environmental factors on the potential of nutraceuticals. b) Regulatory Aspects; FSSAI, FDA, FPO, MPO, AGMARK. HACCP and GMPs on Food Safety. Adulteration of foods. c) Pharmacopoeial Specifications for dietary supplements and nutraceuticals.

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