

**BIRLA INSTITUTE OF TECHNOLOGY AND SCIENCE PILANI, PILANI CAMPUS
DEPARTMENT OF PHARMACY**

July 22, 2016

List of electives offered during 1st Semester (2016-17)

Course No.	Course Name	Instructor-in-Charge	Course Description
PHA G512	Chemistry of Natural Drugs	DR. ATISH T. PAUL	Study of recent methods of phytochemical investigations with reference to alkaloids like rauwolfia, vinca, cantharanthus etc.; some selected steroids, terpenes & flavoring agents, their chemistry, structure activity relationship, pharmacological actions and synthetic routes.
PHA G645	MOLECULAR PHARMACOLOGY	DR. GAIKWAD ANIL BHANUDAS	Molecular basis of the action of drugs; the characteristics of interactions between drug molecules and substrates of drug action in the cell; molecular, biochemical and cell biological techniques; response of cells to pharmacologic agents.
PHA G544	ADVANCED PHARMACEUTICAL CHEMISTRY	DR. HEMANT R. JADHAV	Stereochemical aspects of drugs and biological molecules; effect of stereochemistry on drug action and isomerism in various drugs; rearrangements and name reactions useful in synthesis of bioactive molecules; example applications of rearrangements and name reactions in synthesis of existing drugs.
PHA G642	LABORATORY PROJECT	DR. HEMANT R. JADHAV	Exercises illustrating principles discussed in theory courses.
PHA G613	PHARMACEUTICAL BIOTECHNOLOGY	MR. MURALI MANOHAR PANDEY	Molecular biology, immunology, recombinant DNA technology and principles of biochemical engineering. Application of biotechnology in diagnosis, therapeutics and production of products of fermentation. Bioinformatic tools required to store, analyze and use biological information for therapeutic utility, immense potentiality and application of decoding the human genome.
PHA G616	PHARMACEUTICAL ADMINISTRATION AND MANAGEMENT	DR. ANUPAMA MITTAL	Technology innovation and creativity, new drugs and products planning, strategic considerations, project implementation, product development, production management and scale up, preparation of product literature and marketing strategy, IPR processes, human resource development, industrial relations, documentation, R & D management, ethical aspects.
PHA F413	PHARMACEUTICAL MANAGEMENT AND QUALITY CONTROL	DR. SUNIL KUMAR DUBEY	Concepts of Pharmaceutical management, Managing of pharmaceutical industry, planning, layouts, designs, current good manufacturing practices, pharmaceutical process validation, documentation, pilot plant scale up technique optimization, pharmaceutical marketing, quality aspects and quality control, managing hospital pharmacy and its importance

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PHA F417	PHARMACO-ECONOMICS	MR. MURALI MANOHAR PANDEY	Economic aspects of health care and its applications in the health sector are broadly emphasized. Cost-benefit, cost effectiveness, cost-minimization, and cost-utility analyses to compare the different pharmaceutical products, drug therapy and treatments are focused. Economic concepts such as supply, demand, efficiency, equity, health policy, market failures, health insurance, pharmaceutical market, measurement of direct and indirect costs to a health care program, economic issues, pharmaceutical regulations, pricing policy and related topics will be covered.
PHA F422	COSMETIC SCIENCE	DR. ANIL JINDAL	Principles of formulation of typical cosmetic preparations such as cosmetic creams, powders, lipsticks, rouges, hair preparations, dentifrices, aerosol cosmetics, perfumes for cosmetic, their blending and mixing techniques. Some recent and new trends.
PHA F415	PATHOPHYSIOLOGY	DR. RAJEEV TALIYAN	Cellular pathology, inflammatory, genetic and immunological disorders, infectious diseases-their expression and cause, targets for therapy, diseases of the organ systems, environmental and nutritional pathology.
PHA G614	CLINICAL PHARMACY AND THERAPEUTICS	DR. R. MAHESH	Basic concepts of Clinical pharmacy and its applications, analysis of patient data interpretation of clinical laboratory tests, drug information queries, their sources and interpretation of the information. Clinical pharmacokinetics, therapeutic drug monitoring, drug-drug interactions.

HOD, PHA