



गुरु घासीदास विश्वविद्यालय, बिलासपुर (छ.ग.)

(केन्द्रीय विश्वविद्यालय अधिनियम 2009, क्रमांक 25 के अंतर्गत स्थापित केन्द्रीय विश्वविद्यालय)

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(A Central University established by the Central University Act., 2009 NO.25 of 2009)

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बिलासपुर, दिनांक 08 JUN 2022

प्रति,

विभागाध्यक्ष,
फार्मेसी विभाग,
गुरु घासीदास विश्वविद्यालय,
बिलासपुर (छ.ग.)

विषय :- अनुमोदित अध्यादेश का प्रारूप एवं पाठ्यक्रम का प्रेषण विषयक ।
संदर्भ :- अध्ययन मण्डल की बैठक दिनांक 05.04. 2022 के कार्यवृत्त ।

महोदय,

उपरोक्त विषयांतर्गत लेख है कि विश्वविद्यालय के विद्यापरिषद की स्थायी समिति के द्वारा बैठक दिनांक 24.05. 2022 में फार्मेसी विभाग के Vret Exam, M.Pharma, New D. Pharma की पाठ्यक्रम का अनुमोदित किया गया है ।

अनुमोदित पाठ्यक्रम इस पत्र के साथ संलग्न कर आवश्यक कार्यवाही हेतु प्रेषित है । विद्यापरिषद ने यह भी निर्णय लिया है कि संबंधित विभाग के विभागाध्यक्ष यह सुनिश्चित करेंगे कि प्रस्तावित पाठ्यक्रम एवं अंक योजना प्रभावी अध्यादेश के प्रावधानों के अनुरूप हो ।

सुलभ संदर्भ हेतु विद्यापरिषद के स्थायी समिति के निर्णय की छाया प्रति भी संलग्न है ।

प्रतिलिपि:-

1. परीक्षा नियंत्रक, गुरु घासीदास विश्वविद्यालय बिलासपुर को सूचनार्थ प्रेषित ।
2. उप/सहायक कुलसचिव परीक्षा गोपनीय की ओर आवश्यक कार्यवाही हेतु प्रेषित ।
3. कार्यालय प्रति ।

सहायक-कुलसचिव (अका0)

सहायक-कुलसचिव (अका0)

21047/Pharmacy/22
10/06/22

Syllabus for the Qualifying Exam for the Ph.D. Programme in Natural Resources

Syllabus for VERT Section I : Research Methodology

UNIT – I

General Research Methodology: Research, objective, requirements, practical difficulties, review of literature, study design, types of studies, strategies to eliminate errors/bias, controls, randomization, crossover design, placebo, blinding techniques.

UNIT – II

Biostatistics: Definition, application, sample size, importance of sample size, factors influencing sample size, dropouts, statistical tests of significance, type of significance tests, P values, degree of freedom, interpretation of P values.

UNIT – III

Medical Research: History, values in medical ethics, autonomy, beneficence, non-maleficence, informed consent, confidentiality, cultural concerns, truth telling, online business practices, conflicts of interest, referral, vendor relationships, treatment of family members, sexual relationships, fatality.

UNIT – IV

Declaration of Helsinki: Introduction, basic principles for all medical research

UNIT – V

CPCSEA guidelines for laboratory animal facility – Goals, veterinary care, quarantine, surveillance, diagnosis, treatment and control of disease, personal hygiene, location of animal facilities to laboratories, anesthesia, euthanasia, physical facilities, environment.

VRET 2018-19

Section II (Subject specific Syllabus: Pharmacy)

(50% shall be based on Subject Specific as mentioned below)

Unit 1: Pharmaceutics:

Classification and manufacturing of conventional dosage forms like solids, semisolids, liquids. Industrial scale manufacturing of tablets and capsules. Need, design, and development of various types of novel drug delivery systems. Prospects and comparison of sustained and controlled release formulations. Biopharmaceutics and Pharmacokinetics of drug/s and importance in formulation design (conventional and novel). Factors affecting bioavailability enhancement of drug/s for oral dosage forms. Pharmacopoeial and non-compendial standards/limits for development of sterile (parenterals and ophthalmics) and non-sterile dosage forms, their life cycle. Pharmaceutical calculations. Drugs and cosmetics Act and rules with respect to manufacture, sales and storage. Pharmacy Act.

Unit 2: Pharmacology :

General pharmacological principles including Toxicology. Drug-drug interaction, drug disease interactions, drug-food interactions. Pharmacology of drugs acting on Central nervous system. Cardiovascular system, Autonomic nervous system, Gastro intestinal system and Respiratory system. Pharmacology of Autacoids, Hormones, Hormone antagonists, Diuretics. Adverse Drug reactions and side effects.

Unit 3: Pharmaceutical Chemistry:

JShe *KC* *Keene* *Moffam*

A detailed study of the following classes with respect to drug nomenclature, classification, physicochemical properties, mode of action [MOA], structure activity relationships [SAR], wherever applicable, synthesis of simple & prototype molecules, drug metabolism, therapeutic uses & side effects. Drug resistance, wherever applicable, should be covered in respective classes of drugs: Antiamoebic agents, Antibacterial sulpha drugs [only], Quinolone antibacterials, Antimycobacterial drugs, Antifungal agents, Antiviral agents including anti-HIV drugs, Thyroid & anti thyroid drugs, Antiallergic agents, Antiulcer agents & Proton Pump Inhibitors, Hypoglycemic agents, Antimalerials, Sedative-hypnotics, Antiepileptic agents, Neuroleptics, Anti-anxiety drugs, Diuretics, Antibiotics, Steroids, Corticosteroids [gluco- & mineralocorticoids] & anti-inflammatory steroids. Sex steroids. Male & female contraceptive agents. Anabolic steroids, Anticancer agents, Narcotic analgesics, Morphine & all its structural modifications [peripheral & nuclear]. Narcotic agonists & antagonists. Non-narcotic analgesics [NSAIDS]. Adrenergic drugs. Neurotransmitters & their role. General & specific adrenergic agonists & antagonists [up to alpha-2 & beta-2 only], Cholinergic agents. Muscarinic & nicotinic cholinergic agonists & antagonists, Neuronal [transmission] blockers, Drugs used in neuromuscular disorders. Drugs used in the treatment of Parkinson's disease. Central & peripheral muscle relaxants, Hypertensive, antihypertensive & antianginal agents.

Unit 4: Pharmacognosy:

Introduction to pharmacognosy, Classification of crude drugs, Factor influencing quality of crude Drugs, Evaluation, Quality control and standardization of crude drugs, Carbohydrate containing drugs, Glycoside containing drugs, Tannins containing Drugs, Volatile oil containing drugs, Resins containing drugs, Alkaloid containing drugs, Protein and enzyme containing crude drugs herbal pesticides, Extraction and isolation techniques, Identification and estimation of phytopharmaceuticals, Plant tissue culture, herbal cosmetics, Plant neutraceuticals.

Unit 5: Pharmaceutical Analysis and Biotechnology:

Principles and applications of the following: Absorption spectroscopy (UVvisible & IR). Fluorimetry, Flame photometry, Potentiometry. Conductometry and Polarography. Pharmacopoeial assays. Principles of NMR, ESR, Mass spectroscopy. X-ray diffraction analysis, different modern chromatographic methods, capillary electrophoresis. PCR, ELISA, blotting, DNA Sequencing. Principles and methods of microbiological assays as per Pharmacopoeia. Methods of preparation of Pharmacopoeial sera and vaccines. Serological and diagnostics tests.. rDNA technology: Tools, techniques and applications, Hybridoma technology: Production and applications.

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M. S. S.