Gandaki University
Gandaki Province, Pokhara, Nepal

Eligibility Criteria for Lecturer- IT / Electronics:

Candidates must have completed a four years Bachelor's degree (in ICT or IT or Computer Science or Software or Electronics or Information System or equivalent) and Two years Master's degree in related subjects (with Thesis) from a recognized university with minimum first division or above. Candidates holding foreign degrees must submit equivalence certificate from the concerned authority.

Eligibility Criteria for Lecturer (Pharmaceutics)
Candidates must have completed M. Pharm. (major: Pharmaceutics, or Industrial Pharmacy, or Drug Delivery System) from a recognized university with minimum first division or above. Candidates holding foreign degrees must submit equivalence certificate from the concerned authority. The candidate must be registered in the Nepal Pharmacy Council.

Eligibility Criteria for Lecturer (Natural Products Chemistry / Pharmacognosy)
Candidates must have completed M. Pharm (major: Natural Products Chemistry/ Pharmacognosy from a recognized university with minimum first division or above. Candidates holding foreign degrees must submit equivalence certificate from the concerned authority. The candidate must be registered in the Nepal Pharmacy Council.

Eligibility Criteria for Laboratory In-Charge
Candidates must have completed B. Pharmacy from a recognized university with minimum first division or above. Candidates holding foreign degrees must submit equivalence certificate from the concerned authority. The candidate must be registered in the Nepal Pharmacy Council.

Eligibility Criteria for Lecturer- Sports Management:
Candidates must have completed Bachelor's degree in Sports Management, and Two years Master degree in Business Administration in Sports Management from a recognized University with minimum first division or above.

Eligibility Criteria for Lecturer- Physical Education:
Candidates must have completed Bachelor's degree in Physical Education, or equivalent, and Two years Master's degree or equivalent in Physical Education from recognized University with minimum first division or above.

Lecturer - Electronics syllabus

Programming Languages (procedural and object oriented programming, portability and platform independence),

Basic Electronics (Circuit Theory, Semiconductor Diode, Transistor, Operational Amplifier, Analog/Digital Communication System),

Digital Logic (Number System, Boolean algebra, Combinational Circuits, Sequential Circuits, Counter and Register),

Microprocessor (8085/8086 Architecture and Assembly Language Programming, Bus Structure, Memory and I/O Interfacing),

Computer Organization and Architecture (Register Transfer and Micro Operations, Central Processing Unit, Control Unit, Computer Arithmetic, Memory Organization, Input Output Organization, RISC, Parallel Processing),

Communication System (Analog / Digital communication, transmission and receivers, signal representation, Spectral Analysis, Modulation/Demodulation, Multiplexing) **,**

Teaching and Research Methodology (Curriculum review, lesson plans, work plan, Preparation of reference material, Method of teaching particular subject, research paper/proposal writing),

Basic Concepts of Big Data, Machine Learning

Lecturer - IT syllabus

Programming Languages (procedural and object oriented programming, portability and platform independence),

Object Oriented Programming (platform independence, class, object, methods, inheritance and polymorphism, exceptions**),**

Web Technology (Internet, WWW, Web Browser, Web Servers, URL,: HTTP, HTTPS, POP, SMTP, FTP, WAP ,Domain name and hierarchy, HTML, XHTML,CSS, client and server side scripting, data exchange Web Security**),**

Information Technology (Information System Elements and Architecture, Information Technology Components, Computer Security and Encryption, E-Business and E-Commerce, Decision Support Systems**),**

Discrete Mathematics (Logic and induction, mathematical reasoning, Finite state automata and Grammars, Recurrence Relation, Graph theory),

Problem Solving and Logic (Problem identification and definition, pseudocode and flowcharts, algorithm, validation and verification, Error Handling and Debugging**),**

Software Engineering (Software engineering process, process models, agile development, requirement modelling, design concepts, implementation and testing, Security, software quality assurance, Software configuration management**),**

Data Structure and Algorithms (Structures like Lists, Stack, Queue, Tree, Graphs and Operations like searching, sorting, Algorithm complexity),

Database Systems (Database concepts and applications, data abstraction and independence, schema and instances, Data Models, RDBMS and NOSQL databases, normalization, query processing and optimization, Transactions processing and Concurrency Control, database recovery and backups, hashing**),**

Teaching and Research Methodology (Curriculum review, lesson plans, work plan, Preparation of reference material, Method of teaching particular subject, research paper/proposal writing),

Concept of Big Data and Machine Learning

Lecturer- Natural Products Chemistry/Pharmacognosy syllabus

1. **The knowledge of the related subject matters which are generally included in the concerned bachelor and master level courses**
    a) A General review on the source of drugs, primary and secondary metabolites, and Pharmacognostic study of medicinal and aromatic plants of Nepal
    b) Phytochemical and Pharmacological screening of the plant extracts
    c) Chemistry, synthesis, and pharmacological activity of major bioactive compounds
    d) Extraction, Isolation, and Purification of phytochemicals, Processing and standardization of medicinal plants and their products
    e) Spectroscopic analysis of organic compounds
    f) Traditional and Complementary system of medicine
    g) Insight on plant hormones, toxicity, and clinical uses of herbal medicine

2. **Basic Knowledge on the Recent trend in Natural Products Chemistry and Pharmacognosy**
    a) Current status and future scope of Natural Products Chemistry and Pharmacognosy
    b) Drug design and discovery from the natural sources
    c) Commercialization, quality control and Guidelines for assessment of natural origin drugs
    d) Herbal Pharmacology and Formulations
    e) The ethnomedicinal study, Lead compounds search, modification of bioactive compounds and SAR of drug molecules.
    f) Overview of Promising Cosmeceuticals and Nutraceuticals of natural origin, their trade, and commerce.

3. **National and global trends and Issues about the Pharmaceutical Education**

4. **Teaching and research methodology**

Teaching skills, Conceptualization of Research topic, Pharmaceutical Research Proposal design and scientific writing, project development, Pharmacy law and research ethics.

Lecturer- Pharmaceutics syllabus

1. **The knowledge of the related subject matters which are generally included in the concerned bachelor and master level courses**

a. Fundamentals of Pharmaceutics (Drugs, Dosage form, Drug discovery, Drug manufacturing)
b. Physiochemical phenomena, Micrometrics, Disperse system, Rheology, drug stability
c. Dosage form design and manufacture (Solid and semi-solid dosage, Solution, Gases and Colloidal dosages form, Parenterals, Topical formulations), Pharmaceutical excipients and Polymers, Radiopharmaceuticals, Sterile products and Sterilization, Cosmetics and Cosmeceutical products
d. Pharmaceutical Processing (Mixing, Milling, Drying, Compression, Filtration), packaging, evaluation and regulations, Industrial hazards, plant safety and Safety guidelines
e. Principles of Biopharmaceutics and Pharmacokinetics (ADME, reaction rate and order, Pharmacokinetics models, Application of Pharmacokinetics to clinical situations, Bioavailability and Bioequivalence
f. Sustained and Controlled drug delivery system, Microencapsulation, Topical and Transdermal drug delivery system, Novel drug delivery system, Targeted drug delivery system.

2. **Basic Knowledge on the recent trend in Pharmaceutics, Industrial Pharmacy and Drug delivery system** National and International regulatory affairs, Pharmaceutical research and publication
   a. Pharmaceutical Biotechnology, Vaccine delivery system
   b. Pharmaceutical nanotechnology and nanomedicine (Liposomes, Niosomes, monoclonal antibodies)
3. **National and global trends and Issues about the Pharmaceutical Education**

4. **Teaching and research methodology:** Teaching skills, Conceptualization of Research topic, Pharmaceutical Research Proposal design and scientific writing, project development, Pharmacy law and research ethics.

Laboratory In-charge syllabus

1. Theoretical knowledge on basic Sciences (Chemistry, Microbiology, Anatomy and Physiology, and Biochemistry) and core Pharmaceutical Subjects (Pharmaceutics, Pharmacognosy, Pharmaceutical Analysis, Medicinal Chemistry, Pharmacology, Therapeutics, Community Pharmacy, and Clinical Pharmacy)

2. Fundamental knowledge on Pharmaceutical Laboratories Practice

a. Basic concept of Laboratory safety measures, Rules, Regulations and Chemical hazards
b. Methods of Preparation of basic laboratory reagents and samples.
c. Labeling, storage and disposal of organic chemicals, reagents and waste materials
d. Methods and significance of Procurement, Inventory management and control of glass-wares, chemicals, and equipment.
e. Crude drugs collection and storage, Herbarium preparation
f. Methods of handling biological samples, microorganism and laboratory animals.
g. Theory, instrumentation and working principle of pharmaceutical laboratory instruments like Distillation plant, pH meter, Viscometer, Calorimeter, UV Spectrophotometer, Dissolution apparatus, Disintegration apparatus, Friability apparatus, Hardness tester, Vernier caliper, Vacuum-pump rotary evaporator, Incubator, Hot air ovens, Autoclaves, Weighing balance, Sonicator, Centrifuge, Soxhlet apparatus, TLC, Column Chromatography, Analgesiometer, Rota Rod Apparatus, etc
h. Process of Calibration, Validation and Designing Standard Operating Procedure (SOP) of important lab instruments.
i. Principles of Good Manufacturing Practice (GMP) and Good Laboratory Practice (GLP)
j. Preparation of datasheet and lab recoding

Lecturer – Sports Management Syllabus

Sports Organization and Administration (Introduction, Sports Organization's Operating Environment, Macro Environment & Micro Environment, National and International Sports Organization, Foundation of Olympic Movements),

Sports Marketing (Introduction to Sports Marketing, Basic Promotion of Sports, Sports Consumer Behaviours, and Factors influencing the sports market segmentation),

Sports Facility Management (Planning and Management, Responsibilities of facilities managers, First aid and emergency arrangement, Facility administration),

Governance in Sports (Importance of governance, The function of Boards & Meetings and current issues, The board performance assessment, understanding the basis of assessment – the various principles),

Teaching and Research Methodology (Curriculum review, lesson plans, work plan, Preparation of reference material, Method of teaching particular subject, research paper/proposal writing),

Basic Concepts of Sports Journalism, Sports Event Management

Lecturer – Physical Education syllabus

Sports Biomechanics and Kinesiology (Meaning, Need and Importance of biomechanics in sports, Newton's laws of motion, Equilibrium, Mechanical analysis, Introduction to Kinesiology, Muscles and Joints)

Exercise Physiology (Meaning and Definition of Physiology and Exercise Physiology, Physiological Basis, Physiological of Exercise, Sports Diet:- Balance diet,
Diet before, during and after the athletic performance***),***

Sports Training (Definition, Meaning, and importance of Sports Training, Principles of Sports Training, Training Components, Planning, Periodization, and Competitions, Technique, Tactics and Strategy, Tests, Measurements and Evaluation),

Sports Psychology (Definition, Meaning, Nature and scope of sports psychology, Emotion and Motivation, Personality, Psychological Skills, Motor Learning***),***

Athlete care and Rehabilitation (Definition and objectives of corrective Sports and physical Education. Posture and body mechanics, Rehabilitation Exercises, Massage, Sports Injuries Care, Treatment and Support),

Teaching and Research Methodology (Curriculum review, lesson plans, work plan, Preparation of reference material, Method of teaching particular subject, research paper/proposal writing),

Concept of Sports Medicine, Anti-Doping in Sports, Sports Injuries and physiotherapy