

Quantum University, Roorkee

Course Outcomes for the Syllabus 2022-24 Batch



Program Name **Diploma in Pharmacy**

Course Name **PHARMACEUTICS–THEORY**

Course Code **ER20-11T**

Unit-wise Course Outcome	Descriptions	BL Level	Employability (Emp)/ Skill(S)/ Entrepreneurship (Emt)/ None (Use , for more than One)
CO1	Describe about the different dosage forms and their formulation aspects	2	Em,S
CO2	Explaintheadvantages,disadvantagesandqualitycontrol testsofdiferentdosage forms	2	Em,S
CO3	Discuss the importance quality assurance &good manufacturing practices	1	Em,S

Course Name **PHARMACEUTICS–PRACTICAL**

Course Code **ER 20-11P**

Unit-wise Course Outcome	Descriptions	BL Level	Employability (Emp)/ Skill(S)/ Entrepreneurship (Emt)/ None (Use , for more than One)
CO1	Calculate the working formula from the given master formula	2	Em, S
CO2	Formulate the dosage form and dispense in appropriate container	2	Em, S
CO3	Design the label with necessary product and patient information	1	Em,S

Course Name **PHARMACEUTICAL CHEMISTRY–THEORY**

Course Code **ER20-12T**

Unit-wise Course Outcome	Descriptions	BL Level	Employability (Emp)/ Skill(S)/ Entrepreneurship (Emt)/ None (Use , for more than One)
CO1	Describe the chemical class, structure and chemical name of the commonly used drugs and pharmaceuticals of both organic and inorganic nature	3	Em,S



CO2	Discuss the pharmacological uses, dosage regimen, stability issues and storage conditions of all such chemical substances commonly used as drugs	2	Em,S
CO3	Describe the quantitative and qualitative analysis, impurity testing of the chemical substances given in the official monographs	1	Em,S
CO4	Identify the dosage form & the brand names of the drugs and pharmaceuticals popular in the marketplace	2	Em,S

Course Name **PHARMACEUTICAL CHEMISTRY–PRACTICAL**
Course Code **ER20-12P**

Unit-wise Course Outcome	Descriptions	BL Level	Employability (Emp)/ Skill(S)/ Entrepreneurship (Emt)/ None (Use , for more than One)
CO1	Students should be able to perform limit test for quality control in pharmaceuticals.	2	Em,S
CO2	Students should be able to perform assay of inorganic compounds	2	Em,S
CO3	Students should be able to perform the limit tests for iron, sulphur, chlorides, arsenic, and heavy metals in pharmaceutical preparations.	2	Em,S

Course Name **PHARMACOGNOSY–THEORY**
Course Code **ER20-13T**

Unit-wise Course Outcome	Descriptions	BL Level	Employability (Emp)/ Skill(S)/ Entrepreneurship (Emt)/ None (Use , for more than One)
CO1	Identify the important/common crude drugs of natural origin	2	Em
CO2	Describe the uses of herbs in nutraceuticals and cosmeceuticals	2	Em
CO3	Discuss the principles of alternative system of medicines	2	Em
CO4	Describe the importance of quality control of drugs of natural origin	2	Em

Course Name **PHARMACOGNOSY–PRACTICAL**
Course Code **ER20-13P**



Unit-wise Course Outcome	Descriptions	BL Level	Employability (Emp)/ Skill(S)/ Entrepreneurs hip (Emt)/ None (Use , for more than One)
CO1	Students should be able to know the fundamental Identify of the given crude drugs based on the morphological characteristics, Take a transverse section of the given crude drugs	2	Em,S
CO2	Students should be able to describe the anatomical characteristics of the given crude drug under microscopical condition .	2	Em,S
CO3	Students should be able to identify the crude drug by. Physical and chemical tests to evaluate the given crude drugs	2	Em,S

Course Name **HUMAN ANATOMY AND PHYSIOLOGY –THEORY**
Course Code **ER 20-14T**

Unit-wise Course Outcome	Descriptions	BL Level	Employability (Emp)/ Skill(S)/ Entrepreneurs hip (Emt)/ None (Use , for more than One)
CO1	Students should be able to know the gross morphology, of various organs of the human body.	2	Em,S
CO2	Students should be able to Identify the various tissues and organs of different systems of human body	2	Em,S
CO3	Students should be able to establish the link between different Courses within the regime.	3	Em,S
CO4	Students should be able to know the structure and functions of various organs of the human body.	2	Em,S

Course Name **HUMAN ANATOMY AND PHYSIOLOGY–PRACTICAL**
Course Code **ER20-14P**

Unit-wise Course Outcome	Descriptions	BL Level	Employability (Emp)/ Skill(S)/ Entrepreneurs hip (Emt)/ None (Use , for more than One)
--------------------------	--------------	----------	--



CO1	Students should be able to know the gross morphology, of various organs of the human body.	2	Em,S
CO2	Students should be able to Identify the various tissues and organs of different systems of human body	2	Em,S
CO3	Students should be able to establish the link between different Courses within the regime.	2	Em,S

Course Name **SOCIAL PHARMACY–THEORY**

Course Code **ER20-15T**

Unit-wise Course Outcome	Descriptions	BL Level	Employability (Emp)/ Skill(S)/ Entrepreneurs hip (Emt)/ None (Use , for more than One)
CO1	Students should be able to know roles of pharmacists in the various national health program	2	Em,S
CO2	Students should be able to various sources of health hazards and disease preventive measures	2	Em,S
CO3	Students should be able to establish the health care issues associated with food and nutritional substances	2	Em,S

Course Name **SOCIAL PHARMACY–PRACTICAL**

Course Code **ER 20-15P**

Unit-wise Course Outcome	Descriptions	BL Level	Employability (Emp)/ Skill(S)/ Entrepreneurs hip (Emt)/ None (Use , for more than One)
CO1	Students should be able to know roles of pharmacists in the various national health program	2	Em,S
CO2	Students should be able to various sources of health hazards and disease preventive measures	2	Em,S
CO3	Students should be able to establish the health care issues associated with food and nutritional substances	2	Em,S

Course Name **PHARMACOLOGY–THEORY**

Course Code **ER20-21T**



Unit-wise Course Outcome	Descriptions	BL Level	Employability (Emp)/ Skill(S)/ Entrepreneurs hip (Emt)/ None (Use , for more than One)
CO1	Students should have pharmacological knowledge of drugs.	2	Em
CO2	Students should be able to know the mode of action of every drug,	2	Em
CO3	Students should be able to know the toxicology of different drugs	2	Em
CO4	Students should have knowledge of pharmacokinetics and pharmacodynamics of drug.	2	Em
CO5	Students should be able to know the side effect and adverse effect of drug	2	Em

Course Name **PHARMACOLOGY–PRACTICAL**

Course Code **ER 20-21P**

Unit-wise Course Outcome	Descriptions	BL Level	Employability (Emp)/ Skill(S)/ Entrepreneurs hip (Emt)/ None (Use , for more than One)
CO1	Students should be able to know the pharmacokinetic and pharmacodynamic drug actions.	2	Em
CO2	Students should be able to know the developing an insight of pharmacology and toxicology.	2	Em
CO3	Students should be able to know ADR monitoring.	2	Em

COMMUNITY PHARMACY AND MANAGEMENT–

Course Name **THEORY**

Course Code **ER20-22T**

Unit-wise Course Outcome	Descriptions	BL Level	Employability (Emp)/ Skill(S)/ Entrepreneurs hip (Emt)/ None (Use , for more than One)
--------------------------	--------------	----------	--



CO1	Students should have knowledge of the establishment ,legal requirements and effective administration of a community pharmacy	2	Em
CO2	Students should be able to know the Professionally handle prescriptions and dispense medications	2	Em
CO3	Students should be able to know the Counsel patients about the disease ,prescription and command on prescription drugs	2	Em
CO4	Students should have knowledge of Perform basic health screening on patient s and interpret the reports in the community pharmacy settings	2	Em

COMMUNITY PHARMACY AND MANAGEMENT–

Course Name **PRACTICAL**
Course Code **ER 20-22P**

Unit-wise Course Outcome	Descriptions	BL Level	Employability (Emp)/ Skill(S)/ Entrepreneurship (Emt)/ None (Use , for more than One)
CO1	Students should have knowledge of Handle and fill prescriptions in a professional manner.	2	Em
CO2	Students should be able to know the Professionally handle prescriptions and dispense medications	2	Em
CO3	Students should be able to know the Counsel patients about the disease ,prescription and non-prescription drugs	2	Em
CO4	Students should have knowledge of Perform basic health screening on patient s and interpret the reports in the community pharmacy settings	2	Em

Course Name **BIOCHEMISTRY & CLINICALPATHOLOGY– THEORY**
Course Code **ER20-23T**

Unit-wise Course Outcome	Descriptions	BL Level	Employability (Emp)/ Skill(S)/ Entrepreneurship (Emt)/ None (Use , for more than One)
CO1	Students should be able to know the role of various protein, carbohydrates, co-enzymes and vitamins including normal and abnormal metabolism.	2	Em,S



CO2	Students should be able to understand the catalytic role of co-enzymes	2	Em,S
CO3	Students should be able to know the importance of enzyme inhibitors in design of new drugs.	2	Em,S
CO4	therapeutic and diagnostic applications of co- enzymes	2	Em,S
CO5	Students should be able to understand the pathology of body fluids and their importance.	2	Em,S

Course Name **BIOCHEMISTRY & CLINICALPATHOLOGY –PRACTICAL**
Course Code **ER20-23P**

Unit-wise Course Outcome	Descriptions	BL Level	Employability (Emp)/ Skill(S)/ Entrepreneurs hip (Emt)/ None (Use , for more than One)
CO1	Students should be able to clinical diagnosis of diseases.	2	Em,S
CO2	Students should be able to perform the detection test of proteins, amino acids, and lipids in given samples	2	Em,S
CO3	Students should be able to normal range of biochemical values in human body.	2	Em,S

Course Name **PHARMACOTHERAPEUTICS -THEORY**
Course Code **ER 20-24T**

Unit-wise Course Outcome	Descriptions	BL Level	Employability (Emp)/ Skill(S)/ Entrepreneurs hip (Emt)/ None (Use , for more than One)
CO1	Students should be able to help assessing the Courseive and objective parameters of patients in common disease conditions.	2	Em,S
CO2	Students should be able to understand to Assist the health care provides to analyze drug related problems and provide therapeutic interventions.	2	Em,S
CO3	Students should be Participate in planning the rational medicine therapy for common diseases.	2	Em,S
CO4	Students should be able to understand Design and deliver discharge counseling for patients.	2	Em,S

Course Name **PHARMACOTHERAPEUTICS–PRACTICAL**
Course Code **ER20-24P**



Unit-wise Course Outcome	Descriptions	BL Level	Employability (Emp)/ Skill(S)/ Entrepreneurs hip (Emt)/ None (Use , for more than One)
CO1	Students should be able to clinical diagnosis of diseases.	2	Em,S
CO2	Students should be able to perform the detection test of proteins, amino acids, and lipids in given samples	2	Em,S
CO3	Students should be able to normal range of biochemical values in human body.	2	Em,S

Course Name **HOSPITAL AND CLINICAL PHARMACY –THEORY**
Course Code **ER20-25**

Unit-wise Course Outcome	Descriptions	BL Level	Employability (Emp)/ Skill(S)/ Entrepreneurs hip (Emt)/ None (Use , for more than One)
CO1	Students should be able to know the clinical parameters of hospitals	2	Em
CO2	Students should be able to Know about the IPD and OPD of the hospitals.	2	Em
CO3	Students should be able to know the layout and working culture of hospitals	2	Em
CO4	Students should be able to know the function and definition of various items in hospitals	2	Em

Course Name **HOSPITAL AND CLINICAL PHARMACY–PRACTICAL**
Course Code **ER20-25P**

Unit-wise Course Outcome	Descriptions	BL Level	Employability (Emp)/ Skill(S)/ Entrepreneurs hip (Emt)/ None (Use , for more than One)
CO1	Students should be able to working in hospital and management of clinical pharmacy.	2	Em
CO2	Students should be able for the preparation and management of infusions.	2	Em



CO3	Students should be able to know the sterilization and evaluation of surgical dressings and other hospital supplies	2	Em
------------	--	---	----

Course Name **PHARMACY LAW AND ETHICS–THEORY**

Course Code **ER20-26T**

Unit-wise Course Outcome	Descriptions	BL Level	Employability (Emp)/ Skill(S)/ Entrepreneurship (Emt)/ None (Use , for more than One)
CO1	Students should be able to know the rules to run a pharmacy collage	2	Em
CO2	Students should be able to know the legislation of Pharmacy Council of India	2	Em
CO3	Students should be able to know the regulation of the pharmacy acts	2	Em
CO4	Students should be able to know the regulation for sale and purchase of the medicine	2	Em
CO5	Students should be able to know the different schedule of pharmacy acts	2	Em

