ISLAMABAD CAMPUS

ISRA UNIVERSITY

PROSPECTUS
2014-15

OUR MISSION

Our mission at Isra University is to provide our students with education of the highest quality, groom their personality, inculcate in them a sense of responsibility, confidence, commitment and dedication towards their profession, society and the country.

TABLE OF CONTENTS


AL - NAFEES MEDICAL COLLEGE
AL - NAFEES MEDICAL COLLEGE HOSPITAL

The Islamabad Campus is strategically located just behind Farash Town, Phase II, Islamabad. With an area of 150,000 square feet, the campus houses the Al Nafees Medical College and Hospital, Isra School of Rehabilitation Sciences, Isra Institute of Pharmaceutical Sciences, and School of Engineering & Applied Sciences. The city campus is located at Plot No. 176, Sohni Road, I-10/3, Islamabad.

AL NAFEES MEDICAL COLLEGE & HOSPITAL

Al Nafees Medical College & Hospital is a newly built state of the art medical institute at the scenic zone of the capital city of Islamabad. Renowned subject specialists and faculty members as well as purpose built facilities and buildings give it a clear edge over other medical institutes.

Qualified faculty with modern and state of the art teaching aids and laboratory equipment help impart quality education in a clean and serene environment.

The laboratories and museums are well equipped, where the tutorial room, lecture halls and auditorium meet the educational needs and also have the capacity of hosting seminars and conferences. The operative skill labs are also a distinguishing feature of this institute. The college has a well established library consisting of three separate portions for lending books, reference material and periodicals. The Digital library is also well furnished and offers a large collection of e-books and e-journals to meet the scholarly needs of teachers and students.

An operative animal house within the premises and other available research facilities reflects the academic environment and the vision of the institute in contributing towards learning and research.

The college enjoys the facility of Al Nafees Medical College Hospital, an allied teaching hospital having all the clinical departments including Internal Medicine, General Surgery, Obstetrics and Gynecology, Pediatrics, Ophthalmology, Otolaryngology, Urology, Neurosurgery, Radiology, Clinical Laboratory, and Operation theatres. The hospital unit supervised by highly qualified and experienced professionals integrates the most modern facilities at general and sub-specialty levels under one roof.

All the clinical departments are furnished with modern equipment and are capable of providing high quality medical care.

The programs at Al Nafees Medical College have been approved and recognized by the Pakistan Medical & Dental Council.

Al Nafees Medical College

Anatomy Physiology Mortuary Pathology
Paediatrics Forensic Medicine Surgery
Community Medicine Medical Technology
Library Internal Medicine Bio Chemistry
Gynaecology
Otorhinolaryngology Ophthalmology

Al Nafees Medical College

The Al Nafees Medical College is committed to academic excellence in medical education. It caters for the urgent need for community oriented, competent, dedicated and above all caring medical doctors and physiotherapists who through their comprehensive understanding and acquisition of relevant skills can deal with the health problems of the people.

BACHELOR OF MEDICINE & BACHELOR OF SURGERY

The MBBS degree is a five-year program of 238 credit hours. The first two years (called first professional) mostly cover the pre-clinical studies in basic medical sciences. The courses taught in the pre-clinical years deal with the normal structure and function of the organs of the body. The program also incorporates community-oriented medicine, biostatistics and preliminary clinical medicine.

In the subsequent years of clinical education and training, the students gain a broad systematic knowledge of para-clinical, medical and surgical subjects. The clinical teaching is mainly given in Isra University Hospital and Isra University Welfare Hospital. It prepares the students to learn how the disease process affects the body, and provides them necessary skills to examine, investigate and treat the patients.

During the clinical period, the students are also exposed to clinical laboratories and hospital wards where they get an opportunity to become familiar with the most commonly Encountered health problems. From time to time, the students are also required to participate in clinicopathological conferences to integrate various aspects of a particular disease.

Courses of Study

The curriculum conforms to the rules and regulations laid down by the Pakistan Medical and Dental Council (PM&DC). It aims at stimulating the cognitive, affective and psychomotor domains of learning. There are two broad categories of subjects covered in the MBBS program, namely basic medical sciences & para-clinical and clinical subjects.

PM&DC now requires that throughout the tenure of MBBS program the courses are to be taught in integrated system-based modular form. During the first two years the major thrust [80%] will be on basic medical sciences and during the following years on the clinical sciences and house job. Thus total period of training will be six years before a student qualifies to practice medicine.

Anatomy (Contact Hours 500)

The subject matter is structured to give an understanding of the cell biology, gross anatomy, microscopic anatomy (histology), neuroanatomy and embryology with emphasis on clinical implications. The subject is taught with the help of models, dissected cadavars, prosections, films, CD's, slides, and other audiovisual aids. MDAT 111, 112.

Physiology and Behavioral Sciences (Contact Hours 500)

The discipline of physiology includes the study of living systems from sub-cellular and cellular levels to organ function and whole body behavior. The topics covering the major organ systems of the body include cardiovascular, digestion, respiration, internal homeostasis, voluntary and involuntary motor control, energy balance and geriatic physiology. Experimental work in physiology is designed to include and illustrate important physiological concepts, and measurements. The use of advanced recording and monitoring equipment and techniques is demonstrated, emphasizing the importance of precise recording and analysis of data in the solution of medical problems. MDPL 121, 122.

The discipline of behavioral sciences include the study of consciousness and its altered states; psychological development of learning, memory, personality and human motivation in health and illness. MDBS 123.

Biochemistry (Contact Hours 300)

The science of biochemistry is fundamental to the understanding of relationships between structure and function of biomolecules in the human body. Students are taught those areas of biochemistry that are important for the understanding of nutritional, metabolic and genetic disorders, relevant to common disturbances of body functions, gene structure and its function. The course is integrated with concomitant studies of the morphology and physiology of the human organ systems. Experimental work in biochemistry will highlight important clinical applications of biochemical tests. Methods of biochemical analysis by various techniques are used for separation, identification, and measurement of biomolecules relevant to clinical sciences.
MDBC 131, 132.

Pharmacology & Therapeutics (Contact Hours 300)

The science of pharmacology is concerned with the effects of drugs on the cells, organs of human beings, influence of drugs on cellular mechanisms and the fate of drugs in the body. The teaching of pharmacology is limited to general principles of pharmacokinetics and pharmacodynamics of groups of commonly used drugs. The course also contributes to studies in the clinical disciplines in which the therapeutic uses of drugs and an appreciation of adverse drug reactions form an essential part of the preparation of clinical practice. Experimental work in pharmacology is aimed at the demonstration of actions of drugs on isolated tissues and living subjects. MDPM 251.

Pathology (Contact Hours 500)

This subject includes general and special pathology, clinical and chemical pathology, microbiology, hematology and immunology. The general pathology presents a scientific study of diseases, the genetic basis of some diseases, the body's normal responses to noxious environmental stimuli and the principles of homeostasis. Abnormal and deleterious effects of the immune responses, neoplasia, infection and metabolic derangement constitute an important part of the course. The course on microbiology consists of bacteriology, mycology, virology, immunology and parasitology. Emphasis in microbiology is given on the knowledge of various infections in humans and the application of this knowledge in the diagnosis and management of infectious diseases. Practical work in the laboratory complements instruction given in lectures and tutorials. Teaching of general principles is supplemented by experimental work. Students are trained in collection of various specimens for analysis, and performing commonly used tests. MDGP 241, MDMB 242, MDSP 243.

Forensic Medicine & Toxicology (Contact Hours 100)

Students are taught the legal aspects of medical practice and the legal implications of medical disorders, in collaboration with the departments of pathology, pharmacology, hospital casualty, and other clinical sciences. The emphasis is placed on those legal aspects of medicine that a young medical graduate may be expected to face in professional life. MDFM 244.

Community Medicine (Contact Hours 250)

This subject is highly stressed in the curriculum to familiarize the students with community health problems and is taught from year one through four. It covers fields of biostatistics, epidemiology, primary healthcare and community related medicine. The subject is taught by way of lectures and tutorials, field visits to various rural communities, and through environmental health projects. MDCM 261.

Islamic and Pakistan Studies (Contact Hours 40)

These courses, though not falling under basic

sciences curriculum, are important for a medical student in Pakistan. The causes of ailments of body go beyond the derangement of physiological systems of body. Its roots go deep down in the society and culture of a diseased person.

Pakistani culture and moral values are derived from its religion, Islam. The courses consist of an overview of Islam as a religion, its contribution to human civilization, its concepts of moral values, and the chief characteristics of an Islamic society. While emphasizing the moral, constructive and reformative values of Islam, the students are guided to evolve their own codes of behavior with respect to medical ethics and relationships with patients and society.

HMPS 113, HMIS 114.

Computer Applications (Contact Hours 40)

The subject involves rigorous training over 48 contact hours that enables students to use popular computer software packages and learn the course related subject matter through computer simulated educational programs that are available at the Isra University library and elsewhere. CSMO 115.

Clinical Subjects

Clinical clerkships in various clinical disciplines are essential to develop basic clinical skills for accurate assessment, analysis, synthesis, and critical thinking, leading to appropriate diagnosis and management. Students are exposed to common health problems of the community. They spend much of their time in clinics, hospitals, and community health facilities, with less reliance on conventional classroom lectures. Students actively involve in the day-to-day management of patients in the wards, outpatient clinics, community health facilities, operation theaters, and so forth. They perform their duties under the supervision of their professors. Clinico-Pathological Conferences are held and a multidisciplinary, integrated approach is adopted to correlate clinical presentations with pathology, and include comprehensive management of health problems.

Internal Medicine (Contact Hours 800)

This field of study deals with medical diagnosis, treatment and care of a diseased person. It introduces the students to the art of history taking, teaches them the basic skills in performing the physical examination of patients,

trains them to prescribe appropriate investigations, interpret the results rationally, to formulate their findings orally and in writing, and provide them with the basic knowledge needed to stimulate them to reach a reasonable differential diagnosis. Internal Medicine and allied specialties include, among others, disciplines like cardiology, dermatology, psychiatry, and radiology. MDMD 361, 461.

Surgery (Contact Hours 800)

Included under this broad heading are subjects of general surgery and allied specialties consisting of orthopedics, anesthesiology, radiotherapy and radiology. Students are taught the general principles, indication and contra-indication of common surgical procedures. Emphasis is laid on developing skills in aseptic techniques, dressing, and mastering of minor surgical procedures along with pre- and post-operative care of patients. Students are given the opportunity to observe the live operations of patients through closed circuit TV, and at times be physically present, to see the whole process from beginning to the end. In addition to this, training in the skills for giving local anesthesia, intubation and resuscitation is provided during clinical clerkship in anesthesia. MDSG 371, 471.

Obstetrics and Gynecology (Contact Hours 300)

These courses cover concepts of childbirth, reproductive health, family planning and aspects of diseases specific to women. Students are assigned to take part in maternity & child welfare clinics and other community health facilities. While on duty in obstetrics and gynecology unit, the residence of student in the hospital premises is made compulsory so that they take active part in labor room procedures. MDOG 481.

Pediatrics (Contact Hours 300)

Teaching of pediatrics includes understanding of normal child growth and development, neonatology and theoretical as well as clinical aspects of diseases specific to children. The students are also familiarized with child health statistics and national health programs. MDPD 462.

Ophthalmology (Contact Hours 100)

This is a very advanced field of surgery beyond the scope of undergraduate students to diagnose and manage all the common problems of the eye. However, the students are taught and trained to diagnose and manage minor common eye problems. They are trained to recognize and refer complicated eye problems to concerned specialists. MDOP 472.

Otorhinolaryngology, ENT (Contact Hours 100)

This is a very advanced field of surgery beyond the scope of undergraduate students to diagnose and manage all the common problems of the ENT. However, the students are taught and trained to diagnose and manage minor common ENT problems. They are trained to recognize and refer complicated ENT problems to concerned specialists. MDOL 473.

Clinico-Pathological Conferences (Contact Hours 80)

Clinico-pathological conferences are held regularly in the fourth and final years. These conferences are held in rotation by the various units. The students are encouraged to use their knowledge and skills to gather relevant information, and present case studies employing an integrated approach involving concerned specialists. Students are encouraged to attend mortality and morbidity sessions in the hospital. Furthermore, the conferences provide a platform for discussion of topics of practical importance, as well as updating and reviewing of specific clinical issues. This process also improves the student's competence and skills of public speaking and communication, and boosts up their ability to carry out literature survey, review the subject and become familiar with the art of report writing. MDCP 541.

Electives (Contact Hours 150)

Students are encouraged to gain further experience in one or two clinical subjects or carry out research on some aspect of medical sciences during annual vacations. This requirement can be fulfilled by gaining the required experience either inside the Isra University or its Hospitals. In some instances, arrangements can also be made so that the same can be accomplished in accredited institutions in Pakistan or abroad. For outside work, students themselves will bear the financial burden.

A TYPICAL STUDY PLAN
BACHELOR OF SCIENCE BS (HONS) PHYSIOLOGY

DURATION 4 YEARS

Minimum Degree Requirements: This program comprises a total of 133 credits.

YEAR 1
First Semester

Course Title	Credit Hours	Contact Hrs per Semester
English-I	3 (3+0)	54
Islamiat	2 (2+0)	36
Mathematics-I/ Biology-I	3 (3+0)	54
Biochemistry-I	3 (2+2)	72
Cell and Molecular Biology-I	3 (2+2)	72
Fundamental Anatomy and Physiology-I	4 (2+2)	90
Total Credits	**18**	**378**

Second Semester

Course Title	Credit Hours	Contact Hrs per Semester
English-II	3 (3+0)	54
Pak Studies	2 (2+0)	36
Mathematics-II/Biology-II	3 (3+0)	54
Biochemistry-II	3 (2+2)	72
Cell and Molecular Biology-II	3 (2+2)	72
Functional Anatomy and Physiology-II	4 (3+2)	90
Total Credits	**18**	**378**

YEAR 2
First Semester

Course Title	Credit Hours	Contact Hrs per Semester
English-III	3 (3+0)	54
Introduction and Application to Computers	3 (0+6)	108
Humanities/Civilization	2 (2+0)	36
Homeostasis	1 (1+0)	18
Physiology of blood and ECF	3 (2+2)	72
Pathophysiology	3 (2+2)	72
Plant Physiology	3 (2+2)	72
Total Credits	**18**	**432**

Second Semester

Course Title	Credit Hours	Contact Hrs per Semester
English-IV (Communication Skills)	3 (3+0)	54
Introduction to Bioinformatics	3 (0+6)	108
Neurophysiology	4 (3+2)	90
Muscle Physiology	3 (3+2)	72
Principles of Immunology	3 (3+2)	72
Total Credits	**16**	**396**

YEAR 3
First Semester

Course Title	Credit Hours	Contact Hrs per Semester
Biostatistics	3 (1+4)	90
Cardiovascular Physiology	4 (3+2)	90
Pulmonary Physiology	3 (3+2)	72
Renal Physiology	3 (3+2)	72
Gastroenteropancreatic Physiology	3 (3+2)	72
Total Credits	**16**	**396**

Second Semester

Course Title	Credit Hours	Contact Hrs per Semester
Endocrinology	4 (3+2)	90
Reproductive and Development Physiology	4 (3+2)	90
Physiology of Sensory Systems	3 (3+2)	72
Comparative Animal Physiology	3 (3+2)	72
Human and Animal Behavior	3 (3+2)	72
Total Credits	**17**	**396**

YEAR 4
First Semester

Course Title	Credit Hours	Contact Hrs per Semester
Pharmacology	4 (3+2)	90
Environmental Physiology	3 (2+2)	72
Physiology of Health, Fitness and Exercise	3 (2+2)	72
Research Methodology	3 (0+6)	108
Project	3 (0+6)	108
Total Credits	**16**	**350**

Second Semester

Course Title	Credit Hours	Contact Hrs per Semester
Pathophysiology (Plant/Human/Animal)	3 (2+2)	72
Physiological Biotechnology	3 (2+2)	72
Toxicology	3 (2+2)	72
Ergonomics	2 (2+0)	36
Internship	3 (0+6)	108
Total Credits	**14**	**360**

Bachelor of Science in (Medical Technology)

Medical Technology is a professional discipline that is central to providing effective patient management and health care. Diagnosis of the diseases at the laboratory level heavily depend on investigation reports that are critical in the proper treatment of patients. The role of medical technologists and technicians in laboratories thus becomes crucial.

This program is designed to produce well trained and qualified medical technologists who can work with diligence and efficiency. The graduates will be equipped with the skills to assist doctors and clinicians in the proper diagnosis of diseases. Practical trainings are conducted in the college labs and hospitals associated with Isra University. The program has been designed to meet the growing demand of trained technicians and technologists in the country and nearby regions including the Middle East, South East Asia and Africa.
The program comprises two years of study under an annual system. The following courses are offered to the students: Microtechniques and Elementary Anatomy, Clinical Pathology and Serology, Haematology and Blood Banking, Microbiology, Clinical Biochemistry, Medical Instrumentation, Elementary Human Physiology, English, Islamic Studies and a variety of elective courses related to the program.

Isra Institute of Rehabilitation Sciences

PPDPT

Electro Neuro Physiology

Doctor of Physical Therapy

M.Phil SMMPT

Sports Medicine

Manipulative Physical Therapy

PhD in Rehabilitation Sciences

Kinesiology

Diagnostic Electro Neurophysiology

Bio Statistics

Postgraduate Diploma

Anatomy

Pathology

Speech Language Pathology

Community Based Rehabilitation

Isra Institute of Rehabilitation Sciences

The Isra Institute of Rehabilitation Sciences (IIRS) aims to produce competent rehabilitation practitioners who are capable of conducting unique and independent research. The Institute promotes critical thinking and inquiry to foster an environment of research and academic learning. Its programs have been designed to meet the growing demand of the rehabilitating patients from injuries and disabilities. Its graduates are equipped with the skills and aptitude to provide effective care in restoring bodily functions, improving mobility, relieving pain and contributing towards a better life style for the patients.

Physical Therapy, also known as physiotherapy is a dynamic profession concerned with evaluation and rehabilitation of patient disabled by pain, disease, or injury and their treatment by physical therapeutic measures. The objective of the program is to produce a group of highly competent physiotherapists to fulfill the increasing demand at national and international level.

Course of Study

This is a five years under graduate program of full time study. Each year of study comprises of two semesters. The duration of each semester is 18 weeks. The first two years cover the basic medical sciences, communication skill and basic physiotherapy concepts. The last three years will cover clinical medical sciences along with practical physical therapy applications.

A TYPICAL STUDY PLAN
DOCTOR OF PHYSICAL THERAPY (DPT)

DURATION 5 YEARS

Minimum Degree Requirements: This program comprises a minimum of 200 credit hours.

YEAR 1
First Semester

Course Code	Course Title	Credit (Contact) Hours
DPAN111	Anatomy -I	4(3+1)
DPPY112	Physiology-I	3(2+1)
DPKY113	Kinesiology-I	3(2+1)
DPEN114	English-I	3(3+0)
DPIS115	Islamiat	2(2+0)
DPPS116	Pakistan Studies	2(2+0)
DPMA117	Mathematics	3(3+0)
	Total Credits	**20**

Second Semester

Course Code	Course Title	Credit (Contact) Hours
DPAN121	Anatomy -II	4(3+1)
DPPY122	Physiology-II	3(2+1)
DPKY123	Kinesiology-II	4(3+1)
DPEN124	English-II	3(3+0)
DPPH125	Physics	3(2+1)
DPBT126	Biostatistics	3(3+0)
	Total Credits	**20**

YEAR 2
First Semester

Course Code	Course Title	Credit (Contact) Hours
DPAN231	Anatomy -III	4(3+1)
DPPY232	Physiology-III	3(2+1)
DPBE233	Biomechanics & Ergonomics-I	3(2+1)
DPEN234	English-III	3(2+1)
DPCS235	Computer	3(2+1)
DPCH236	Chemistry	3(2+1)
DPSY237	Sociology	2(2+0)
	Total Credits	**21**

Second Semester

Course Code	Course Title	Credit (Contact) Hours
DPAN241	Anatomy-IV	4(3+1)
DPEP242	Exercise Physiology	3(2+1)
DPBE243	Biomechanics & Ergonomics-II	3(2+1)
DPBG244	Biochemistry & Genetics	4(2+2)
DPTE245	Therapeutic Exercises	3(2+1)
DPBS246	Behavioral Sciences (Psychiatry & Psychology)	3(3-0)
	Total Credits	**20**

YEAR 3
First Semester

Course Code	Course Title	Credit (Contact) Hours
DPPM351	Pathology & Microbiology I	3(2+1)
DPPT352	Pharmacology & Therapeutic I	3(2+1)
DPPE353	Physical Agents & Electrotherapy I	3(2+1)
DPMT354	Manual Therapy	3(2+1)
DPCM355	Community Medicine I	3(3+0)
DPHW356	Health Promotion & Wellness	3(3+0)
DPCP357	Clinical Practice I	3(0+3)
	Total Credits	**21**

Second Semester

Course Code	Course Title	Credit (Contact) Hours
DPPM361	Pathology & Microbiology II	3(2+1)
DPPT362	Pharmacology & Therapeutics II	3(3+0)
DPPE363	Physical Agents & Electrotherapy II	3(2+1)
DPTM364	Teaching Methodology	3(2+1)
DPMI365	Medical Informatics	2(2+0)
DPHD366	Human Growth & Development	2(2+0)
DPCP367	Clinical Practice II	3(0+3)
	Total Credits	**19**

YEAR 4
First Semester

Course Code	Course Title	Credit (Contact) Hours
DPMD471	Medicine I	3(3+0)
DPSR472	Surgery I	3(3+0)
DPRI473	Radiology & Imaging	4(3+1)
DPMS474	Musculoskeletal Physical Therapy	3(2+1)
DPRM475	Research Methodology I	3(3+0)
DPCB476	Community Based Rehab	2(2+0)
DPCP477	Clinical Practice III	3(0+3)
	Total Credits	**21**

Second Semester

Course Code	Course Title	Credit (Contact) Hours
DPMD481	Medicine II	3(3+0)
DPSR482	Surgery II	3(3+0)
DPNP483	Neurological Physical Therapy	3(3+1)
DPEB484	Evidence Based Practice	3(2+1)
DPOP485	Orthotics & Prosthetics	3(2+1)
DPAM486	Administration & Management	2(2-0)
DPCP487	Clinical Practice IV	3(0+3)
	Total Credits	**17**

YEAR 5
First Semester

Course Code	Course Title	Credit (Contact) Hours
DPCP591	Cardiopulmonary Physical Therapy	3(2+1)
DPEP592	Emergency Procedures & Primary Care in Physical Therapy	3(2+1)
DPDD593	Clinical Decision Making & Differential Diagnosis	3(3-0)
DPSI594	Scientific Inquiry	2(2+0)
DPPP595	Professional Practice	2(2+0)
DPIP596	Integumentry Physical Therapy	3(2+1)
DPCP597	Clinical Practice V	4(0+4)
	Total Credits	**20**

Second Semester

Course Code	Course Title	Credit (Contact) Hours
DPOG511	Obstetrics & Gynaecological Physical Therapy	2(2+0)
DPPD512	Pediatric Physical Therapy	2(2+0)
DPGG513	Gerontology & Geriatric Physical Therapy	2(2+0)
DPMP514	Metabolic Physical Therapy	2(2+0)
DPCP515	Clinical Practice VI	4(0+4)
DPRP516	Project/Dissertation	6(0+6)
		18
	Total Credits	**200**

BS, Speech Language Therapy/Pathology (BS, SLT/SLP)

Introduction:

Speech-Language Pathology professionals (Speech-Language Pathologists (SLPs), or informally speech therapists) specialize in communication disorders. The main components of speech production include: phonation, the process of sound production; resonance, opening and closing of the vocal folds; intonation, the variation of pitch; and voice, including aeromechanical components of respiration. The main components of language include: phonology, the manipulation of sound according to the rules of the language; morphology, the understanding and use of the minimal units of meaning; syntax, the grammar or principles and rules for constructing sentences in language; semantics, the interpretation of meaning from the signs or symbols of communication; and pragmatics, the social aspects of communication.

Eligibility Requirement: Minimum requirement – A levels / Intermediate (Pre-Medical) with 45% or Equivalent marks.

Scope of Speech Language Therapy:

The field of speech – language therapy has remained neglected here, so far. Our students graduating from the institute shall be the torch bearers of the profession in Pakistan and would be able to provide their valuable services in a multitude of settings, working collaboratively with ENT specialists, neurologists, pediatricians, psychologists, occupational and physical therapists in hospitals, and rehabilitation units. They could also work at schools or have their private practices.

A TYPICAL STUDY PLAN
BACHELOR OF SCIENCE SPEECH LANGUAGE THERAPY/PATHOLOGY (BS, SLT/SLP) **DURATION 4 YEARS**

Minimum Degree Requirements: This program comprises a minimum of 130 credit hours.

YEAR 1
First Semester

Course Code	Course Title	Credit (Contact) Hours
HMLG 111	English I (Functional English)	3(3-0)
ADDA 111	Anatomy	3(3-0)
ADBB 112	Biochemistry	3(3-0)
ADBS 113	Behavioral Sciences	3(3-0)
HMIS 113	Islamic Studies	2(2-0)
SLSP116	Introduction to Speech-Language Pathology	3(3-0)
	Total Credits	**17**

Second Semester

Course Code	Course Title	Credit (Contact) Hours
HMCS 114	English II (Communication Skills)	3(3-0)
ADBP 121	Physiology	3(3-0)
ADGP 122	Pathology	3(3-0)
HMPS 112	Pakistan Studies	2(2-0)
ADCE 123	Computer Education	3(2-1)
SLPN126	Phonetics Theory & Practical Phonetics	3(3-1)
	Total Credits	**17**

YEAR 2
First Semester

Course Code	Course Title	Credit (Contact) Hours
SLLG231	Linguistics -Theory, Development and Clinical Application	3(2-1)
SLSL2332	Speech, Language and Communication Needs And Intervention I	3(2-1)
ADMS 211	Medical Sociology (Counseling & Behavior)	2(2-0)
ADAB 222	Anatomical basis of (Speech, Hearing & Balance)	3(3-0)
HMFR 211	English- III (Technical Report Writing)	3(3-0)
	Total Credits	**14**

Second Semester

Course Code	Course Title	Credit (Contact) Hours
SLLD241	Persistent Childhood Speech, Language and Communication Disorders	3(2-1)
SLSL242	Speech, Language and Communication Needs and Intervention -II	3(2-1)
SLAD243	Adult Communication Disorders and Theories of Counseling	3(2-1)
ADMS 221	Medical Sociology (Psychology & Teaching)	2(2-0)
SLPR245	Professional Roles and Linguistic Perspectives-1	2(1-1)
SLCN247	Clinical Medical Studies-I (Neurology)	2(1-1)
	Total Credits	**14**

YEAR 3
First Semester

Course Code	Course Title	Credit (Contact) Hours
SLCD351	Clinical Decision Making and Counseling	3(3-0)
SLPD352	Personal Development Planning & Theoretical Application	3(2-1)
SLAC353	Adult Communication Disorders	3(3-0)
SLCP354	Clinical Medical Studies-II (Pediatrics)	2(1-1)
SLPR355	Professional Roles and Linguistic Perspectives-11	2(1-1)
SLCP356	Clinical Practicum	3(0-3)
	Total Credits	**16**

Second Semester

Course Code	Course Title	Credit (Contact) Hours
SLCB361	Community Based Rehabilitation (CBR)	3(3-0)
SLPD362	Personal Development and Professional Practice -I	3(2-1)
SLMH363	Child & Adolescent Mental Health	2(1-1)
SLAA364	Adult Acquired Aphasia	2(2-0)
SLSC 365	Augmentative and Alternative Communication	3(2-1)
SLCA366	Clinical Medical Studies-III (Audiology)	2(1-1)
SLCP367	Clinical Practicum	4(0-4)
	Total Credits	**19**

YEAR 4
First Semester

Course Code	Course Title	Credit (Contact) Hours
SLFA471	Advance Fluency Disorders in Adults	3(3-0)
SLFC472	Advance Fluency Disorders in Children	3(3-0)
ADBS 413	Biostatistics	3(3-0)
ADRM 414	Research Methods	2(2-0)
SLPP475	Personal Development and Professional Practice -II	3(3-0)
SLCP476	Clinical Practicum	4(0-4)
	Total Credits	**18**

Second Semester

Course Code	Course Title	Credit (Contact) Hours
SLEB481	Evidence Based Practice in Rehabilitation	3(3-0)
SLLS482	Language and School	3(3-0)
SLCP483	Advanced Clinical Practicum	4(0-4)
SLRP484	Research Project/thesis	4(0-4)
	Total Credits	**14**

Post Professional Doctor of Physical Therapy

This is a two year post graduate program of 75 credits including a project/dissertation of 6 credits. Each year of study comprises two semesters. The duration of each semester is 18 weeks. The program is offered to cater to the growing need of qualified professionals in the field of physical therapy.

Candidates having a four years BS degree in Physiotherapy, or a three years B.Sc. in Physiotherapy with a one year additional certificate course from an HEC recognized university are eligible to take admission in the PPDPT program.

A TYPICAL STUDY PLAN
POST PROFESSIONAL DOCTOR OF PHYSICAL THERAPY (PPDPT)

DURATION 2 YEARS

Minimum Degree Requirements: This program comprises a minimum of 75 credits.

YEAR 1
First Semester

Course Code	Course Title	Credit (Contact) Hours
PPDP611	Exercise Physiology & Neurophysiology	4(3+1)
PPDP612	Applied Anatomy	4(3+1)
PPDP613	Pathology & Microbiology	4(3+1)
PPDP614	Histology & Embryology	3(2+1)
PPDP614	Ergonomics & Biomechanics	3(2+1)
PDPP615	Human Growth & Development	2(2+0)
PDPP616	Genetics	2(2+0)
	Total Credits	**22**

Second Semester

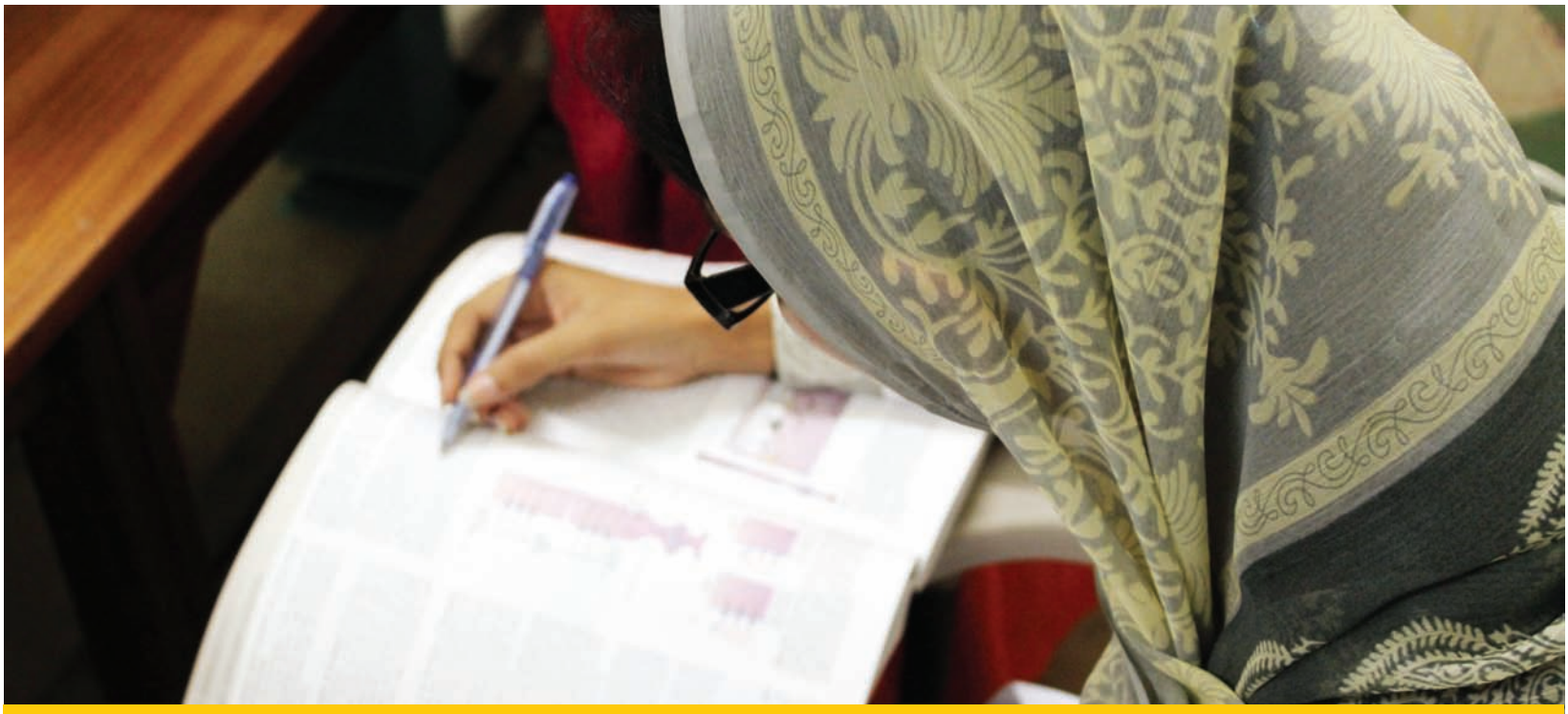
Course Code	Course Title	Credit (Contact) Hours
PPDP621	Pharmacology & Therapeutics	3(2+1)
PPDP622	Radiology & Imaging	3(2+1)
PPDP623	Evidence Based Practice	3(2+1)
PPD624	Clinical Methods in Musculoskeletal & Neuromuscular Physical Therapy	4(3+1)
PPDP625	Clinical Methods in Cardio-pulmonary Integumentary & Metabolic Physical Therapy	4(3+1)
PPDP627	Manual Therapy	3(2+1)
PPDP628	Medical Informatics	2(2+0)
	Total Credits	**22**

YEAR 2
First Semester

Course Code	Course Title	Credit (Contact) Hours
PPDP711	Primary Care & Emergency Procedures in Physical Therapy	3(2+1)
PPDP712	Pediatrics & Gender Health Care in Physical Therapy	4(3+1)
PPDP713	Gerontology & Geriatrics Physical Therapy	3(2+1)
PPDP714	Biostatistics, Research Methodology & Scientific Inquiry	3(3+0)
PPDP715	Differential Diagnosis & Clinical Decision Making	3(2+1)
PPDP716	Health Education, Learning & Teaching Methodology	2(2+0)
PPDP717	Molecular Medicine	3(3+0)
PPDP718	Orthotics & Prosthetics	2(2+0)
	Total Credits	**23**

Second Semester

Course Code	Course Title	Credit (Contact) Hours
PPDP721	Health Promotion & Wellness in Physical Therapy & Community Based Rehabilitation	2(2+0)
PPDP722	Professional Practice	2(2+0)
PPDP723	Clinical Practice In Integumentary PT	1(0+1)
PPDP724	Clinical Practice in Musculoskeletal PT	1(0+1)
PPDP725	Clinical Practice in Neurology PT	1(0+1)
PPDP726	Clinical Practice in Cardiopulmonary PT	1(0+1)
PPDP799	Research Project / Dissertation	6(0+6)
	Total Credits	**14**



Master of Science & Postgraduate Diploma in Diagnostic Electro Neuro Physiology

Monitoring the functions of both the central and peripheral nervous systems during surgery and in intensive care is becoming increasingly important. Diagnostic Electro Neuro Physiology encompasses the measurement of such electrophysiological events that are critical in providing effective health care to the patients. A variety of diagnostic tests and procedures within the domain such as electroencephalography, electromyography, nerve conduction studies and transcranial doppler ultrasonography are used to diagnose specific types of neurological and neuromuscular disorders. This post graduate program aims to produce skilled professionals who are equipped with the required knowledge of electroneurophysiological procedures to improve patient care.
The Postgraduate Diploma is based over one year of study, while the Master of Science is a two year program.

A TYPICAL STUDY PLAN
MASTER OF SCIENCE IN DIAGNOSTIC ELECTRO NEURO PHYSIOLOGY **DURATION 2 YEARS**

Minimum Degree Requirements: This program comprises a total of 36 credits.

YEAR 1
First Semester

Course Code	Course Title	Credit (Contact) Hours
DENP611	Advance Anatomy & Physiology	3 (3+0)
DENP612	Instrumental Electronics	3 (3+0)
DENP613	Advance Pathalogy	3 (3+0)
DENP614	Clinical Neurophysiology-I	3 (3+0)
	Total Credits	**12**

Second Semester

Course Code	Course Title	Credit (Contact) Hours
DENP621	Clinical Neurophysiology-II	3 (3+0)
DENP622	Electro Diagnostic Medicine	3 (3+0)
DENP623	Clinical Neurology	3 (3+0)
DENP624	Computer Application & Physics for Electro Neurophysiology	3 (3+0)
	Total Credits	**12**

YEAR 2
First & Second Semester

Course Code	Course Title	Credit (Contact) Hours
	Clinical Practice in Diagnostic Electro Neurophyiology (Mandatory)	Non Credit
DENP799	Thesis	12 (0+24)
	Total Credits	12

M. Phil & Post Graduate Diploma in Community Based Rehabilitation & Disability Studies M. Phil (CBR&DS) & PGD (CBR &DS)

Community-based rehabilitation (CBR) focuses on enhancing the quality of life for people with disabilities and their families, meeting basic needs ensuring inclusion and participation and mobilizing locally available resources for the rehabilitation and inclusion of PWDs. CBR has evolved to become a multi-sectoral strategy that empowers persons with disabilities to access and benefit from health, education, employment and social services. CBR is implemented through the combined efforts of people with disabilities, their families, organizations and communities, relevant government and non-government health, education, vocational, social and other services. Now the rehabilitation of persons with disabilities is taken as human rights issue instead of just providing the care.

The Postgraduate Diploma is based over one year of study, while the Master of Philosophy is a two year program.

A TYPICAL STUDY PLAN
MASTER OF PHILOSOPHY & POST GRADUATE DIPLOMA IN COMMUNITY BASED REHABILITATION & DISABILITY STUDIES

DURATION 2 YEARS

Minimum Degree Requirements: This program comprises a total of 36 credits.

YEAR 1
First Semester

Course Code	Course Title	Credit (Contact) Hours
CBRD611	Planning Organization and Management of Community Based Services	3 (3+0)
CBRD 612	Community Based Strategies For Millennium Development Goals	3 (2+2)
CBRD 613	Disability Studies	3 (2+2)
CBRD 614	Social & Medical Intervention with People with Disabilities	3 (2+2)
	Total Credits	**12**

Second Semester

Course Code	Course Title	Credit (Contact) Hours
CBRD 621	Disaster Management Regarding Food, Health Care & Shelter Security	3 (2+2)
CBRD 622	Community Based Research Methods & Project Planning and Management	3 (2+2)
CBRD 623	Curriculum Design, Teaching and Learning for CBR Workers	3 (2+2)
CBRD 624	Advance Guidance and Counseling	3 (2+2)
	Total Credits	**12**

YEAR 2
First & Second Semester

Course Code	Course Title	Credit (Contact) Hours
	Field Work Practice (8 Weeks Mandatory for M. Phil)	Non Credit
CBRD 799	Thesis	12 (0+24)
	Total Credits	**12**

M. Phil, Postgraduate Diploma & Post Professional Clinical Residency (Sports Medicine & Manipulative Physical Therapy)

Sport Medicine & Manipulative Physical Therapy (SM& MPT) is a rapidly growing specialty that has the potential to impact upon all areas of Rehabilitation sciences. This world-class course is for physiotherapists seeking a specialist qualification in sports medicine & Manipulative Physical Therapy, compliant with international standards of practice. Sports Medicine & Manipulative Physical Therapy is becoming an increasingly popular method of treating athletes with musculoskeletal problems. The primary theoretic basis for the claimed beneficial results of manipulation is the restoration of motion with subsequent effects on ligamentous adhesions, muscle spasm, disk nutrition, and central nervous system endorphin systems. Research trials suggest that sports medicine & manipulation is beneficial in relieving or reducing the duration of acute low back pain and acute neck pain. It is evident that sports medicine & manipulative physical therapy enhance certain parameters of motion of the spine and peripheral joints.

The Postgraduate Diploma is based over one year of study, while the Master of Philosophy is a two year program.

A TYPICAL STUDY PLAN
MASTER OF PHILOSOPHY, POSTGRADUATE DIPLOMA & POST PROFESSIONAL CLINICAL RESIDENCY (SPORTS MEDICINE & MANIPULATIVE PHYSICAL THERAPY)

DURATION 2 YEARS

Minimum Degree Requirements: This program comprises a total of 36 credits.

YEAR 1
First Semester

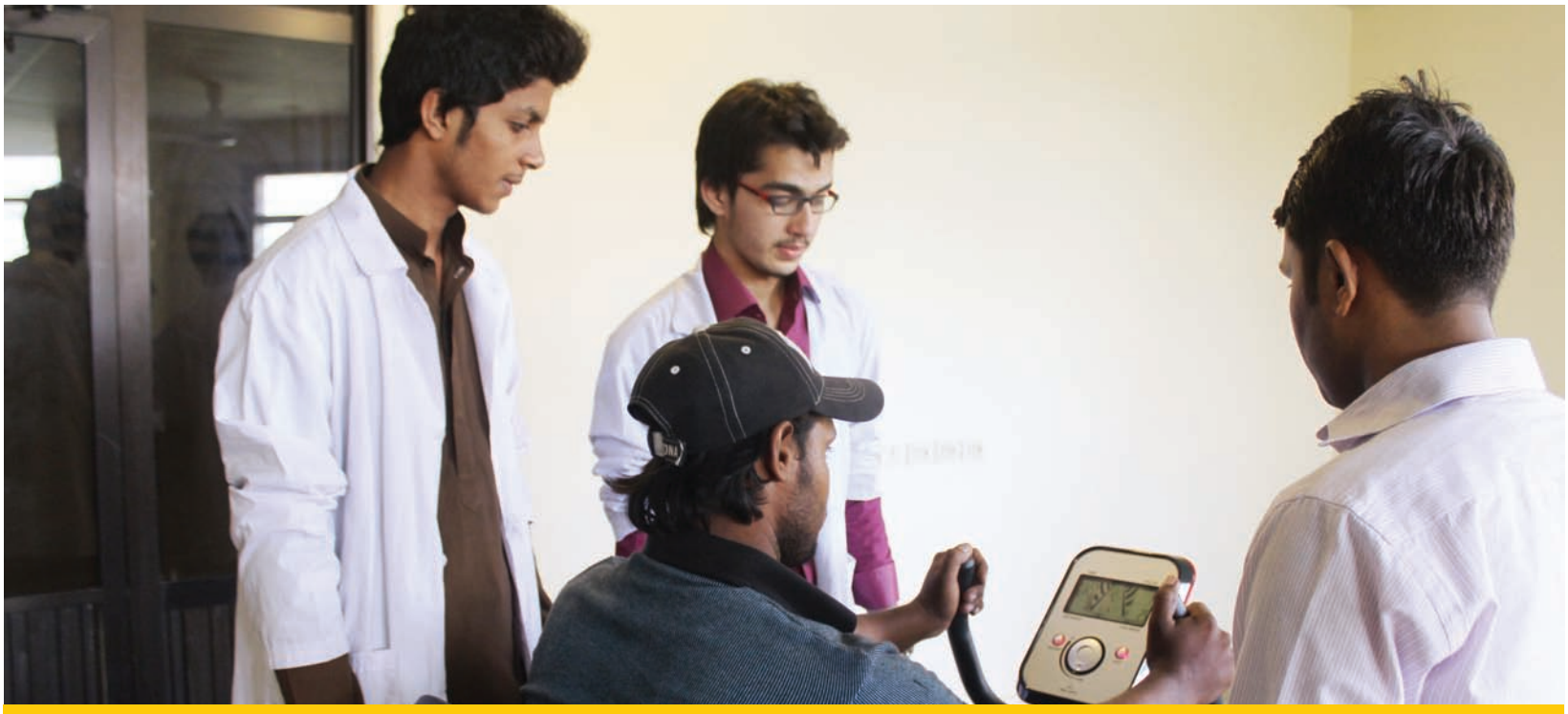
Course Code	Course Title	Credit (Contact) Hours
SMMT611	Research Methods, Data Analysis & Scientific Inquiry	3 (3+0)
SMMT 612	Advance Principles & Practice of Manipulative Physical Therapy	3 (2+2)
SMMT 613	Musculoskeletal Sciences (Musculoskeletal Injuries, Diagnosis & Management)	3 (2+2)
SMMT 614	Advance Manipulative Physical Therapy Techniques (Upper, Lower Quadrant & Spine)	3 (1+4)
	Total Credits	**12**

Second Semester

Course Code	Course Title	Credit (Contact) Hours
SMMT 621	Sports Medicine (Sports Injuries, Diagnosis & Management)	3 (2+2)
SMMT 622	Sports Psychology	3 (2+2)
SMMT 623	Applied Exercise Physiology & Nutrition	3 (2+2)
SMMT 624	Pain Management (Musculoskeletal & Sports Injuries)	3 (1+4)
	Total Credits	**12**

YEAR 2
First & Second Semester

Course Code	Course Title	Credit (Contact) Hours
SMMT 799	Thesis	12 (0+24)
	Total Credits	**12**



M.Phil, Postgraduate Diploma in Speech Language Pathology & Hearing Sciences (M.Phil, PGD-SLP&HS)

The aim of Speech-Language Pathology & Hearing program is to train post graduates in the country who will be qualified and competent to identify, diagnose, assess, evaluate, treat, manage and rehabilitate people with Language, Speech, Voice, Fluency, Cognitive and other related Communication disorders Swallowing and Hearing difficulties. This Degree Program Will Cover Communication Disorders due to Neurological Impairments, Hearing Impairment, Language Learning Disabilities, Cerebral Palsy, Developmental Delays, Autism, Cleft Palate, Brain Injuries, Feeding , Swallowing and Hearing Disorders .
The Postgraduate Diploma is based over one year of study, while the Master of Philosophy is a two year program.

A TYPICAL STUDY PLAN
MASTER OF PHILOSOPHY, POSTGRADUATE DIPLOMA IN SPEECH LANGUAGE PATHOLOGY & HEARING SCIENCES **DURATION 2 YEARS**

Minimum Degree Requirements: This program comprises a total of 36 credits.

YEAR 1
First Semester

Course Code	Course Scheme for Speech, Language & Hearing Sciences	Credit (Contact) Hours
SLHS 611	Language Science	2 (1+1)
SLHS 612	Biomedical Sciences 1	2 (1+1)
SLHS 613	Child Development	2 (1+1)
SLHS 614	Speech & Hearing Sciences	2 (1+1)
	Total Credits	**8**

Second Semester

Course Code	Course Scheme for Speech, Language & Hearing Sciences	Credit (Contact) Hours
SLHS621	Biomedical Sciences 11	2 (1+1)
SLHS622	Biostatistics, Research Methodology & Scientific Inquiry	2 (1+1)
SLHS623	Evidence Based Practice	2 (2+0)
SLHS624	Communication and Behavioral Disorders	2 (2+0)
SLHS625	Pharmacology in Rehabilitation	2 (2+0)
	Total Credits	**10**

YEAR 2
First Semester

Course Code	Course Scheme for Speech, Language & Hearing Sciences	Credit (Contact) Hours
	Elective-1	3 (2+1)
	Elective-2	3 (2+1)
	Elective-3	2 (1+1)
	Elective-4	3 (2+1)
	Total Credits	**11**

Second Semester

Course Code	Course Scheme for Speech, Language & Hearing Sciences	Credit (Contact) Hours
	Elective-5	4 (3+1)
SLHS642	Advance Clinical Practum	4 (NCH)
SLHS699	Dissertation	**6**
	Total Credits	**39**

YEAR 1
First Semester

Course Code	Course Speech & Language Pathology	Credit (Contact) Hours
SLSD631	Speech Disorders	3 (2+1)
SLDC632	Language Disorders in Children	3 (2+1)
SLRA633	Rudiments of Audiology	2 (1+1)
SLDP634	Clinical Decision Making & Planning Effective Treatment	3 (2+1)
	Total Credits	**9**

Second Semester

Course Code	Course Speech & Language Pathology	Credit (Contact) Hours
SLND641	Neurological, Communication & Swallowing Disorders	4 (3+1)
SLAC642	Advance Clinical Practum	4 (NCH)
	Thesis	6

YEAR 2
First Semester

Course Code	Course Hearing Sciences	Credit (Contact) Hours
HSAA631	Introduction To Audiology & Its Medical & Physiologic Aspects	3 (2+1)
HSPA632	Principles of Audiological Assessment	3 (2+1)
HSPI633	Psychoacoustics and Instrumentation	2 (2+0)
HSAR634	Aural Habilitation and Rehabilitation	3 (2+1)
	Total Credits	**11**

Second Semester

Course Code	Course Hearing Sciences	Credit (Contact) Hours
HSCD641	Guidance, Counseling, Clinical Decision Making and Related Issues in Audiology	4 (3+1)
HSAC642	Advance Clinical Practum	4 (NCH)
SLHS699	Dissertation	**6**
	Total Credits	**39**

PhD in Rehabilitation Sciences

The mission of the Doctoral Program in Rehabilitation Sciences of the Isra Institute of Rehabilitation Sciences (IIRS) is to advance the frontiers of knowledge underlying the practice of the rehabilitation disciplines and professions through research, teaching, and professional development.

The primary goals of the PhD program in Rehabilitation Sciences are to:

1. Provide core content in theories and models of rehabilitation, disability and/or assistive technology that underpin rehabilitation sciences
2. Provide in depth, state of the science, content in basic, clinical, social, medical and/or engineering sciences that support the dissertation research
3. Provide mentorship opportunities for immersion in rehabilitation science research labs, projects, and/or ongoing studies.
4. Prepare students to conduct and disseminate original research that will advance rehabilitation science.
5. Promote interdisciplinary research in preparation for becoming a research team member.
6. Promote knowledge, behaviors and skills consistent with the responsible conduct of research.
7. Provide opportunities to teach content in an area of expertise.

Graduates of this Program will have a specific area of expertise in rehabilitation sciences as well as a core of inter disciplinary knowledge related to this specific area They will become their researchers, scholars, teachers, thinkers, and planners in the demanding and changing field of rehabilitation sciences.

A TYPICAL STUDY PLAN
PhD IN REHABILITATION SCIENCES

DURATION 3 YEARS

Minimum Degree Requirements: This program comprises a total of 36 credits.

YEAR 1
First Semester

Course Code	Course Title	Credit (Contact) Hours
DPRS711	Biostatistics & Research Design	02
DPRS712	Disability and Rehabilitation	02
	Elective - 01	02
	Total Credits	**6**

Second Semester

Course Code	Course Title	Credit (Contact) Hours
DPRS721	Outcome Measurements & Analysis	02
DPRS722	Neuroscience	02
	Elective - 02	02
	Total Credits	**6**

YEAR 2
First Semester

Course Code	Course Title	Credit (Contact) Hours
DPRS731	Scientific Inquiry & Writing	02
	Seminar in Rehabilitation Sciences	02
	Elective - 03	02
DPRS799	Dissertation	09
	Total Credits	**15**

YEAR 2
Second Semester

Course Code	Course Title	Credit (Contact) Hours
DPRS799	Dissertation	9
	Total Credits	**9**

YEAR 3
First Semester

Course Code	Course Title	Credit (Contact) Hours
DPRS799	Dissertation	9
	Total Credits	**9**

Second Semester

Course Code	Course Title	Credit (Contact) Hours
DPRS799	Dissertation	9
	Total Credits	**9**

Electives

Course Title	Credit (Contact) Hours
Issues in Orthopedic Physical Therapy & Manual Therapy	02
Biomechanics in Orthopedic Physical Therapy	02
Health and Wellness Promotion	02
Exercise Physiology	02
Differential Diagnosis in Rehabilitation	02
Pharmacology in Rehabilitation	02
Motor Control Theory and Practice	02
Articulation Disorders: Evaluation and Therapy	02
Dysphagia	02
Diagnostic Audiology	02
Sign Language for Health Professionals	02
Neural Bases of Speech & Language Disorders	02
Pain Management	02
Physical Medicine & Rehabilitation	02
Curriculum Design and Teaching in Allied Health	02
Disability and Rehabilitation, Individual and Contextual Factors	02
Seminar in Health Care Policy and Administration	02
Pathophysiology and Disability	02
Counseling in Rehabilitation	02
Occupational Therapy Practice: Assistive Technology	02
Conditions in Occupational Therapy	02
Occupational Performance Throughout the Lifespan	02
Physiology of Body Systems	02
Disability and Rehabilitation, National and International Perspectives Influencing Public Policy and Research	02
Behavior Principles	02
Psychology: Understanding Human Behavior	02
Abnormal Psychology and Society	02
Cognitive Psychology	02
Fundamentals of Human Neuropsychology	02
Orthotics and Prosthetics	02

School of Engineering & Applied Sciences

Computer Vision
Fiber Optics
Optimal Controls
Stochastic Processes
Optimization Techniques
Network Programming
Network Security
Switching Theory
Circuit Analysis
Advanced FPGAs
Digital Signal Processing
Project
Bio Statistics

School of Engineering & Applied Sciences

The School of Engineering & Applied Sciences aims to foster an academic environment of learning and research that can inspire the next generation of creators and innovators in the fields of electrical engineering & computer science. Its programs are designed to enrich students with basic knowledge of their respective fields and accommodate the rapid changes of the modern world. Of far greater importance is the reality that these changes have created enormous opportunities for engineering and computer related expertise in the world. The students are equipped with the necessary background and skills to excel in the job market in spite of the growing competition.

School of Engineering & Applied Sciences

The SEAS offers the following degree programs at the Islamabad Campus, the details of which are presented in the accompanying tables giving an overview of typical study plans.

MS & PhD (Electronic Engineering)

The School of Engineering & Applied Sciences offers degree programs in MS and PhD in Electronic Engineering. MS Electronic Engineering program is a two year, full-time program of 30 credits based on 24 credits of coursework and six credits of research or 30 credits of coursework only.

This program also offers a variety of elective courses in novel technologies and emerging trends in modern engineering, which helps broaden the student's field of expertise.

The PhD in Electronic Engineering program is a three to five years, full-time commitment of 54 credits based on 18 credits of coursework and 36 credits of Research.

M.Sc. (Electronics)

The School of Engineering & Applied Sciences also offers a degree M.Sc in Electronics. It is a two years, full-time program of 60 credits based on 54 credit of coursework and 6 credits of project.

BE (Electrical Engineering)

This is a four year, full-time program of 136 credits. It offers a degree in the parent discipline of Electrical Engineering, along with specialization in the three streams of Electronics, Telecommunication, Electrical Power and Computer Systems. The program is designed to produce engineering graduates who have sufficient breadth in the field of electrical engineering to meet the diverse demands of the industry. The program has been designed in accordance with HEC guidelines and has been approved by the Pakistan Engineering Council.

BS (Computer Science)

This is a four year, full-time program of 136 credits. It offers courses covering the core areas of computer science along with technology oriented courses. The graduates of this program will be well equipped to meet the challenges posed by the dynamic needs of the software industry.

M.Sc. Applied Physics

This program is aimed at producing professionals with dynamic range of applications to foster development in physics and its applied branches. It is a two year program and is designed to enable students to master fundamental concepts and be able to learn/apply the developing concepts to enhance their understanding of the subject matter. It is a well balanced program that enables students to meet with requirements of research institutes in Universities and R&D organizations.

Bachelor of Technology

SEAS offer Bachelor of Technology in following disciplines with option of Honors (4 year Program) or Pass (2 Year Program).

B-Tech Electrical

This program is aimed at equipping students with knowledge, skills and techniques to design, implement, integrate, analyze, test and provide support for electrical systems and their accessories. It is a well balanced program that enables students to meet with the requirements of various industries and power companies in Government and Private sector organizations.

B-Tech Electronics

This program is aimed at preparing students for rapidly developing electronics industry. The program is so designed that students get well rounded basic electronics knowledge with an opportunity to choose a specialization. It is a well balanced program that enables students to meet with the requirements of various Electronics, Automation, Telecom, Government and Private sector organizations.

B-Tech Bio-Medical

This program is aimed at producing Bio-Medical Technologists for advancing health care equipment. The program is so designed that students get well rounded basic scientific (Bio-Electro-Mechanical) knowledge. It is a well balanced program that enables students to meet the requirements of various Government/Private sector health care institutes and research centers.

B-Tech Civil

This program is aimed at producing skilled and trained professionals who can be involved in planning, designing, constructing, managing and maintaining infrastructure systems. It is a well balanced program that enables students to meet with the requirements of various infrastructure development companies in Government and Private sector organizations.

SUMMARY OF BE, BS, B-Tech, M.Sc, MS & PhD PROGRAMS

Department of Electronic and Computer Engineering	
BS & BE Programs	
Minimum Qualifications	F.Sc. (Pre-Engineering/ICS) 60% / DAE
Duration	Minimum 4 years
Coursework Credits	136 Credits
Project Credits	06 Credits
B-Tech (Pass/Hons) Program	
Minimum Qualifications	DAE (Relevant Discipline) / F.Sc. (Pre-Engg)/Equivalent
	Pass **Honors**
Duration	Minimum 2 years Minimum 4 years
Coursework Credits	65 Credits 136 Credits
Project Credits	05 Credits 06 Credits
M.Sc Electronics Program	
Minimum Qualifications	B.Sc. In Mathematics and Physics / B-Tech in Electronics / Electrical
Duration	Minimum 2 years
Coursework Credits	60 Credits
Project Credits	06 Credits
MS Program	
Minimum Qualifications	16 years of education: Bachelor of Engineering (Electronic, Electrical, Industrial Electronics, Telecommunication), MSc. Electronics, M.Sc. Computer Science, M.Sc. Applied Physics.
Duration	Minimum 2 years
	Thesis **Non-Thesis**
Coursework Credits	24 30
Research Credits	06 00
PhD Program	
Minimum Qualifications	MS Engg (relevant field) / M Phil Electronics, Telecommunication / MS Computer Science
Duration	3-5 years
Coursework Credits	18 Credits
Research Credits	36 Credits

A TYPICAL STUDY PLAN
BACHELOR OF SCIENCE (COMPUTER SCIENCE), BS (CS) **DURATION 4 YEARS**

Minimum Degree Requirements: This program comprises a minimum of 136 credit hours of coursework that includes a final year project of 6 credits.

YEAR 1
First Semester

Course Code	Course Title	Credit (Contact) Hours
CSIC 111	Introduction to Computing	3 (2+3)
CSPF 112	Programming Fundamentals	4 (3+3)
ESBE 113	Basic Electronics	4 (3+3)
HSEN 114	English I - Composition & Comprehension	3 (3+0)
MTCA 115	Calculus and Analytical Geometry	3 (3+0)
HSPS 116	Pakistan Studies	1 (1+0)
	Total Credits	**18**

Second Semester

Course Code	Course Title	Credit (Contact) Hours
MTLA 121	Linear Algebra	3 (3+0)
HSIS 122	Islamic Studies	2 (2+0)
CSOP 123	Object Oriented Programming	4 (3+3)
HSEN 124	English II - Communication Skills	3 (3+0)
MTES 125	Elements of Statistics and Probability	3 (3+0)
	Supporting Science Elective I	3 (2+3)
	Total Credits	**18**

YEAR 2
First Semester

Course Code	Course Title	Credit (Contact) Hours
MTDS 211	Discrete Structures	3 (3+0)
CSDL 212	Digital Logic and Design	4 (3+3)
CSDS 213	Data Structures and Algorithms	4 (3+3)
HSEN 214	English III -Technical Report Writing	3 (3+0)
CSSE 215	Software Engineering	4 (3+3)
	Total Credits	**18**

Second Semester

Course Code	Course Title	Credit (Contact) Hours
CSSD 221	Software Development	4 (3+3)
CSHC 222	Human Computer Interaction	3 (3+0)
CSDC 223	Data Communication & Computer Networks	4 (3+3)
MTNA 224	Numerical Analysis	3 (3+0)
	Supporting Science Elective II	3 (3+0)
	Total Credits	**17**

YEAR 3
First Semester

Course Code	Course Title	Credit (Contact) Hours
CSDA 311	Design and Analysis of Algorithms	3 (2+3)
CSOS 312	Operating Systems	4 (3+3)
	CS Elective I	4 (3+3)
	General Education Elective I	3 (3+0)
	Supporting Science Elective III	3 (3+0)
	Total Credits	**17**

Second Semester

Course Code	Course Title	Credit (Contact) Hours
CSDD 321	Database Design & Management	4 (3+3)
CSTA 322	Theory of Automata and Formal Languages	3 (3+0)
CSCO 323	Compute Organization & Assembly Language	4 (3+3)
	CS Elective II	4 (3+3)
	Total Credits	**15**

YEAR 4
First Semester

Course Code	Course Title	Credit (Contact) Hours
CSCC 411	Compiler Construction	3 (3+0)
CSAI 412	Artificial Intelligence	4 (3+3)
CSCA 413	Computer Architecture	3 (3+0)
	General Education Elective II	3 (3+0)
	CS Elective III	3 (3+0)
CSCS 499A	BSSE Project I	2 (0+6)
	Total Credits	**18**

Second Semester

Course Code	Course Title	Credit (Contact) Hours
HSPP 421	Professional Practices	2 (2+0)
	General Education Elective III	3 (3+0)
	CS Elective IV	3 (3+0)
	CS Elective V	3 (3+0)
CSCS 499B	BSSE Project II	4 (0+12)
	Total Credits	**15**

Computer Science Electives

Course Code	Course Title	Credit (Contact) Hours
CSIN 341	Internship	3 (0+9)
CSVP 351	Visual Programming	4 (3+3)
CSIP 352	Internet Programming & Web Development	4 (3+3)
CSMC 353	Mobile Computing	4 (3+3)
CSDI 361	Digital Image Processing	4 (3+3)
CSSP 362	Speech Processing	4 (3+3)
CSCG 363	Computer Graphics	4 (3+3)
SEQA 411	Software Quality Assurance	4 (3+3)
SEAD 324	Software Architecture and Design	3 (3+0)
SEPM 323	Software Project Management	3 (3+0)
SEFM 412	Formal Methods in Software Engineering	3 (3+0)
SERE 311	Software Requirements Engineering	3 (3+0)
CSDW 354	Data Warehousing and Data Mining	3 (3+0)
CSMI 355	Management Information Systems	3 (3+0)
CSSC 451	Soft Computing	3 (3+0)
CSML 461	Machine Learning	3 (3+0)
CSNL 462	Natural Language Processing	3 (3+0)
CSCV 463	Computer Vision	3 (3+0)
CSDI 361	Digital Image Processing	3 (3+0)
CSMS 464	Multimedia System Design	3 (3+0)
CSCL 452	Cloud Computing	3 (3+0)
CSDP 453	Distributed Programming	3 (3+0)
CSSP 454	Systems Programming	3 (3+0)
CSCD 465	Cryptography and Data Security	3 (3+0)
ITMI 365	Multimedia Information Networking	3 (3+0)
ITNM 466	Network Management & Security	3 (3+0)
TCMW 484	Mobile and Wireless Communication	3 (3+0)
ITIA 461	Information System Audit	3 (3+0)
ITBA 462	Business Process Automation	3 (3+0)
ESFR 471	Fundamental of Robotics	3 (3+0)
ESES 472	Embedded System	3 (3+0)
CSPL 364	Programming Languages Concepts	3 (3+0)
TCCS 411	Communication Systems	3 (3+0)
TSSS 311	Signals and Systems	3 (3+0)

Supporting Science Electives

Course Code	Course Title	Credit (Contact) Hours
GSAP 131	Applied Physics	3 (2+3)
GSAC 132	Applied Chemistry	3 (2+3)
GSBC 133	Bio-Chemistry	3 (3+0)
GSBG 134	Biology/ genetics	3 (3+0)
MTMC 231	Multivariable Calculus	3 (3+0)
MTDE 232	Differential Equations	3 (3+0)
MTAC 233	Advanced Calculus	3 (3+0)
MTNS 234	Numerical and Symbolic Computing	3 (3+0)
MTSP 235	Stochastic Processes	3 (3+0)
MTCL 331	Computational Linear Algebra	3 (3+0)
MTSE 332	Mathematical tools for Software Engineering	3 (3+0)
MTOR 333	Operations Research	3 (3+0)
MTMS 334	Mathematical Modeling and Simulation	3 (3+0)

General Education Electives

Course Code	Course Title	Credit (Contact) Hours
MSHB 112	Human Behavior & Psychology	3 (3+0)
MSMG 125	Principles of Management	3 (3+0)
HMSC 231	Sociology	3 (3+0)
MSHR 233	Human Resource Management	3 (3+0)
MSFA 235	Financial Accounting	3 (3+0)
MSMK 245	Principles of Marketing	3 (3+0)
MSOB 364	Organizational Behavior	3 (3+0)
MSET 473	Entrepreneurship	3 (3+0)

A TYPICAL STUDY PLAN
BACHELOR OF ENGINEERING (ELECTRICAL), BE (EE)

DURATION 4 YEARS

Minimum Degree Requirements: This program comprises a minimum of 136 credit hours of coursework that includes a final year project of 6 credits.

YEAR 1
First Semester

Course Code	Course Title	Credit (Contact) Hours
MSCA 111	Calculus & Analytical Geometry	3 (3+0)
EELC 112	Linear Circuit Analysis	4 (3+3)
CSIC 113	Introduction to Computing	3 (2+3)
HSFE 114	English-I (Functional English)	2 (2+0)
HSIS 115	Islamic Studies	2 (2+0)
GSAP 116	Applied Physics	4 (3+3)
	Total Credits	**18**

Second Semester

Course Code	Course Title	Credit (Contact) Hours
MSLA 121	Linear Algebra	3 (3+0)
EEEN 122	Differential Equations	2 (2+0)
ELED 123	Electronic Devices & Circuits	4 (3+3)
HSCS 124	English-II (Communication Skills)	2 (2+0)
HSPS 125	Pakistan Studies	2 (2+0)
MEEM 126	Engineering Mechanics	3 (3+0)
	Total Credits	**16**

YEAR 2
First Semester

Course Code	Course Title	Credit (Contact) Hours
MSDE 211	Complex Variables and Transforms	3 (3+0)
HSTR 212	English-III (Technical Report Writing)	2 (2+0)
ELDL 213	Digital Logic Design	4 (3+3)
CSCA 214	Computer Aided Engineering Drawing	3 (2+3)
CSOP 215	Object Oriented Programming	4 (3+3)
	Total Credits	**16**

Second Semester

Course Code	Course Title	Credit (Contact) Hours
EE 122	Electrical Network Analysis	4 (3+3)
HS 222	Engineering Ethics	3 (3+0)
EE 315	Electromagnetic Field Theory	3 (3+0)
MS 224	Numerical Analysis	3 (3+0)
	Breadth Core-I	4 (3+3)
	Total Credits	**17**

YEAR 3
First Semester

Course Code	Course Title	Credit (Contact) Hours
GSPR 311	Probability & Random Variables	3 (3+0)
EEIP 312	Introduction to Power Engineering	3 (3+0)
ELSS 313	Signals & Systems	4 (3+3)
CSMI 314	Microprocessor & Interfacing Techniques	4 (3+3)
EE 223	Fundamentals of Electrical Machines	4 (3+3)
	Total Credits	**18**

Second Semester

Course Code	Course Title	Credit (Contact) Hours
HS 321	Engineering Electronics & Management	3 (3+0)
ELLC 322	Digital Signal Processing	4 (3+3)
TCCS 323	Communication Systems & Applications Interfacing	4 (3+3)
	Breadth Core-II	3 (3+0)
	Specialization-I	4 (3+3)
	Total Credits	**18**

YEAR 4
First Semester

Course Code	Course Title	Credit (Contact) Hours
EESP 411A	Final Year Project-I	2 (0+6)
EL322	Linear Control Systems	4 (3+3)
	Specialization-II	4 (3+3)
	Specialization-III	3 (3+0)
	Elective-I	3 (3+0)
	Total Credits	**16**

Second Semester

Course Code	Course Title	Credit (Contact) Hours
EESP 411B	Final Year Project-II	4 (0+12)
	Specialization-IV	4 (3+3)
	Specialization-V	4 (3+3)
	Elective-II	3 (3+0)
	Total Credits	**15**

Electronics Engineering Breadth-Core Courses

Course Title	Credit (Contact) Hours
Instrumentation & Measurement	4 (3+3)
Electronic Circuit Design	3 (3+0)

Electronic Engineering Specialization

Course Title	Credit (Contact) Hours
VLSI Design	4 (3+3)
Digital Electronics	3 (3+0)
Power Electronics	4 (3+3)
Microwave Engineering	4 (3+3)
Robotics & Automation	4 (3+3)

Electronic Engineering Electives

Course Title	Credit (Contact) Hours
Digital Communication	3 (3+0)
Digital System Design	3 (3+0)
Optoelectronics	3 (3+0)
Digital Control Systems	3 (3+0)
Embedded Systems	3 (3+0)

Telecommunication Engineering Breadth-Core Courses

Course Title	Credit (Contact) Hours
Data Communication & Computer Networking	4 (3+3)
Electronic Circuit Design	3 (3+0)

Telecommunication Engineering Specialization

Course Title	Credit (Contact) Hours
Optical Fiber Communication	4 (3+3)
Digital Communication	3 (3+0)
Radar Systems	4 (3+3)
Microwave Engineering	4 (3+3)
Wave Propagation & Antennas	4 (3+3)

Telecommunication Engineering Electives

Course Title	Credit (Contact) Hours
Digital Communication	3 (3+0)
Digital System Design	3 (3+0)
Optoelectronics	3 (3+0)
Digital Control Systems	3 (3+0)
Embedded Systems	3 (3+0)

Electrical Power Engineering Breadth-Core Courses

Course Title	Credit (Contact) Hours
Instrumentation & Measurement	4 (3+3)
Power Generation	3 (3+0)

Electrical Power Engineering Specialization

Course Title	Credit (Contact) Hours
AC Machines	4 (3+3)
Power Distribution & Utilization	3 (3+0)
Electrical Power Transmission	4 (3+3)
Power Electronics	4 (3+3)
Power System Protection	4 (3+3)

Electrical Power Engineering Electives

Course Title	Credit (Contact) Hours
Power System Analysis	3 (3+0)
Power System Operation & Control	3 (3+0)
High Voltage Engineering	3 (3+0)
Power System stability & Control	3 (3+0)
Advanced Electrical Machines	3 (3+0)
Power Economics & Management	3 (3+0)

Computer Systems Engineering Breadth-Core Courses

Course Title	Credit (Contact) Hours
Data Communication & Computer Networking	4 (3+3)
Computer Architecture	3 (3+0)

Computer Systems Engineering Specialization

Course Title	Credit (Contact) Hours
Operating Systems	3 (3+0)
Embedded Systems	4 (3+3)
Data Structures & Algorithms	4 (3+3)
Database Design & Management Systems	4 (3+3)
Multimedia System	4 (3+3)

Computer Systems Engineering Electives

Course Title	Credit (Contact) Hours
Software Engineering	3 (3+0)
Artificial Intelligence	3 (3+0)
Computer Graphics	3 (3+0)
Digital Image Processing	3 (3+0)
Compiler Construction	3 (3+0)
Bioinformatics	3 (3+0)

A TYPICAL STUDY PLAN
BACHELOR OF TECHNOLOGY IN ELECTRICAL (PASS)

DURATION 2 YEARS

Minimum Degree Requirements: This program comprises of a minimum of 65 credit hours of coursework and 5 credits of Lab.

YEAR 1
First Semester

Course Code	Course Title	Credit (Contact) Hours
MTCA113	Calculus-I	3(3+0)
ETFE124	Foundation of Engineering	3(3+0)
ETIT134	Fundamental of Information Technology	3(3+0)
ETIT135	Fundamental of Information Technology Lab	1(0+3)
MSCS143	Communication Skills-I	3(3+0)
ETEP154	Engineering Physics-I	3(3+0)
HMIS103	Islamic Studies	2
	Total Credits	**18**

Second Semester

Course Code	Course Title	Credit (Contact) Hours
MTCA184	Calculus-II	3(3+0)
ETEP193	Engineering Physics-II	3(3+0)
ETCA114	Circuit Analysis-I	3(3+0)
ETCA115	Circuit Analysis Lab	1(0+3)
ETES174	Electronics-I	3(3+0)
ETED163	Computer Aided Engineering Drawing	2 (0+6)
HMPS213	Pakistan Studies	2
	Total Credits	**17**

YEAR 2
First Semester

Course Code	Course Title	Credit (Contact) Hours
MTLA224	Linear Algebra & Differential Equation	3(3+0)
MSBC232	Business Communication	2
ETEM244	Electrical Machines	3(3+0)
ETSP232	Switchgear & Protective Devices	3(3+0)
ETDL294	Digital Logic Design	3(3+0)
ETDL295	Digital Logic Design Lab	1(0+3)
ETPG253	Power Generation & Utilization	3(3+0)
	Total Credits	**18**

Second Semester

Course Code	Course Title	Credit (Contact) Hours
ETOH272	Occupational Health, Safety & Environment	2
ETIM333	Instrument & Measurements	3(3+0)
ETET273	Electromagnetic Field Theory	3(3+0)
ETPT203	Power Transmission & Distribution	3(3+0)
ETST213	Substation Technology	3(3+0)
ETNA283	Network Analysis	3(3+0)
	Total Credits	**17**

A TYPICAL STUDY PLAN
BACHELOR OF TECHNOLOGY IN ELECTRONICS (PASS)

DURATION 2 YEARS

Minimum Degree Requirements: This program comprises of a minimum of 65 credit hours of coursework and 5 credits of Lab.

YEAR 1
First Semester

Course Code	Course Title	Credit (Contact) Hours
MTCA113	Calculus-I	3(3+0)
ETFE124	Foundation of Engineering	3(3+0)
ETIT134	Fundamental of Information Technology	3(3+0)
ETIT135	Fundamental of Information Technology Lab	1(0+3)
MSCS143	Communication Skills-I	3(3+0)
ETEP154	Engineering Physics-I	3(3+0)
HMIS103	Islamic Studies	2(2+0)
	Total Credits	**18**

Second Semester

Course Code	Course Title	Credit (Contact) Hours
MTCA184	Calculus-II	3(3+0)
ETEP193	Engineering Physics-II	3(3+0)
ETCA114	Circuit Analysis-I	3(3+0)
ETCA115	Circuit Analysis Lab	1(0+3)
ETES174	Electronics-I	3(3+0)
ETED163	Computer Aided Engineering Drawing	2(0+6)
HMPS213	Pakistan Studies	2(2+0)
	Total Credits	**17**

YEAR 2
First Semester

Course Code	Course Title	Credit (Contact) Hours
MTLA224	Linear Algebra & Differential Equation	3(3+0)
MSBC232	Business Communication	2(2+0)
ETEM244	Electrical Machines	3(3+0)
ETSM263	Semiconductor Materials & Devices	3(3+0)
ETDL294	Digital Logic Design	3(3+0)
ETDL295	Digital Logic Design Lab	1(0+3)
ETPE323	Power Electronics	3(3+0)
	Total Credits	**18**

Second Semester

Course Code	Course Title	Credit (Contact) Hours
ETIM333	Instrumentation & Measurements	3(3+0)
ETOH 272	Occupational Health, Safety & Environment	2(2+0)
ETET273	Electromagnetic Field Theory	3(3+0)
ETIE204	Industrial Electronics	3(3+0)
ETCS213	Communication Systems	3(3+0)
ETNA283	Network Analysis	3(3+0)
	Total Credits	**17**

A TYPICAL STUDY PLAN
BACHELOR OF TECHNOLOGY IN ELECTRICAL (HONS)

DURATION 4 YEARS

Minimum Degree Requirements: This program comprises of a minimum of 136 credit hours of coursework including a final year project and 12 credits from the list of electives.

YEAR 1
First Semester

Course Code	Course Title	Credit (Contact) Hours
MTCA113	Calculus-I	3(3+0)
ETFE124	Foundation of Engineering	3(3+0)
ETIT134	Fundamental of Information Technology	3(3+0)
ETIT135	Fundamental of Information Technology Lab	1(0+3)
MSCS143	Communication Skills-I	3(3+0)
ETEP154	Engineering Physics-I	3(3+0)
HMIS103	Islamic Studies	2(2+0)
	Total Credits	**18**

Second Semester

Course Code	Course Title	Credit (Contact) Hours
MTCA184	Calculus-II	3(3+0)
ETEP193	Engineering Physics-II	3(3+0)
ETCA114	Circuit Analysis-I	3(3+0)
ETCA115	Circuit Analysis Lab	1(0+3)
ETES174	Electronics-I	3(3+0)
ETED163	Computer Aided Engineering Drawing	2(0+6)
HMPS213	Pakistan Studies	2(2+0)
	Total Credits	**17**

YEAR 2
First Semester

Course Code	Course Title	Credit (Contact) Hours
MTLA224	Linear Algebra & Differential Equation	3(3+0)
MSBC232	Business Communication	2(2+0)
ETEM244	Electrical Machines	3(3+0)
ETES254	Electronics - II	3(3+0)
ETDL294	Digital Logic Design	3(3+0)
ETDL295	Digital Logic Design Lab	1(0+3)
ETCA252	Circuit Analysis – II	3(3+0)
	Total Credits	**18**

Second Semester

Course Code	Course Title	Credit (Contact) Hours
ETSS314	Signal & Systems	3(3+0)
ETSS315	Signal & Systems Lab	1(0+3)
ETSM263	Semiconductor Materials & Devices	3(3+0)
ETET273	Electromagnetic Field Theory	3(3+0)
ETNA283	Network Analysis	3(3+0)
ETIE203	Industrial Electronics	3(3+0)
ETEE203	Engineering Economics	3(3+0)
	Total Credits	**19**

YEAR 3
First Semester

Course Code	Course Title	Credit (Contact) Hours
ETPS393	Probability & Stochastic Processes	3(3+0)
ETPE323	Power Electronics	3(3+0)
ETIM333	Instrumentation & Measurements	3(3+0)
ETIM334	Instrumentation & Measurements Lab	1(0+3)
ETIC343	Integrated Circuits	3(3+0)
ETTM353	Technology Management	3(3+0)
ETLO363	Laser & Optics	3(3+0)
	Total Credits	**19**

Second Semester

Course Code	Course Title	Credit (Contact) Hours
ETMA374	Microprocessor Architecture & Assembly Language	3(3+0)
ETMA375	Microprocessor Lab	1(0+3)
ETCS213	Communication Systems	3(3+0)
ETCS303	Control Systems	3(3+0)
ETDC313	Data Communication & Computer Networks	3(3+0)
ETVL434	VLSI Design	3(3+0)
	Total Credits	**16**

YEAR 4
First Semester

Course Code	Course Title	Credit (Contact) Hours
ETWP413	Wave Propagation & Antennas	3(3+0)
ETMI424	Microcontroller & Interfacing Techniques	3(3+0)
ETMI425	Microcontroller & Interfacing Techniques Lab	1(0+3)
	Elective – I	3(3+0)
	Elective – II	3(3+0)
ETET499	Project-I	3(3+0)
	Total Credits	**16**

Second Semester

Course Code	Course Title	Credit (Contact) Hours
ETDL444	Advanced Digital Logic Design	3(3+0)
ETDL445	Advanced Digital Logic Design Lab	1(0+3)
	Elective-III	3(3+0)
	Elective-IV	3(3+0)
ETET499	Final Year Project	3(3+0)
	Total Credits	**13**

A TYPICAL STUDY PLAN
BACHELOR OF TECHNOLOGY IN ELECTRONICS (HONS)

DURATION 4 YEARS

Minimum Degree Requirements: This program comprises of a minimum of 136 credit hours of coursework including a final year project and 12 credits from the list of electives.

YEAR 1
First Semester

Course Code	Course Title	Credit (Contact) Hours
MTCA113	Calculus-I	3(3+0)
ETFE124	Foundation of Engineering	3(3+0)
ETIT134	Fundamental of Information Technology	3(3+0)
ETIT135	Fundamental of Information Technology Lab	1(0+3)
MSCS143	Communication Skills-I	3(3+0)
ETEP154	Engineering Physics-I	3(3+0)
HMIS103	Islamic Studies	2(2+0)
	Total Credits	**18**

Second Semester

Course Code	Course Title	Credit (Contact) Hours
MTCA184	Calculus-II	3(3+0)
ETEP193	Engineering Physics-II	3(3+0)
ETCA114	Circuit Analysis-I	3(3+0)
ETCA115	Circuit Analysis Lab	1(0+3)
ETES174	Electronics-I	3(3+0)
ETED163	Computer Aided Engineering Drawing	2(0+6)
HMPS213	Pakistan Studies	2(2+0)
	Total Credits	**17**

YEAR 2
First Semester

Course Code	Course Title	Credit (Contact) Hours
MTLA224	Linear Algebra & Differential Equation	3(3+0)
MSBC232	Business Communication	2(2+0)
ETEM244	Electrical Machines	3(3+0)
ETES254	Electronics - II	3(3+0)
ETDL294	Digital Logic Design	3(3+0)
ETDL295	Digital Logic Design Lab	1(0+3)
ETCA252	Circuit Analysis – II	3(3+0)
	Total Credits	**18**

Second Semester

Course Code	Course Title	Credit (Contact) Hours
ETSS314	Signal & Systems	3(3+0)
ETSS315	Signal & Systems Lab	1(0+3)
ETPG253	Power Generation & Utilization	3(3+0)
ETET273	Electromagnetic Field Theory	3(3+0)
ETNA283	Network Analysis	3(3+0)
ETIE203	Industrial Electronics	3(3+0)
ETEE203	Engineering Economics	3(3+0)
	Total Credits	**19**

YEAR 3
First Semester

Course Code	Course Title	Credit (Contact) Hours
ETPS393	Probability & Stochastic Processes	3(3+0)
ETPE323	Power Electronics	3(3+0)
ETIM333	Instrumentation & Measurements	3(3+0)
ETIM334	Instrumentation & Measurements Lab	1(0+3)
ETPT203	Power Transmission & Distribution	3(3+0)
ETTM353	Technology Management	3(3+0)
ETSP232	Switchgear & Protective Devices	3(3+0)
	Total Credits	**19**

Second Semester

Course Code	Course Title	Credit (Contact) Hours
ETMA374	Microprocessor Architecture & Assembly Language	3(3+0)
ETMA375	Microprocessor Lab	1(0+3)
ETCS213	Communication Systems	3(3+0)
ETCS303	Control Systems	3(3+0)
ETDC313	Data Communication & Computer Networks	3(3+0)
ETST213	Substation Technology	3(3+0)
	Total Credits	**16**

YEAR 4
First Semester

Course Code	Course Title	Credit (Contact) Hours
ETWP413	Wave Propagation & Antennas	3(3+0)
ETMI424	Microcontroller & Interfacing Techniques	3(3+0)
ETMI425	Microcontroller & Interfacing Techniques Lab	1(0+3)
	Elective – I	3(3+0)
	Elective – II	3(3+0)
ETET499	Project – I	3(3+0)
	Total Credits	**16**

Second Semester

Course Code	Course Title	Credit (Contact) Hours
ETHV401	High Voltage Technology	3(3+0)
	Elective-III	3(3+0)
	Elective-IV	3(3+0)
ETET499	Project– II	3(3+0)
	Total Credits	**12**

B-Tech Electives
Electrical / Electronics

Course Code	Course Title	Credit (Contact) Hours
ESMA436	Mechatronics Applications	3(3+0)
CSTA452	Theory of Automata	3(3+0)
CSCG309	Computer Graphics	4(3+3)
CSCN331	Computer Networks	4(3+3)
ESPC337	Industrial Process Control	3(3+0)
ETMT384	Microelectronic Technology	3(3+0)
ESFD438	Filter Design	3(3+0)
ESME309	Microwave Engineering	3(3+0)
ESWC467	Wireless Communication	3(3+0)
ESOC468	Fiber Optics Communication	3(3+0)
ESSC469	Satellite Communication	3(3+0)
ESRS491	Radar Systems	3(3+0)
ESAW492	Antennas & Wave Propagation	4(3+3)
ESMC351	Mobile Computing	4(3+3)
ESIP352	Introduction to Image Processing	3(3+0)
ESIM339	Instrumentation and Measurement	3(3+0)
ETHV423	High Voltage DC Transmission	3(3+0)

A TYPICAL STUDY PLAN
BACHELOR OF TECHNOLOGY IN BIOMEDICAL (PASS) **DURATION 2 YEARS**

Minimum Degree Requirements: This program comprises of a minimum of 65 credit hours of coursework and 5 credits of Lab

YEAR 1
First Semester

Course Code	Course Title	Credit (Contact) Hours
MTCA113	Calculus-I	3
BTFE124	Foundation of Engineering	3
BTIT134	Fundamental of Information Technology	3
BTIT135	Fundamental of Information Technology Lab	1
MSCS143	Communication Skills-I	3
BTEP154	Engineering Physics-I	3
HMIS103	Islamic Studies	2
	Total Credits	**18**

Second Semester

Course Code	Course Title	Credit (Contact) Hours
MTCA184	Calculus-II	3
BTEP193	Engineering Physics-II	3
BTCA114	Circuit Analysis-I	3
BTCA115	Circuit Analysis Lab	1
BTES174	Electronics-I	3
BTED163	Computer Aided Engineering Drawing	2
HMPS213	Pakistan Studies	2
	Total Credits	**17**

YEAR 2
First Semester

Course Code	Course Title	Credit (Contact) Hours
MTLA224	Linear Algebra & Differential Equations	3
MSBC232	Business Communication	2
BTPH244	Physiology-I	3
BTBC254	Biochemistry	3
BTDL294	Digital Logic Design	3
BTDL295	Digital Logic Design Lab	1
BTBE252	Biomedical Electronics	3
	Total Credits	**18**

Second Semester

Course Code	Course Title	Credit (Contact) Hours
BTSS314	Signal & Systems	3
BTSS315	Signal & Systems Lab	1
BTPH263	Physiology-II	3
BTHA273	Human Anatomy	3
BTNA283	Network Analysis	3
BTBP203	Biophysics	3
BTEE203	Engineering Economics	3
	Total Credits	**19**

A TYPICAL STUDY PLAN
BACHELOR OF TECHNOLOGY IN BIOMEDICAL (HONS)

DURATION 4 YEARS

Minimum Degree Requirements: This program comprises of a minimum of 136 credit hours of coursework including a final year project and 12 credits from the list of electives.

YEAR 1
First Semester

Course Code	Course Title	Credit (Contact) Hours
MTCA113	Calculus-I	3
BTFE124	Foundation of Engineering	3
BTIT134	Fundamental of Information Technology	3
BTIT135	Fundamental of Information Technology Lab	1
MSCS143	Communication Skills-I	3
BTEP154	Engineering Physics-I	3
HMIS103	Islamic Studies	2
	Total Credits	**18**

Second Semester

Course Code	Course Title	Credit (Contact) Hours
MTCA184	Calculus-II	3
BTEP193	Engineering Physics-II	3
BTCA114	Circuit Analysis-I	3
BTCA115	Circuit Analysis Lab	1
BTES174	Electronics-I	3
BTED163	Computer Aided Engineering Drawing	2
HMPS213	Pakistan Studies	2
	Total Credits	**17**

YEAR 2
First Semester

Course Code	Course Title	Credit (Contact) Hours
MTLA224	Linear Algebra & Differential Equations	3
MSBC232	Business Communication	2
BTPH244	Physiology-I	3
BTBC254	Biochemistry	3
BTDL294	Digital Logic Design	3
BTDL295	Digital Logic Design Lab	1
BTBE252	Biomedical Electronics	3
	Total Credits	**18**

Second Semester

Course Code	Course Title	Credit (Contact) Hours
BTSS314	Signal & Systems	3
BTSS315	Signal & Systems Lab	1
BTPH263	Physiology-II	3
BTHA273	Human Anatomy	3
BTNA283	Network Analysis	3
BTBP203	Biophysics	3
BTEE203	Engineering Economics	3
	Total Credits	**19**

YEAR 3
First Semester

Course Code	Course Title	Credit (Contact) Hours
BTPS393	Probability & Stochastic Processes	3
BTSP323	Bio-Signal Processing	3
BTBM333	Biomechanics	3
BTSP334	Bio-Signal Processing Lab	1
BTIC343	Integrated Circuits	3
BTTM353	Technology Management	2
BTBI363	Biomedical Instrumentation-I	3
	Total Credits	**19**

Second Semester

Course Code	Course Title	Credit (Contact) Hours
BTMA374	Microprocessor Architecture & Assembly Language	3
BTMA375	Microprocessor Lab	1
BTCS383	Biomedical Control Systems	3
BTMS303	Modeling & Simulation	3
BTBI313	Biomedical Instrumentation-II	3
BTEH434	Economics & Healthcare Management	3
	Total Credits	**16**

YEAR 4
First Semester

Course Code	Course Title	Credit (Contact) Hours
BTBM413	Biomaterials & Design	3
BTNN424	Neuroscience & Networks	3
BTAD425	Professional Practices	2
	Elective – I	3
	Elective – II	3
BTPP499	Project-I	3
	Total Credits	**17**

Second Semester

Course Code	Course Title	Credit (Contact) Hours
BTMI444	Medical Imaging	3
BTPP444	Medical Imaging Lab	1
	Elective-III	3
	Elective-IV	3
BTPP499	Project-II	3
	Total Credits	**13**

A TYPICAL STUDY PLAN
BACHELOR OF TECHNOLOGY IN CIVIL (PASS) **DURATION 2 YEARS**

Minimum Degree Requirements: This program comprises of a minimum of 65 credit hours of coursework and 5 credits of Lab. from the list of electives.

YEAR 1
First Semester

Course Code	Course Title	Credit (Contact) Hours
MTCA113	Calculus-I	3
CTFE124	Foundation of Engineering	3
CTIT134	Fundamental of Information Technology	3
CTIT135	Fundamental of Information Technology Lab	1
MSCS143	Communication Skills-I	3
CTEP154	Engineering Physics-I	3
HMIS103	Islamic Studies	2
	Total Credits	**18**

Second Semester

Course Code	Course Title	Credit (Contact) Hours
MTCA184	Calculus-II	3
CTEP193	Engineering Physics-II	3
CTMS 173	Mechanics of Solids	3
CTMS174	Mechanics of Solids Lab	1
CTES123	Engineering Surveying	3
CTES124	Engineering Surveying Lab	1
CTED163	Computer Aided Engineering Drawing	2
HMPS213	Pakistan Studies	2
	Total Credits	**18**

YEAR 2
First Semester

Course Code	Course Title	Credit (Contact) Hours
MTLA224	Linear Algebra & Differential Equations	3
MSBC232	Business Communication	2
CTFM 213	Fluid Mechanics	3
CTES223	Advanced Engineering Surveying	3
CTES224	Advanced Engineering Surveying Lab	1
CTEG233	Engineering Geology	3
CTEM243	Civil Engineering Materials & Construction	3
	Total Credits	**18**

Second Semester

Course Code	Course Title	Credit (Contact) Hours
CTES253	Quantity Surveying & Estimation	2
CTES263	Structural Analysis	3
CTES273	Soil Mechanics	3
CTES274	Soil Mechanics Lab	1
MTNA 223	Numerical Analysis	3
CTCT 293	Concrete Technology-I	3
CTCT294	Concrete Technology Lab	1
CTCE262	Cost Estimates & Contract Documents	2
	Total Credits	**18**

A TYPICAL STUDY PLAN
BACHELOR OF TECHNOLOGY IN CIVIL (HONS) **DURATION 4 YEARS**

Minimum Degree Requirements: This program comprises of a minimum of 136 credit hours of coursework including a final year project and 12 credits from the list of electives.

YEAR 1
First Semester

Course Code	Course Title	Credit (Contact) Hours
MTCA113	Calculus-I	3
CTFE124	Foundation of Engineering	3
CTIT134	Fundamental of Information Technology	3
CTIT135	Fundamental of Information Technology Lab	1
MSCS143	Communication Skills-I	3
CTEP154	Engineering Physics-I	3
HMIS103	Islamic Studies	2
	Total Credits	**18**

Second Semester

Course Code	Course Title	Credit (Contact) Hours
MTCA184	Calculus-II	3
CTEP193	Engineering Physics-II	3
CTMS 173	Mechanics of Solids	3
CTMS174	Mechanics of Solids Lab	1
CTES123	Engineering Surveying	3
CTES124	Engineering Surveying Lab	1
CTED163	Computer Aided Engineering Drawing	2
HMPS213	Pakistan Studies	2
	Total Credits	**18**

YEAR 2
First Semester

Course Code	Course Title	Credit (Contact) Hours
MTLA224	Linear Algebra & Differential Equations	3
MSBC232	Business Communication	2
CTFM 213	Fluid Mechanics	3
CTES223	Advanced Engineering Surveying	3
CTES224	Advanced Engineering Surveying Lab	1
CTEG233	Engineering Geology	3
CTEM243	Civil Engineering Materials & Construction	3
	Total Credits	**18**

Second Semester

Course Code	Course Title	Credit (Contact) Hours
CTES253	Quantity Surveying & Estimation	2
CTES263	Structural Analysis	3
CTES273	Soil Mechanics	3
CTES274	Soil Mechanics Lab	1
MTNA 223	Numerical Analysis	3
CTCT 293	Concrete Technology-I	3
CTCT294	Concrete Technology Lab	1
CTCE262	Cost Estimates & Contract Documents	2
	Total Credits	**18**

YEAR 3
First Semester

Course Code	Course Title	Credit (Contact) Hours
CTPS393	Probability & Stochastic Processes	3
CTCT313	Concrete Technology-II	3
CTCT314	Concrete Technology Lab	1
CTAF323	Advanced Fluid Mechanics	3
CTTM383	Technology Management	3
CTGI333	Geo Informatics	3
CTGI334	Geo Informatics Lab	1
	Total Credits	**17**

Second Semester

Course Code	Course Title	Credit (Contact) Hours
CTIH343	Irrigation and Hydraulic Structure	3
CTIH344	Irrigation and Hydraulic Structure Lab	1
CTWS353	Water Supply and Waste Water Management Environmental Engineering- I	3
CTEE363	Transportation Planning & Engineering	3
CTTP373	Hydrology	3
CTHY383		3
	Total Credits	**16**

YEAR 4
First Semester

Course Code	Course Title	Credit (Contact) Hours
CTCM413	Construction Management	3
CTAT423	Architecture & Town Planning	3
CTTQ433	Total Quality Management	3
	Elective – I	3
	Elective – II	3
	Project-I	3
	Total Credits	**18**

Second Semester

Course Code	Course Title	Credit (Contact) Hours
CTFP443	Foundations and Pavements	3
CTFP444	Foundations and Pavements Lab	1
	Elective-III	3
	Elective-IV	3
	Project-II	3
	Total Credits	**13**

A TYPICAL STUDY PLAN
BACHELOR OF BUSINESS ADMINISTRATION **DURATION 4 YEARS**

Minimum Degree Requirements: This program comprises a minimum of 138 credit hours of coursework that includes 114 credits of required courses, a final year project of 6 credits, a 6-8 weeks internship of 6 credits and 12 credits of electives courses.

YEAR 1
First Semester

Course Code	Course Title	Credit (Contact) Hours
HSEN 114	English - I (Composition & Comprehension)	3 (3+0)
MSHB112	Human Psychology & Behavior	3 (3+0)
CSIC 111	Introduction to Computing	3 (2+3)
MTBM 113	Business Mathematics	3 (3+0)
HSPS 116	Pakistan Studies	1 (1+0)
MSIB 114	Introduction to Business	3 (3+0)
	Total Credits	**16**

Second Semester

Course Code	Course Title	Credit (Contact) Hours
HSEN 124	Communication Skills (English - II)	3 (3+0)
HMPT 123	Personal & Time Management	3 (3+0)
MSMG 125	Principle of Management	3 (3+0)
MSBS 121	Business Statistics	3 (3+0)
MSEC 126	Microeconomics	3 (3+0)
HSIS 122	Islamic Studies	2 (2+0)
	Total Credits	**17**

YEAR 2
First Semester

Course Code	Course Title	Credit (Contact) Hours
HMSC 231	Sociology	3 (3+0)
MSOC 232	Business Oral Communication	3 (3+0)
MSHR 233	Human Resource management	3 (3+0)
MSEC 234	Macroeconomics	3 (3+0)
MTCA 115	Calculus & Analytical Geometry	3 (3+0)
MSFA 235	Financial Accounting	3 (3+0)
	Total Credits	**18**

Second Semester

Course Code	Course Title	Credit (Contact) Hours
MSCA 352	Cost Accounting	3 (3+0)
HMBE 242	Business Ethics	3 (3+0)
MSBC 243	Business Communication	3 (3+0)
MSBF 244	Business Finance	3 (3+0)
MSMK 245	Principle of Marketing	3 (3+0)
HMLO 246	Logic	3 (3+0)
	Total Credits	**18**

YEAR 3
First Semester

Course Code	Course Title	Credit (Contact) Hours
HMPE 241	Pakistan Economy	3 (3+0)
MSMM 351	Marketing Management	3 (3+0)
MSFM 353	Financial Management	3 (3+0)
MSBL 354	Business & Corporate Law	3 (3+0)
MSTQ 356	Total Quality Management	3 (3+0)
	Elective I	3 (3+0)
	Total Credits	**18**

Second Semester

Course Code	Course Title	Credit (Contact) Hours
HMSD 361	System Dynamics	3 (2+3)
MSMI 362	Management Information System	3 (3+0)
MSCB 363	Consumer Behavior	3 (3+0)
MSOB 364	Organizational Behavior	3 (3+0)
MSPM 365	Project Management	3 (3+0)
	Elective II	3 (3+0)
	Total Credits	**18**

YEAR 4
First Semester

Course Code	Course Title	Credit (Contact) Hours
MSBR 471	Business Research & Report Writing	3 (3+0)
MSPM 472	Production & Operations Management	3 (3+0)
MSET 473	Entrepreneurship	3 (3+0)
MSMB 474	Money & Banking	3 (3+0)
HMIR 475	International Relations and Current Affairs	3 (3+0)
	Elective III	3 (3+0)
	Total Credits	**18**

Second Semester

Course Code	Course Title	Credit (Contact) Hours
MSIB 481	International Business Management	3 (3+0)
MSBA 482	Business Project	3 (3+0)
MSBP 483	Business Policy	3 (3+0)
MSEC 484	E- Commerce	3 (3+0)
	Elective IV	3 (3+0)
	Total Credits	**15**

BBA Electives
Management Courses

Course Code	Course Title	Credit (Contact) Hours
MSMR 454	Marketing Research	3(3+0)
MSIM 452	International Marketing	3(3+0)
MSIM 453	Industrial Marketing	3(3+0)
MSAM 455	Advertisement Management	3(3+0)
MSPS 456	Personal Selling and Sales Management	3(3+0)

Human Resources Management

Course Code	Course Title	Credit (Contact) Hours
MSTD 483	Training and Development	3(3+0)
MSMA 484	Motivation and its Applications	3(3+0)
MSLL 488	Labor Laws in Pakistan	3(3+0)
MSCM 487	Compensation Management	3(3+0)
MSRS 486	Recruitment and Selection	3(3+0)

Management

Course Code	Course Title	Credit (Contact) Hours
MSKM 416	Knowledge Management	3(3+0)
MSSM 417	Small and Medium enterprise management	3(3+0)
MSMS 419	Managing Services Business	3(3+0)
MSOD 413	Organization Development	3(3+0)
MSSC 415	Supply Chain Management	3(3+0)

Finance

Course Code	Course Title	Credit (Contact) Hours
MSSA 441	Security Analysis	3(3+0)
MSIP 442	Investment and Portfolio Management	3(3+0)
MSAF 443	Analysis of Financial Statement	3(3+0)
MSCM 445	Capital Markets	3(3+0)
MSIB 446	Islamic Banking and Finance	3(3+0)

Information Technology

Course Code	Course Title	Credit (Contact) Hours
CSSA 421	System Analysis and Design	3(3+0)
CSCN 435	Computer networking	3(3+0)
CSAI 466	Expert System and Artificial Intelligence	3(3+0)
CSOS 331	Operating System	3(3+0)
CSWD 456	Web Designing	3(3+0)

STUDY PLAN
MASTER OF BUSINESS ADMINISTRATION (2 Year MBA Program)

Minimum Degree Requirements: This program comprises a minimum of 36 credit hours given in 6 core courses together with 2 specialization courses from any of the areas of concentration namely Marketing, Hotel Management, Health Care & Hospital Management, Management Information System, Banking & Finance, Management and Human Resource Management. Students may choose to undertake research in the form of a 12 credit dissertation of a 3 credit internship along with an additional 9 credit of elective courses. The combined list of courses in the various areas of specialization forms the pool of elective courses.

Course Work Category	Credit (Contact) Hours
Core	**18**
Area of Specialization & Electives	**6**
Dissertation	**12**
Total	**36**

OR

Course Work Category	Credit (Contact) Hours
Core	**18**
Area of Specialization & Electives	**15**
Internship	**3**
Total	**36**

Course Code	Course Title	Credit (Contact) Hours
MSMD 599	Dissertation	12(0+36)

MBA COURSES IN MANAGEMENT SCIENCES

The courses offered in this program comprise of core courses together with courses in areas of specialization.

Core Courses

Course Code	Course Title	Credit (Contact) Hours
MSFM 547	Financial Management	3(3+0)
MSSM 551	Strategic Marketing Management	3(3+0)
MSSM 573	Strategic Management	3(3+0)
MSAR 501	Advanced Research Methods	3(3+0)
MSME 534	Managerial Economics	3(3+0)
MSOD 511	Organization Development	3(3+0)

Areas of Specialization

Marketing

Course Code	Course Title	Credit (Contact) Hours
MSMR 559	Marketing Research	3(3+0)
MSIE 557	International Marketing	3(3+0)
MSID 555	Industrial Marketing	3(3+0)
MSBM 552	Brand Management	3(3+0)
MSAM 553	Advertisement Management	3(3+0)
MSPS 554	Personal Selling and Sales Management	3(3+0)

Finance

Course Code	Course Title	Credit (Contact) Hours
MSSA 546	Security Analysis	3(3+0)
MSIP 541	Investment and Portfolio Management	3(3+0)
MSFS 542	Financial Statement Analysis	3(3+0)
MSCM 540	Capital Markets	3(3+0)
MSIF 543	International Financial Management	3(3+0)
MSIB 555	Islamic Banking and Finance	3(3+0)

Management Information Systems (MIS)

Course Code	Course Title	Credit (Contact) Hours
MSSD 561	Systems Dynamics	3(3+0)
MSSD 562	Database Management	3(3+0)
MSSD 563	System Analysis and Design	3(3+0)
MSSD 564	E-Business	3(3+0)
MSCN 565	Computer networking	3(3+0)
MSAI 566	Expert System and Artificial Intelligence	3(3+0)

Human Resource Management

Course Code	Course Title	Credit (Contact) Hours
MSTD 583	Training and Development	3(3+0)
MSMA 581	Motivation and its Applications	3(3+0)
MSLL 582	Labor Laws in Pakistan	3(3+0)
MSPM 587	Performance Management	3(3+0)
MSCM 586	Compensation Management	3(3+0)
MSLT 584	Leadership and Team Management	3(3+0)

Management

Course Code	Course Title	Credit (Contact) Hours
MSCM 513	Comparative Management	3(3+0)
MSCM 514	Change Management	3(3+0)
MSKM 515	Knowledge Management	3(3+0)
MSSM 516	Small and Medium enterprise management	3(3+0)
MSSM 519	Services Management	3(3+0)
MSPO 518	Production & Operations Management	3(3+0)

Hotel Management

Course Code	Course Title	Credit (Contact) Hours
MSFO 531	Front Office Management	3(3+0)
MSHM 532	Hotel Marketing Management	3(3+0)
MSFB 533	Food Beverage Management	3(3+0)
MSAL 535	Accommodation & Leisure Management	3(3+0)
MSFP 536	Food Production & Management	3(3+0)
MSHF 537	Hospitality Financial Managment	3(3+0)

Health Care and Hospital Management

Course Code	Course Title	Credit (Contact) Hours
MSPH 571	Public Health Management	3(3+0)
MSEH 572	Economics of Health Care Industry	3(3+0)
MSPH 573	Professional Health Care Management	3(3+0)
MSPH 574	Population and Health Care Management	3(3+0)
MSEH 575	Environmental Health Management	3(3+0)
MSLF 576	Legal Framework of Health Care Industry	3(3+0)

A TYPICAL STUDY PLAN
M.Sc. APPLIED PHYSICS

DURATION 2 YEARS

Minimum Degree Requirements: M.Sc. Applied Physics program comprises of a minimum of 51 credit hours of coursework, 9 credits of Lab and 6 credits for project/optional courses.

YEAR 1
First Semester

Course Code	Course Title	Credit (Contact) Hours
AP 3101	Methods of Mathematical Physics-I	3
AP 3102	Electromagnetic Theory	3
AP 3102L	Electromagnetic Theory Lab	1
AP 3103	Classical Mechanics	3
AP 3104	Computer Programming	3
AP 3104L	Computer Programming Lab	1
AP 3105	Physical Electronics	3
AP 3105L	Physical Electronics Lab	1
	Total Credits	**18**

Second Semester

Course Code	Course Title	Credit (Contact) Hours
AP 3207	Statistical Mechanics & Thermodynamics	3
AP 3208	Solid State Physics-I	3
AP 3209	Quantum Mechanics-I	3
AP 3210	Digital Electronics	3
AP 3210L	Digital Electronics Lab	1
AP 3211	Methods of Mathematical Physics-II	3
AP 3212	Physics Lab-I	1
	Total Credits	**17**

YEAR 2
First Semester

Course Code	Course Title	Credit (Contact) Hours
AP 4313	Atomic and Molecular Physics	3
AP 4314	Signals and Systems	3
AP 4314L	Signals and Systems Lab	1
AP 4315	Quantum Mechanics-II	3
AP 4316	Solid State Physics-II	3
AP 43XX	Optional Course	3
AP 4317	Physics Lab-II	1
	Total Credits	**17**

Second Semester

Course Code	Course Title	Credit (Contact) Hours
AP 4418	Nuclear Physics	3
AP 44XX	Optional Course	3
AP 4419	Physics Lab-III	2
AP 4420	Project / 2 Optional Courses	6
	Total Credits	**14**

Applied Physics Electives

Course Code	Course Title	Credit (Contact) Hours
AP 4321	Applied Optics	3
AP 4322	Advanced Methods of Mathematical Physics	3
AP 4323	Semiconductor Devices & Circuit Theory	3
AP 4324	Methods & Techniques of Experimental Physics	3
AP 4325	Communication Systems	3
AP 4426	Digital Signal Processing	3
AP 4427	Control Systems	3
AP 4428	Particle Physics	3
AP 4429	Material Science	3
AP 4430	Thermal Physics	3
AP 4431	Microcontroller and Interfacing	3
AP 4432	Laser Physics and Quantum Optics	3
AP 4433	Computational Physics	3
AP 4434	Relativity and Cosmology	3
AP 4435	Group Theory	3
AP 4436	Plasma Physics	3
AP 4437	Atomic and Molecular Spectroscopy	3
AP 4438	Digital Communications	3

STUDY PLAN
M.Sc (ELECTRONICS)

DURATION 2 YEARS

Minimum Degree Requirements: This program comprises of a minimum of 66 credits including 51 credits for the 14 core courses that cover major areas of Electronics, 9 credits from a chosen area of specialization, and 6 credits for the project.

Category of Area	Credit Hours
Core	**51**
Area of Specialization	**9**
Project	**6**
Total	**66**

STUDY PLAN
M. Sc in Electronics
DURATION 2 YEARS

The courses offered in this program comprise of four semesters.

YEAR 1
First Semester

Course Code	Course Title	Credit (Contact) Hours
ELAM311	Applied Mathematics I	3(3+0)
ELCA312	Circuit Analysis	4(3+3)
ELDL313	Digital Logic Design	4(3+3)
ELOP416	Object Oriented Programing	4(3+3)
	Total Credits	**15**

Second Semester

Course Code	Course Title	Credit (Contact) Hours
ELLA316	Linear Algebra	3(3+0)
ELEL412	Electronics I	4(3+3)
ELMM323	Microprocessor & Microcontroller	4(3+3)
ELSS324	Signals & Systems	4(3+3)
	Complex Variables & Transform	3(3+0)
	Total Credits	**18**

YEAR 2
First Semester

Course Code	Course Title	Credit (Contact) Hours
ELPR331	Probability & Random Variables	3(3+0)
ELCM411	Communication I	4(3+3)
ELEL422	Electronics II	4(3+3)
ELSP414	Digital Signal Processing	4(3+3)
ELCS413	Control Systems	3(3+0)
	Total Credits	**158**

Second Semester

Course Code	Course Title	Credit (Contact) Hours
	Elective I	3(3+0)
	Elective II	3(3+0)
	Elective III	3(3+0)
ELPJ499	Project	6(0+18)
	Total Credits	**15**

Specialization (Electronics)

Course Code	Course Title	Credit (Contact) Hours
ELDL427	Digital Design using VHDL	3(3+0)
ELET321	Electromagnetic Theory	3(3+0)
ELCM421	Communication II	3(3+0)
ELVD428	VLSI Design	3(3+0)
ELRA426	Robotics & Automation	3(3+0)
ELFO429	Fiber Optics	3(3+0)
ELCN428	Computer Networks	3(3+0)
ELSC423	Satellite Communication	3(3+0)
ELIP434	Introduction to Image Processing	3(3+0)
ELIM435	Instrumentation and Measurement	3(3+0)

Specialization (Telecommunication)

Course Code	Course Title	Credit (Contact) Hours
ELMC433	Mobile Communication	3(3+0)
ELFO429	Fiber Optics	3(3+0)
ELET321	Electromagnetic Theory	3(3+0)
ELCM421	Communication II	3(3+0)
ELWC436	Wireless Communication	3(3+0)
ELNS437	Network Security	3(3+0)
ELSC423	Satellite Communication	3(3+0)
ELOF438	Optical Fiber Communication	3(3+0)
ELRS439	Radar System Engineering	3(3+0)
ELCN428	Computer Networks	3(3+0)

Note: Second year second semester is specialization for Electronics or Telecommunication. The student of Electronics will to select from Electronic Electives whereas. The students of Telecommunication will have to select from Telecommunication Electives.

STUDY PLAN
MASTER OF SCIENCE (ELECTRONIC ENGINEERING), MS (EE)

DURATION 2 YEARS

Minimum Degree Requirements: This program comprises of a minimum of 30 credits including 6 credits for the 2 core courses that cover major areas of Electronic Engineering, 9 credits from a chosen area of specialization, 9 credits from the list of elective courses or from any other group and 6 credits for the dissertation which forms the major research component of this program.

Category of Area	Credit Hours
Core	**6**
Area of Specialization	**9**
Electives	**9**
Dissertation / Extra Courses	**6**
Total	**30**

STUDY PLAN
DOCTOR OF PHILOSOPHY, PhD (ELECTRONIC ENGINEERING)

DURATION 3 YEARS

Minimum Degree Requirements: This program comprises of a minimum of 36 credits for thesis and 18 credits of coursework. The minimum qualification for entering this program is an M Phil degree or 18 years of education in a related field.

MS & PhD COURSES IN ELECTRONIC ENGINEERING

The courses offered in these programs comprise of core courses together with courses in area of specialization and some courses from a set of specified electives

Core Courses

Course Code	Course Title	Credit (Contact) Hours
EESP501	Stochastic Processes	3(3+0)
EEEM502	Advanced Engineering Mathematics	3(3+0)
EECN503	Advanced Computer Networks	3(3+0)
EECG504	Advanced Cryptography	3(3+0)
EESP521	Advanced Digital Signal Processing I	3(3+0)

Area of Specialization

Telecommunication

Course Code	Course Title	Credit (Contact) Hours
EEDC511	Advanced Digital Communication I	3(3+0)
EEDC611	Advanced Digital Communication II	3(3+0)
EECT612	Coding Theory I	3(3+0)
EEWC613	Wireless Communication I	3(3+0)

Signal & Image Processing

Course Code	Course Title	Credit (Contact) Hours
EESP621	Advanced Digital Signal Processing II	3(3+0)
EEIP631	Digital Image Processing	3(3+0)
EEPR632	Pattern Recognition	3(3+0)
EECV633	Computer Vision	3(3+0)

Control Systems

Course Code	Course Title	Credit (Contact) Hours
EECS541	Modern Optimal Controls	3(3+0)
EECS542	Digital Control Systems	3(3+0)
EELS543	Advanced Linear Systems	3(3+0)
EERC641	Robust Controls	3(3+0)
EECS642	Advanced Control Systems	3(3+0)
EEFS643	Fuzzy Systems I	3(3+0)

Control Systems

Course Code	Course Title	Credit (Contact) Hours
EECS541	Modern Optimal Controls	3(3+0)
EECS542	Digital Control Systems	3(3+0)
EELS543	Advanced Linear Systems	3(3+0)
EERC641	Robust Controls	3(3+0)
EECS642	Advanced Control Systems	3(3+0)
EEFS643	Fuzzy Systems I	3(3+0)

Antennas & Microwaves

Course Code	Course Title	Credit (Contact) Hours
EEET551	Advanced Electromagnetic Theory	3(3+0)
EEME683	Advanced Microwave Engineering	3(3+0)
EEAD684	Advanced Antenna Design	3(3+0)
EEME685	Computational Methods in Electromagnetism	3(3+0)
EEFE686	Finite Element Methods	3(3+0)

Communication Networks

Course Code	Course Title	Credit (Contact) Hours
CEWN651	Wireless Networks	3(3+0)
CENP652	Network Programming	3(3+0)
CEWN653	Wireless Adhoc & Sensor Networks	3(3+0)
CEBS654	Broadband Systems	3(3+0)
CEPN655	Integrated Services over Packet Networks	3(3+0)

Information Security

Course Code	Course Title	Credit (Contact) Hours
CESM671	Information Security Management	3(3+0)
CESA672	Security Analysis of Protocols	3(3+0)
CENS673	Network Security	3(3+0)
CEDW674	Digital Watermarking	3(3+0)
CESG675	Steganography	3(3+0)

Embedded Systems

Course Code	Course Title	Credit (Contact) Hours
EEAF591	ASIC and FPGA Design	3(3+0)
EEES592	Embedded Systems	3(3+0)
EEVD691	VLSI Design I	3(3+0)
EESC692	System on Chip	3(3+0)
EESM693	Semiconductor Device Manufacturing Technology	3(3+0)

Power Electronics

Course Code	Course Title	Credit (Contact) Hours
EEPE581	Advanced Power Electronics I	3(3+0)
EEPE582	Advanced Power Electronics II	3(3+0)
EEPC681	Power Controls	3(3+0)
EESS682	Solid State Power Conversion	3(3+0)

Intelligent & Autonomous Systems

Course Code	Course Title	Credit (Contact) Hours
EEFS643	Fuzzy Systems I	3(3+0)
EENN661	Artificial Neural Network I	3(3+0)
EEEC704	Evolutionary Computing	3(3+0)
EEFS743	Fuzzy Systems II	3(3+0)
EENN761	Artificial Neural Network Ii	3(3+0)

EE Electives

Course Code	Course Title	Credit (Contact) Hours
EECT711	Coding Theory II	3(3+0)
EEWC712	Wireless Communication II	3(3+0)
EESC614	Satellite Communication	3(3+0)
EEOC615	Optical Communication	3(3+0)
EEST616	Switching Theory	3(3+0)
EEDE721	Detection and Estimation Theory	3(3+0)
EEOT701	Optimization Techniques	3(3+0)
EEAC664	Adaptive Controls	3(3+0)
EEOC665	Optimal Controls	3(3+0)
EENC741	Nonlinear Controls	3(3+0)
EESI742	System Identification	3(3+0)
EESP722	Array Signal Processing	3(3+0)
EEBM731	Biometrics	3(3+0)
EESP623	Speech Processing	3(3+0)
EEAV624	Audio and Video Standards in Multimedia	3(3+0)
EEAI662	Artificial Intelligence	3(3+0)
EENG751	Next Generation Networks	3(3+0)
EEVD781	VLSI Design II	3(3+0)
EEAF782	Advanced FPGAs	3(3+0)
EEES783	Advanced Embedded Systems	3(3+0)
EEMS784	Microelectronics for System on Chip	3(3+0)
EEMS785	Advanced Microprocessor Systems	3(3+0)
EESP723	Special Topics in Signal Processing	3(3+0)
EECS744	Special Topics in Control Systems	3(3+0)
EEST713	Special Topics in Telecommunication	3(3+0)
EEIS733	Special Topics in Information Security	3(3+0)
EEMA687	Agents & MultiAgent Systems	3(3+0)
EESA688	Service Oriented Architecture	3(3+0)
EEAS689	Autonomous Systems	3(3+0)
EEOR705	Operation Research	3(3+0)

Admissions

Foreign Students
Rehabilitation Sciences
Fee Packages
Management
Applications
Policy
BDS Program
Admission Plan
Financial Assistance
Ph.D
Nursing
Entry Test
Masters
Short List
Engineering
DPT
Selection Criteria
Interviews
Scholarships

Admissions

The University invites applications for various degree programs, where admissions are granted based on academic competence and an entry test that ensures the high quality of student entrants. The affordable and convenient fee packages offer young students a viable opportunity for career advancement and higher learning. Selected students are also awarded financial assistance based on need and merit.

The following programs are offered at Isra University, Islamabad Campus:

Al Nafees Medical College

Degree Program		Year(s)
Bachelor of Medicine & Bachelor of Surgery	MBBS	05
Bachelor of Science (Physiology)	BS (Physiology)	04
B.Sc (Medical Technology)	B.Sc (MT)	02

Isra School Rehabilitation Sciences

Degree Program		Year(s)
Doctor of Physical Therapy	DPT	05
Bachelor of Science (Speech Language Therapy)	BS (SLT)	04
Post Professional Doctor of Physical Therapy	PPDPT	02
Master of Science (Diagnostic Electro Neuro Physiology)	MS (DENP)	02
Master of Philosophy (Community Based Rehabilitation & Disability Studies)	M. Phil (CBRDS)	02
Master of Philosophy (Sports Medicine & Manipulative Physical Therapy)	M. Phil (SMMPT)	02

School of Engineering & Applied Sciences

Degree Program		Year(s)
Bachelor of Science (Computer Science)	BS (CS)	04
Bachelor of Engineering (Electrical)	BE (EE)	04
Bachelor of Technology (Hons)	B-Tech (Electrical, Electronics, Civil, Biomedical)	04
Bachelor of Technology (Pass)		02
Bachelor of Business Administration	BBA	04
MBA	Healthcare & Hospital Management, Hotel Managem-ent,Management, Marketing, Banking & Finance or HRM	02
Master of Science (Electronics, Applied Physics)	M. Sc (Electronics Applied Physics)	02
Master of Science (Electronics & Computer Engineering)	MS (Electronics & Computer Engineering)	02
Doctor of Philosophy	PhD (Electronics & Computer Engineering)	03

Students from anywhere in Pakistan or overseas may apply for admission to the above degree programs.

A step-by-step guideline for making an application is available on our website. This information is particularly useful for overseas and foreign students.

DRESS CODE

The female students are required to dress modestly and to wear long-sleeve shirts and use scarves to cover their heads. There is a separate female common room and other facilities, which suit special needs of female students. Male students are also required to maintain a neat & professional attire to promote a pleasant environment for learning.

MINIMUM QUALIFICATIONS FOR ENTRY

The Admissions Committee formulates the admission policy in accordance with the rules laid down by the University. To apply for admission, the student should have the needed minimum qualifications set forth for each program. In view of inconsistency in schedules of examinations conducted by various bodies in Pakistan and overseas, applications for entry from students waiting for the results will also be entertained. Such applicants, if selected in the admission process, will be granted provisional admissions. These admissions will automatically stand cancelled if such candidates fail to attain the required minimum qualifications.

Minimum Entrance Qualifications for Bachelor Degree Programs

Candidates who have passed the Higher Secondary Certificates (HSC) / Intermediate Examinations from any Board of Intermediate and Secondary Education in Pakistan or an equivalent examination recognized by the University are eligible to seek admission to the relevant Bachelor's Program of this University. The eligibility requirements for the programs are listed below:

Degree Program	Eligibility
MBBS, DPT, BS (SLT)	HSC (Pre-Medical, 60% minimum marks) OR SAT-II (550 minimum: Biology & Chemistry, any science subject) & TOEFL (500 or equivalent)/IELTS (5.5), if subjects are taught in other than English
BBA	HSC (Any subject), minimum 45% marks
B.E	HSC (Pre-Engineering), minimum 60% marks

The Government of Pakistan evaluates all the overseas Higher Secondary Certificates for their equivalence. More information is available on the university website. However, the concerned students may directly write to the following address to have their certificates evaluated:

Inter Board Committee of Chairmen,
Government of Pakistan,
Ministry of Education No. 342, Street 97, G-9/4, Islamabad, Pakistan.
Link to download application form /http://www.ibec.edu.pk/attestatian.asp

Minimum Entrance Qualifications for Postgraduate Degree Programs

Candidates, who hold Bachelor Degree or its equivalent in an appropriate field of study, from a University / Institution of good standing recognized by this University, are eligible to seek admission to the relevant Postgraduate Degree of this University if they have the required qualifications listed below:

Postgraduate Degree Programs	Eligibility: Bachelor degree in the relevant group
MBA	BE; BBA; BS; MBBS; etc. (Minimum of 16 years education)

ISRA UNIVERSITY ADMISSION TEST

Applicants for admission to all the Bachelor and Master degree programs are required to take the Isra University Admission Test (IUAT). The admission is purely on merit attained in this test. The test consists of two parts with an intermediate phase of short listing for personal interviews. It may, however, be noted that overseas Pakistani and foreign students are exempted from taking the Isra University Admission Test.

Applicants for M. Phil, PhD or postgraduate degree programs in clinical sciences, who fulfill the requisite conditions for admissions, will be called for a comprehensive interview or subject Graduate Records Examination or both.

IUAT Part-1

This is a written test. Sample test papers are available for each program of study, and are provided to those candidates who complete the prescribed application form and register themselves for taking the admission test.

The test will be conducted at the Isra University Campuses or other venues, as announced through news media. The time and date of the test will be communicated to the applicants individually by post or e-mail and through announcements in the news media.

Short Listing of Candidates

Short listing will purely depend upon the scores achieved by students in IUAT Part - 1. Only the short-listed students will qualify for IUAT Part - 2 and will be individually called for the interview.

IUAT Part-2

This part of the test is a personal interview of the applicants to assess their communication skills, aptitude, integrity, motivation, maturity and interest in the selected degree program. An applicant will meet two interviewers for a period of 20 minutes each. The interviews will be held at Isra University Campuses or other venues, as announced through news media. The date and time of the interview will be communicated separately to each short listed applicant.

SELECTION FOR ADMISSION

The results of IUAT (both parts) are compiled and reviewed by Isra University Admissions Committee. The Committee recommends only those students for admission who are considered academically outstanding and have special aptitude for serving the community and the country of their permanent residence. The decision of the Committee is final and can not be challenged. Selected candidates will be informed individually. The results of the IUAT will neither be communicated on telephone nor will be revealed to sympathizers and friends. Selection of the candidates for the M. Phil and PhD programs is based on correspondence in the case of foreign students and interviews of the candidates residing in Pakistan.

PROFICIENCY IN ENGLISH

All programs are conducted in the English language, the official medium of communication of the University. Students are required to demonstrate reasonably good proficiency in this language. However, those who are admitted because of excellent performance in the test but are not up to the required standard in English will be offered an intensive, non-credit course in Special English aimed at improving their proficiency in written and oral communication skills. The students attending this course must take a test at the completion of this course and achieve a satisfactory test score.

WHERE AND HOW TO APPLY?

An admission kit containing the application form, prospectus and the necessary information, can be obtained from:

Hyderabad Campus:
Isra University
Hala Road, Hyderabad-Sindh, Pakistan.
Tel: (+92 22) 2030181-4
Fax (+92 22) 2030180 & 2030185
URL: http://www.isra.edu.pk
Email: admissions@isra.edu.pk

Karachi Campus:
Al Tibri Medical College & Hospital
Near Al-Ibrahim Eye Hospital, Old Thana,
Gadap Town, Karachi, Pakistan.
Tel: (+92 21) 34561711-20
Fax: (+92 21) 34561816
URL: http://www.isra.edu.pk
Email: iu.altibri@isra.edu.pk

Isra Institute of Rehabilitation Sciences
B-21, Block-2, Gulistan-e-Jauhar,
Karachi-75290
Tel: (+92 21) 34664002
Fax: (+92 21) 34664001
URL: http://www.isra.edu.pk
Email: iirs.khi@isra.edu.pk

Islamabad Campus:
Al Nafees Medical College & Hospital
Lehtrar Road, Frash Town, Phase - II,
Islamabad, Pakistan.
Tel: (+92 51) 8439901-10
Fax: (+92 51) 8439900
URL: http://www.isra.edu.pk
Email: alnafees@isra.edu.pk

School of Engineering & Applied Sciences
Plot No. 176, Sohni Road, I-10/3, Islamabad.
Tel: (+92 51) 8358360-61
Fax: (+92 51) 8358362
URL: http://www.isra.edu.pk
Email: seas@isra.edu.pk

The admission kit may be obtained from various branches of Soneri Bank, Pakistan or any campus of Isra University.

The fee for admission kit is Rs. 1500 (US$ 30 for overseas applicants). Add Rs. 200 for delivery by courier service in Pakistan and US$ 30 for overseas destinations.

Fees for admission kit can be paid in cash if the kit is collected in person or through a bank draft / pay order in the name of Isra University. The completed application forms together with the required supporting documents and a non-refundable application processing fee of Rs. 2000 (US$ 60 for overseas applicants), should reach the Admissions Office on or before the closing date announced by the University. The applications received without fees will not be processed. Once acknowledged, an application can not be withdrawn. It is the sole responsibility of the candidates to comply with all the instructions given on the application form and submit it before the due date. Incomplete applications will not be processed. Applications received after the due date will not be entertained.
In order to meet the deadline, the application form may be downloaded from our website and

the same may be submitted along with the fee for admission kit and application processing dues. Prior to entry into Pakistan, the foreign students seeking admission in the University should first obtain an official clearance from the Government of Pakistan. For this purpose, they may approach the Pakistan Mission in their country of residence. Further information on admission of foreign nationals to educational institutions in Pakistan is available on our website.

Applicants who have failed IUAT can apply afresh in subsequent year(s). A fresh application is a must for admission in the ensuing academic year. The merit of the applicant taking repeat test(s) will be evaluated on the basis of the best score in the current or previous tests taken in the last two years.

Finalization of Admission

The admission, to all the academic programs under all the categories, will remain incomplete and unconfirmed until the following documents are not submitted and duly verified by the competent authority:

- Duly completed admission form.
- All the dues paid in full through a bank draft or challan duly signed by a bank.
- Exact spelling of the name and other antecedents verified from the academic certificates specified on the admission form.
- Duly signed and notarized affidavit specific to a particular program / faculty.

FEE PACKAGE AND OTHER DUES

The fee packages and schedule of payment of various degree programs are listed faculty-wise according to the nationality and resident status of the concerned students. The fee packages exclude hostel fees, transportation and other dues that may be modified from time to time.

Forfeiting of Fee: Students must note that if, for any reason, they discontinue the studies or if their admission is cancelled for any reason, the deposited fees will be forfeited.

Continuous and Uninterrupted Payment of Fee: A student has to pay full fee package, uninterruptedly over his / her full tenure of studentship in the program registered. This would be the case, irrespective of the fact that he / she fails in an examination, repeats a semester / year or interrupts his / her study that results in extension of the tenure. However, for a student of FES&T and FCE&MS in case of extension of period beyond the tenure, he / she will be required to pay the normal semester fee, while students of FM&AMS will make annual payment based on the fee package. Students who fail to deposit the fees in due time may be disallowed from attending classes and appearing in examination.

Examination Fee: The students of all the Faculties are required to pay fees for each semester examination. In case of the examinations that are conducted under the regulatory control of professional bodies like the Pakistan Medical and Dental Council, a seperate fee is chargeable per examination, irrespective of the number of subjects in which the student may wish to appear in a regular or supplementary examination conducted in a particular academic year. There is separate examination fee schedule for postgraduate examinations in each course and discipline. The fee schedule for examinations can be obtained from the Admissions Office.

Refund and Penalty: A student must note that the fees once deposited, in any account, can not be refunded for any reason. Requests for refund of fees will be subject to HEC and PM&DC regulations. Furthermore a student is liable to pay the cost of damage or loss of University property caused by him/her.

Student Categories: A regular Pakistani student, who acquired the entrance qualification while residing in Pakistan, falls in Regular category (Category A). On the other hand a Pakistani student, who acquired the entrance qualification while residing in an overseas country, irrespective of the fact that he/she is presently living in Pakistan, falls in Overseas Pakistani category (Category B). An overseas (foreign) student, irrespective of where he/she acquired the entrance qualification, falls in the Foreign Student category (Category C).

FEE PACKAGES

AL NAFEES MEDICAL COLLEGE

MBBS Program

Fee Items	Category A (Regular)	Category B (Overseas)
Admission Fee (One Time)	PKR 50,000	USD 2,000
University Fee (Annual)	PKR 100,000	USD 1,000
Tuition Fee (Annual)	PKR 650,000	1st & 2nd Year USD 10,750 3rd to Final Year USD 11,500
Other Charges (Annual) (PERN, Library, Sports, Cultural, Co-curricular, Visit etc)	PKR 100,000	USD 1,000

1. Tuition fee will be charged on annual basis.
2. Refund will be as per PM&DC Policy.
3. As per Government directive 5% Advance Tax will be charged over total fee.

B.Sc. (Medical Technology), B.Sc. (Respiratory Therapy) and BS (Physiology)

Fee Items	Category A
Admission Fee (One Time)	PKR 12,600
University Fee (Semester)	PKR 11,000
Tuition Fee (Semester)	PKR 22,000

ISRA INSTITUTE OF REHABILITATION SCIENCES

Doctor of Physical Therapy Program

Fee Items	Category A (Regular)	Category B (Overseas)	Category C (Foreigner)
Admission Fee (One Time)	PKR 25,100	USD 500	USD 600
University Fee (Annual)	PKR 30,000	USD 250	USD 400
Tuition Fee (Annual)	PKR 220,000	USD 3,000	USD 4,000
Security Deposit (Once & Refundable)	PKR 10,000	USD 500	USD 1,000

Note: Any additional taxes imposed by the government will be the liability of the students/parents/gurdian.
(The University reserves the right to increase the fees if required according to the recommendation of the Governing Body.
Payment delayed will be charged penalty as per current university policy.

Master of Philosophy & Post Professional Doctor of Physical Therapy Program

Fee Items	Category A (Regular)	Category B (Overseas)	Category C (Foreigner)
Admission Fee (One Time)	PKR 22,600	USD 500	USD 600
University Fee (Annual)	PKR 4,000	USD 300	USD 400
Tuition Fee (Semester)	PKR 99,000	USD 1,500	USD 1,800

Professional Deficiency Make Up Program

Fee Items	Category A (Regular)	Category B (Overseas)	Category C (Foreigner)
Admission Fee (One Time)	PKR 15,000	USD 500	USD 600
University Fee (Annual)	PKR 10,000	USD 300	USD 400
Tuition Fee (Per Course)	PKR 15,000	USD 500	USD 600

Ph.D in Rehabilitation Sciences

Fee Items	Category A
Admission Fee (One Time)	PKR 55,100
University Fee (Semester)	PKR 68,000
Tuition Fee (Semester)	PKR 105,600

M.Phil & PGD (Sports Medicine & Manipulative Physical Therapy, Community Based Rehabilitation & Disability Studies

Fee Items	Category A
Admission Fee (One Time)	PKR 12,600
University Fee (Semester)	PKR 14,000
Tuition Fee (Semester)	PKR 49,500
Security Deposit (Once & Refundable)	PKR 5,000

Note: Any additional taxes imposed by the government will be the liability of the students/parents/gurdian.
(The University reserves the right to increase the fees if required according to the recommendation of the Governing Body.
Payment delayed will be charged penalty as per current university policy.

MS&PGD (Diagnostic Electroneuro Physiology)

Fee Items	Category A
Admission Fee (One Time)	PKR 12,600
University Fee (Semester)	PKR 14,000
Tuition Fee (Semester)	PKR 49,500
Security Deposit (Once & Refundable)	PKR 5,000

BS (SLT/SLP) Bachelor of Science in Speech Language Therapy/Pathology

Fee Items	Category A
Admission Fee (One Time)	PKR 12,600
University Fee (Semester)	PKR 14,000
Tuition Fee (Semester)	PKR 66,000
Security Deposit (Once & Refundable)	PKR 10,000

Nursing Postgraduate

Fee Items	Category A
Admission Fee (One Time)	PKR 25,100
University Fee (Semester)	PKR 12,000
Tuition Fee (Semester)	PKR 49,500

SCHOOL OF ENGINEERING & APPLIED SCIENCES
MS (CS), MS (EE) and Ph.D (EE)

Fee Items	Category A
Admission Fee (One Time)	PKR 20,100
University Fee (Semester)	PKR 8,500
Tuition Fee (Per Course)	PKR 15,400

Note: Any additional taxes imposed by the government will be the liability of the students/parents/gurdian.
(The University reserves the right to increase the fees if required according to the recommendation of the Governing Body.
Payment delayed will be charged penalty as per current university policy.

M.Sc. (Electronics)

Fee Items	Category A
Admission Fee (One Time)	PKR 15,100
University Fee (Semester)	PKR 8,500
Tuition Fee (Semester)	PKR 35,200

BE (Electrical)

Fee Items	Category A (Regular)	Category B (Overseas)	Category C (Foreigner)
Admission Fee (One Time)	PKR 18,100	PKR 65,000	PKR 100,000
University Fee (Every Semester)	PKR 10,000	PKR 10,000	PKR 10,000
Tuition Fee (Every Semester)	PKR 104,500	PKR 135,000	PKR 185,000

BS (CS)

Fee Items	Category A (Regular)	Category B (Overseas)	Category C (Foreigner)
Admission Fee (One Time)	PKR 18,100	PKR 30,000	PKR 50,000
University Fee (Every Semester)	PKR 6,500	PKR 13,000	PKR 15,000
Tuition Fee (Every Semester)	PKR 49,500	PKR 80,000	PKR 90,000

B. Tech (ET, ELT, Civil)

Fee Items	Category A
Admission Fee (One Time)	PKR 12,100
University Fee (Every Semester)	PKR 6,500
Tuition Fee (Semester)	PKR 27,500

Note: Any additional taxes imposed by the government will be the liability of the students/parents/gurdian.
(The University reserves the right to increase the fees if required according to the recommendation of the Governing Body.
Payment delayed will be charged penalty as per current university policy.

BBA

Fee Items	Category A (Regular)	Category B (Overseas)	Category C (Foreigner)
Admission Fee (One Time)	PKR 10,000	PKR 30,000	PKR 50,000
University Fee (Every Semester)	PKR 5,000	PKR 8,000	PKR 10,000
Tuition Fee (Every Semester)	PKR 60,000	PKR 70,000	PKR 80,000

MBA

Fee Items	Category A, B & C
Admission Fee (One Time)	PKR 10,000
University Fee (Every Semester)	PKR 5,000
Tuition Fee (Every Semester)	PKR 60,000

FEE FOR REPEATING / REAPPEARING COURSE(S)

A student repeating course(s) has to pay tuition fee per credit hour per course or the semester fee, whichever is less. In case of summer session, the student has to pay the stipulated fee per credit hour per course for repeating or reappearing in a course.

PAYMENT OF FEES

The fee installments of packages and dues are payable by a bank draft in the name of Isra University.

Late Fee: The students, who fail to pay the installments of fee package within the prescribed period, will be required to pay penalty based on the current per day bank rate. The dues inclusive of the penalty is payable until two weeks before the ensuing examination failing which the concerned students will not be allowed to sit in the examinations; and their admission may be cancelled.

FINANCIAL ASSISTANCE

Isra Islamic Foundation and other philanthropic organizations / individuals provide a limited number of full and partial free-ships, scholarships and other forms of financial assistance that are available to the needy and meritorious students.

Isra University is listed in the roster of institutions where the poor and meritorious students, seeking admissions, are eligible to apply for the award of scholarships from an endowment fund created by the Government of Sindh. For more information, the interested students should contact the Secretary, Board of Trustees for Endowment Fund, Education Department, Government of Sindh, Karachi.

Note: Any additional taxes imposed by the government will be the liability of the students/parents/gurdian.
(The University reserves the right to increase the fees if required according to the recommendation of the Governing Body.
Payment delayed will be charged penalty as per current university policy.

Teaching Staff

Dean Highly Qualified Assistant Associate Demonstrator Teaching Staff Visiting Faculty Professor Skills Lecturer Registrar Coordination Administrator Chairperson Knowledge Senior Registrar Medical Officer Instructor Department

Teaching Staff

A highly qualified and dedicated teaching staff caters for the academic needs of the students, enabling them to acquire the knowledge and skills, required to compete in the growing economy and serve the society at large.

ISRA UNIVERSITY ISLAMABAD CAMPUS

Administration

Saleem Kazi
Managing Director

Altaf G.Shaikh
Pro-Vice Chancellor

Umer Ali Khan
Pro-Vice Chancellor (Health Sciences)

P.B. Khokar
Executive Director ANMC&H

Rahim B. Channa
Additional Registrar

Mustafa Minhas
Director (Finance & Admin)

Muzaffar ul Hassan
Additional Controller Examination

AL NAFEES MEDICAL COLLEGE

Principal
Umar Ali Khan
MBBS, M Phil, FCPS
Professor of Physiology

Vice Principal
Mobeen Iqbal
MBBS, DABIM, DABPD, DABCCM
Professor of Medicine

Division of Basic Medical Sciences

Ghulam Mustafa Lodhi
MBBS, M Phil, PhD
Associate Professor Physiology
Vice Dean Basic Health Sciences

Department of Anatomy

Muhammad Azam Qureshi
MBBS, M Phil
Professor

Nusrat Zareen
MBBS, FCPS
Associate Professor

Khadija Iqbal
MBBS, FCPS
Associate Professor

Department of Physiology

Umar Ali Khan
MBBS, M Phil, FCPS
Professor

Ghulam Mustafa Lodhi
MBBS, M Phil, PhD
Associate Professor

Munazza Asad
MBBS, FCPS
Assistant Professor

Nida Naeem
MBBS, FCPS
Assistant Professor

Department of Biochemistry

Saadia Anjum Khan
MBBS, M Phil
Professor

Raheel Qamar
PhD
Adjunct Professor

Waseem Kausar
MBBS, M Phil
Associate Professor

Department of Pharmacology

Zahid Iqbal
DVM, M Phil PhD
Associate Professor

Azmat Ali
MBBS, M Phil
Assistant Professor

Department of Pathology

Noor Khan Lakhnana
MBBS, M Phil
Professor Histopathology

Aftab Ahmed Khan
MBBS, FCPS
Assistant Professor Haemetology

Humaira Zafar
MBBS, M Phil
Assistant Professor Microbiology

Kiran Tauseef Bukhari
MBBS, M Phil
Assistant Professor Haemetology

Iram Sohail
MBBS, FCPS
Assistant Professor Histopathology

Department of Forensic Medicine
Muhammad Arshad
MBBS, DMJ
Assistant Professor

Department of Community Medicine
Pir Bakhsh Khokar
MBBS, MCPS, MSc
Professor

Farrah Ahmed
MBBS, MPH, MBA
Assistant Professor

Rehan Uppal
Senior Lecturer
MBBS, MCPS

Irum Faiz
MBBS, MPH
Senior Lecturer

Clinical Health Sciences
Department of Medicine
Mobeen Iqbal
MBBS, DABIM, DABPD, DABCCM
Professor

M Saeed Khan
MBBS, DTCD, MRCP, FRCP
Associate Professor

Anjum Ilahi
MBBS, MRCP, FRCP, D Card
Associate Professor

Rizwan Uppal
MBBS, MCPS, FCPS
Assistant Professor

Jehanzeb Maqsood
MBBS, FCPS
Assistant Professor

Department of Gynae/Obs
Irum Sohail
MBBS, MCPS, FCPS
Professor

Rukhsana Ayub Alam
MBBS, FCPS
Assistant Professor

Zeba Manzar
MBBS, MCPS, FCPS
Assistant Professor

Jawaria Faisal
MBBS, FCPS, MCPS
Senior Registrar

Saadia Kanwal
MBBS, FCPS
Senior Registrar

Department of Paediatrics
Asifa Murtaza
MBBS, FCPS, PhD
Professor

Zeeshan Ghani
MBBS, FCPS
Assistant Professor

Mehmooda Mustaqueem
MBBS, MCPS
Registrar

Department of Surgery
Ishtiaq Ahmed
MBBS, FCPS
Professor

Muhammad Hafeez
MBBS, FCPS surgery, FCPS Orthopedic
Assistant Professor Orthopedics

Dawood Khan
MBBS,FCPS
Assistant Professor

Salman Ahmed Tipu
MBBS, FCPS
Assistant Professor

Omer Shahzad Altaf
MBBS, FCPS
Senior Registrar

Kashif Sardar Bangish
MBBS, FCPS
Senior Registrar

Department of Diagnostic Radiology
Aisha Asim
MBBS, FRCS
Assistant Professor

Asim Shahzad
MBBS, MCPS, FCPS
Assistant Professor

Umar Abid Saeed
MBBS, FCPS
Assistant Professor

Muhammad Atif Shahzad
MBBS, FCPS
Assistant Professor

Asma Naheed
MBBS, FCPS
Senior Registrar

Department of Dermatology
Fawad Muzaffar
MBBS, FCPS
Assistant Professor

Arshad Iqbal
MBBS
Registrar

Department of E.N.T
Sher Muhammad Malik
MBBS, FCPS
Professor

Muhammad Jamalullah
MBBS, FCPS
Associate Professor

Mehreen babur
MBBS, FCPS
Senior Registrar

Department of Anaesthesia
Massod Ahmed
MBBS, MCPS
Consultant

Sammar Fatima
MBBS, MCPS
Consultant

Department of Ophthalmology
Syed Imtiaz Ali
MBBS, DO, FRCS
Professor

Ayisha Shakeel
MBBS, MCPS, MRCO, FRCS
Assistant Professor

Hammad Sarwar
MBBS, FCPS
Senior Registrar

Department of Medical Sociology
Saira Zaidi
PhD
Assistant Professor

Department of Psychiatry
Tehzeeb Un Nisa
MBBS, FCPS
Assistant Professor

Faisal Rashid
MBBS, FCPS
Senior Registrar

Department of Medical Education
Ara Tekain
PhD, MHPE
Adjunct Professor

Mobeen Iqbal
MBBS, DABIM, DABPD, DABCCM
Professor

Rukhsana Ayub Alam
MBBS, FCPS
Assistant Professor

Saira Zaidi
PhD, MSW,BSW
Assistant Professor

Khariunnisa S Uttanwala
MPH, BScN, Dip of Nursing
Assistant Professor

ISRA INSTITUTE OF REHABILITATION SCIENCES

Muhammad Naveed Babur
PhD (Rehab Science) Scholar, P-DPT (Pak), BSPT (Pak)
MBOD (PPTA), Member, NCRC-PT (HEC), FM (WAME, USA)
Principal

Shiasta Habibullah
PhD (Disability studies) USA, MPH (Pak), MBBS (Pak)
Adjunct Professor

M.Shamim Baig
MD, FRCS (UK), FACS (USA)
Harvard Graduate
Adjunct Professor

Waqar Ahmed Awan
PhD (Scholar), BSPT (Pak), PP-DPT (Pak)
Assistant Professor

Aqeel Ahmed
BSPT (Pak), PP-DPT (Pak)
Assistant Professor

Dr.Tayyab Minhas
BSPT (Pak), MPH (Sweden) MS, SS (Germany)
Senior Lecturer

Mrs.Nazia Mumtaz
PhD (Scholar), MS, SLP(Pak), PGD, SLT(Pak)
Senior Lecturer

Farukh Shahzad
BSPT (Pak), PP-DPT (Pak)
Lecturer

Muhammad Anees Farooque
BSPT (Pak), PP-DPT (Pak)
Lecturer

Farwa Abbas Naqvi
BSPT (Pak), PP-DPT (Pak)
Lecturer

Madeeha Neelum
BSPT (Pak), PP-DPT (Pak)
Lecturer

Anam Aftab
BSPT (Pak), PP-DPT
Practitioner Physical Therapist

Ali Rafaqat
BSPT (Pak), PP-DPT (Pak)
Practitioner Physical Therapist

Sohail Karim Soomro
BSPT (Pak), PP-DPT (Pak)
Lecturer

Shoukat Hayat
BSPT (Pak),PPDPT(Pak)
Lecturer

Fatima Akram
BSPT (Pak), PPDPT
Lecturer

Irfan Sattar
BSPT (Pak), PPDPT
Lecturer

Sara Kafeel
BSPT (Pak), PPDPT (Pak)
Lecturer

Muhammad Ibrar
BSPT (Pak), PPDPT
Lecturer

Misha Ansari
BSPT (Pak), PPDPT
Lecturer

Maria Liaqat
BSPT (Pak), PPDPT
Lecturer

SCHOOL OF ENGINEERING & ALLIED SCIENCES

Tanveer Ahmad Cheema, HoD (EE)
M.Sc. Physics (University of Agriculture, Faisalabad)
M. Phil Electronics (QAU)
PhD Electronic Engineering (MAJU)
Associate Professor

Mustafa Minhas, Director City Campus
BE, Electronic Engineering (Air University)
ME, Biomedical Engineering (UNSW, Australia)
Assistant Professor

Muhammad Adnan Aziz
BCS (AIOU)
MS Electronic Engineering (MAJU)
Assistant Professor

Hannan Adeel
MS Electronic Engineering (Isra University)
BS Computer Engineering (UET Lahore)
Assistant Professor

Muhammad Tausif Afzal Rana
MS Electronic Engineering (MAJU)
BS Electronic Engineering (MAJU)
Lecturer

Yousuf Hameed Ansari
BS, Computer Engineering (COMSATS University)
MS, Electrical Engineering. (BTH, Sweden)
Research Assistant

Abubaker Shabbir
BS Electronics Engineering (International Islamic University)
Lab Engineer

Usman Farooq
BE Electrical Engineering (Air University)
Lab Engineer

Talha Quyyum
BS Electronic Engineering (IIU)
Lab Engineer

Ijaz Mansoor Qureshi
BE Avionics, MS Electrical Engineering, PhD Physics.
Adjunct Faculty

Muhammad Khan Minhas
BE Electrical Engineering (NED)
MS Electrical Engineering (Texas, USA)
Adjunct Faculty

Islamabad Campus:

AL NAFEES MEDICAL COLLEGE & HOSPITAL

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SCHOOL OF ENGINEERING & APPLIED SCIENCES

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