

ISLAMABAD CAMPUS

ISRA UNIVERSITY



PROSPECTUS | 2017-18

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.



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The Islamabad Campus is strategically located just behind Farash Town, Phase IV, 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 College of Nursing and School of Engineering & Applied Sciences. The city campus is located at Plot No. 176, Sohni Road, I-10/3, Islamabad.

AL NAFEEES 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 all programs including PhD programs at Al Nafees Medical College have been approved and recognized by the Pakistan Medical & Dental Council, CPSP and Pakistan Nursing Council.







AI Nafees Medical College

MBBS Ophthalmology

Anatomy Pathology

Paediatrics Surgery

Community Medicine

Nursing Physiology

Otorhinolaryngology Library

Forensic Medicine Mortuary

Bio Chemistry

Internal Medicine

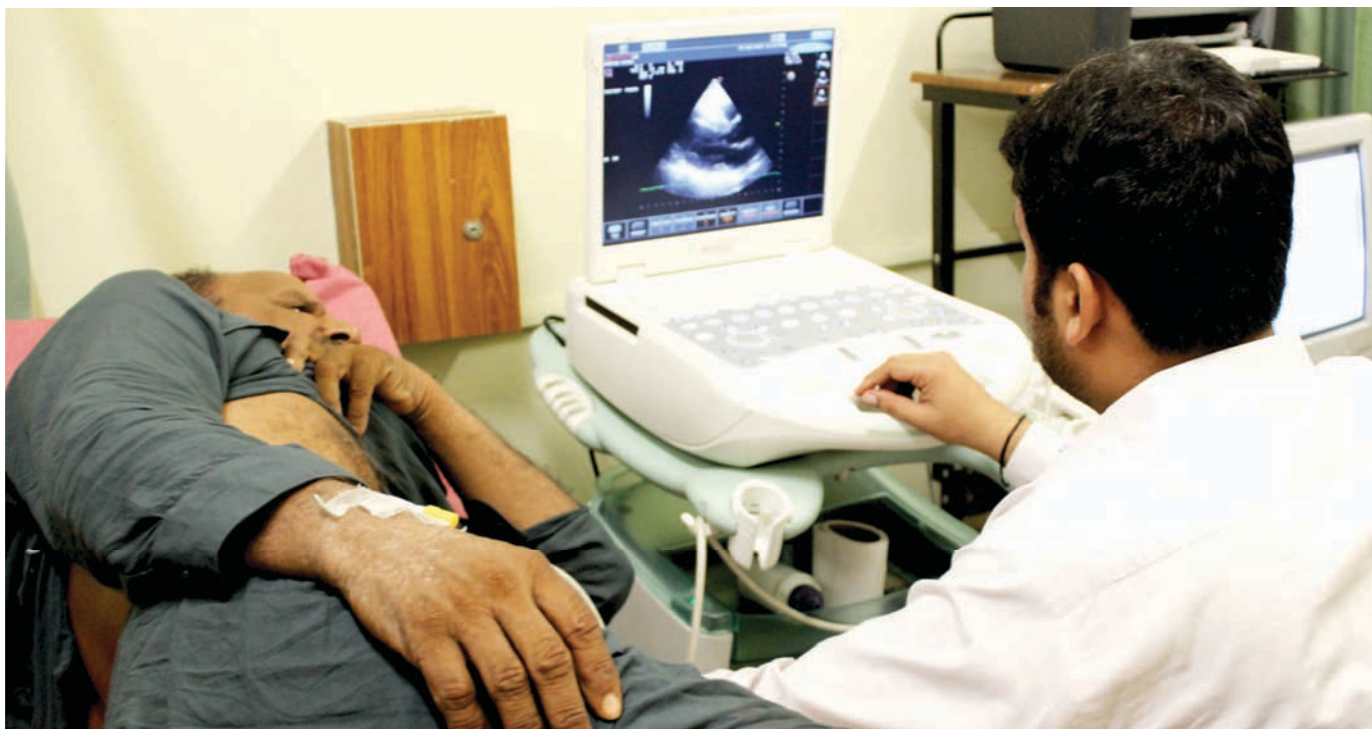
Doctor of Physical Therapy Gynaecology





AI Nafees Medical College

The AI 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 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 attached Al Nafees Teaching 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. Thus total period of training will be five years before a student qualifies to practice medicine.

Anatomy (Contact Hours 600)

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 600)

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 geriatric 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. MDBS 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 600)

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.

Professionalism & Communication Skills

In today's competitive world, effective communication skills training is more essential

than ever before. It is the foundation on which careers are built and a crucial component of lasting success. The communication skill and professionalism courses help young doctors to develop a truly engaging and responsive communication style, leading to positive professional attitude.

Clinical Skill Lab

Medicine of present world demands high level of competency in both clinical examination and performing a procedure in patients. The traditional methods of bedside skill learning and teaching are supplemented by instruction in clinical skills lab is basic important method of teaching clinical skills.

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 (3+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	4 (3+2)	90
Principles of Immunology	4 (3+2)	90
Total Credits	18	432

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



Associate B.Sc in Respiratory Therapy

Introduction and Background: Respiratory therapy is a new concept in Pakistan though it has been a time tested practice in developed countries, increasing numbers of Intensive Care Units (ICU's) in the government and private sector and world wide development in intense care technology makes the introduction of goal for specialist Respiratory Therapists timely. Formal accredited training of personnel in this field under there auspices of ISRA UNIVERSITY will go a long way in fulfilling the local needs as well as preparing a trained work force for employment nationally and abroad.

The respiratory care program prepares students for advanced level practice as a Respiratory Therapist. As a member of the interdisciplinary health care team, the Respiratory Therapist cares, evaluate, treat and manages patients of all ages with respiratory illness and other cardiopulmonary disorders in a wide variety of clinical settings. In addition to performing diagnostic and therapeutic respiratory care procedures, Respiratory Therapists promote cardiopulmonary wellness, disease prevention, and disease management; pulmonary rehabilitation; as well as providing patient, family and community education; participate in life support activities and are involved in clinical decision making.

This specialist role requires careful preparation through a planned and recognized educational program. This document described the curriculum for Associate Degree in Respiratory Therapy.

Eligibility: F.Sc (Preferred), FA (Acceptable)

A TYPICAL STUDY PLAN
ASSOCIATE B.Sc IN RESPIRATORY THERAPY

DURATION 2 YEARS

Minimum Degree Requirements: This program comprises a total of 68 credits.

YEAR 1
First Semester

Course Code	Course Title	Credit (Contact) Hours
RTSA&P-I-111	Anatomy and Physiology	4
RTC-111	Basic Computers Skills	1.5
RTSPA-117	Patient Assessment (theory & VIVA)	5
RTMT-113	Respiratory Therapy Medical Terminology	1.5
RTM-112	Maths	2
RTCS-115	Communication Skill	1
RTHIS-114	Islamic Studies	2
RTSIC-116	Introduction to Respiratory Therapy Infection Control	1
RTENG-113	English	2
	Total Credits	20

YEAR 1
Second Semester

Course Code	Course Title	Credit (Contact) Hours
RTSA&P-II-112	Cardiopulmonary and Renal Anatomy and Physiology	3
RTHPS-127	Psychology	1
RTCPS-121	Cardiopulmonary Diseases	2
RTSP-122	Pharmacology (Respiratory, CNS & Cardiopulmonary)	3
RTMG-124	Medical Gasses/aerosol and humidity therapy	2
RTHPS-126	Pakistan Studies	2
RTCP-125	Clinical Practicum OSCE	5
RTAM-123	Airway Management (Theory & OSCE)	2
	Total Credits	20

YEAR 2
First Semester

Course Code	Course Title	Credit (Contact) Hours
RTSLE-211	Lung Expansion Therapy Bronchial Hygiene (Theory)	2
RTSLECP-212	Lung Expansion Therapy Bronchial Hygiene (Viva)	3
RTSABG-213	Arterial Blood Gases / Cardiopulmonary Physiology (Theory)	2
RTSABGCP-214	Arterial Blood Gases / Cardiopulmonary Physiology (Viva)	3
RTSM-215	Microbiology	2
RTAFT-216	Advanced Pulmonary Function Test	1
RTPR-217	Pulmonary Rehabilitation	2
	Total Credits	15

YEAR 2
Second Semester

Course Code	Course Title	Credit (Contact) Hours
RTSCPD-I-221	Mechanical Ventilator (Theory)	3
RTSP- 222	Mechanical Ventilator (Clinical OSCE)	3
RTSAM -223	Pediatric/Perinatal Pathophysiology and Critical Care (Theory)	2
RTSMG- 224	Pediatric/Perinatal Pathophysiology and Critical Care (Clinical OSCE)	2
RTCP- 225	Application of Cardiopulmonary Diagnostic and Monitoring	3
	Total Credits	12





Isra College of Nursing

Background: Nursing education in Pakistan is changing rapidly. To be at par with the rapid changes in the health care technology and to address the health care needs of the country, Pakistan Nursing Council (PNC) under the aegis of Higher Education Commission (HEC), is reforming the current nursing education system. One of the major shifts is to change the existing 3-Year Diploma Nursing Program into a 4-Year Nursing Degree (BScN) and according to the new strategic plan of PNC, by 2020 all schools of nursing in the country will be set to implement the 4 Year BScN curriculum. In order to achieve this plan, an important step which the council has outlined is to prepare teachers and staff nurses who are equipped to teach and support the future nursing students.

Presently, in our region Rawalpindi & Islamabad there are two institutes that offer Post RN BScN degree to Diploma nurses. These institutes are:

1. AFGMI –Rawalpindi
2. Shifa College of Nursing – Islamabad

Out of two only one enrolls civilian nurses. In order to keep up with the current development of nursing education in Pakistan, Post RN BScN program at Isra College of Nursing (ICN) will be an efficient way -with minimum input - to improve the nursing education and service standards not only in al Nafees medical college and Hospital but also at the National level.

Features of Post RN BScN Program:

The Post-RN BScN is a two year program, which provides experienced diploma level nurses an opportunity to acquire in depth nursing knowledge and skills. Upon completion of the Program, nurses are prepared to utilize effective critical thinking and problem solving skills in order to bring about changes in nursing education, management and practice in various settings including any community based setup. The program is expected to attract nurses from public as well as private sector in general; therefore the Post RN Program at ICN will provide an excellent and in-expensive option for nurses who are planning for higher education.

Post RN BSc. N Program Curriculum:

Post RN BSc. N program is designed in such a way that it enhances the content knowledge of courses taught during Diploma program and builds on applicants' knowledge gained through experience. There are a total of 54 credit hours of the proposed 2-year post-RN program and it builds upon the three-year Diploma in nursing which has a total of 100 credits. Hence the Post RN program carefully eliminates those subjects which are already taught at Diploma levels and focuses mainly on subjects which trains a general nurse to become efficient manager, teacher and researcher; subjects like Advance Concepts in Nursing, Teaching / learning, leadership and Management, Research Process, and Presentation skills are some examples which helps student to achieve the said objective of the program. The Post-RN BScN program is of 4 semesters which is spread across 2 years. In addition an option of summer course will also be introduced mainly for those students who are falling short to maintain the educational standards and expectations of the program.

The curriculum is adopted from Aga Khan University and is approved by Pakistan Nursing Council; ICN has then made revisions as per local needs and context.

Attached please see the outline of the curriculum and detailed calculation of credit hours.

Examinations and Promotions:

In addition to ongoing internal assessments, ICN faculty proposes to have University exams (ISRA University) at the end of each semester. The professional exams will be considered as

summative. The focus of the exams would be to ascertain promotion.

PNC Approval:

Since the students of Post RN programs are staff nurses who already have license to practice and the basic aim of this program is to provide higher education to professional nurses hence degree and affiliation with university becomes more significant than approval of PNC, however program is already been visited by PNC (November 4th 2013) and they have approved the program and given.

Admission Requirement and Selection Criteria:

As the program is specifically designed to

support Registered nurses, therefore number of years of experience will be one of the important criterions. In addition, applicants aptitude, command on language, nursing knowledge and skills, potential role in nursing leadership and enhancement of the profession will also be part of eligibility criteria.

The eligibility criteria are as follow:

Like any other nursing program, the students of Post RN BScN will also be registered with PNC and the University.

- Diploma in General Nursing (3 Years)
- Diploma in Midwifery or any other specialty (1 year)
- Three year clinical experience
- Pre-Entrance Aptitude test & Interview



**A TYPICAL STUDY PLAN
POST-RN B.Sc NURSING****DURATION 2 YEARS****Minimum Degree Requirements:** This program comprises a total of 28 credits.**YEAR 1****First Semester**

Course Code	Course Title	Credit (Contact) Hours
HLT-111	Teaching and Learning: Principles and Practice (Theory & OSCE)	3
NHA-113	Health Assessment (Theory & OSCE)	3
SPP-115	Pathophysiology	2.5
SLS-112	Life Science	2.5
NENG-114	English	3
ISL STD-116	Islamic Studies	2
	Total Credits	16

Second Semester

Course Code	Course Title	Credit (Contact) Hours
NP-121	Nursing practice I (Theory and OSCE)	10
	a. Medical Surgical Nursing	5
	b. Critical care Nursing	3
	c. Geriatric and Palliative Nursing	2
NENG-122	English	2
PAK STD-123	Pakistan Studies	2
	Total Credits	14

YEAR 2
First Semester

Course Code	Course Title	Credit (Contact) Hours
NP-II-211	Nursing Practice II (Theory & OSCE)	10
	a. Mental Health Nursing	3.5
	b. Peadiatrics Nursing	2.5
	c. Community Health Nursing	4
HCHS-212	Culture Health and Society	2
NENG-213	English	2
	Total Credits	14

Second Semester

Course Code	Course Title	Credit (Contact) Hours
NP-III-221	Nursing Practice III Senior Eclective (Theory and VIVA) (Education or Nursing Management)	6
NLM-224	Leadership and Management	2
NNR-BS-223	Research and Biostatics	4
NENG-222	English	2
	Total Credits	14

Nursing Practice I

Course Title	Credit (Contact) Hours
Medical & Surgical Nursing	5
Critical Care Nursing	3
Geriatric & Palliative Nursing	2
Total Credits	10

Nursing Practice II

Course Title	Credit (Contact) Hours
Psychiatric-Mental Health Nursing	3.5
Peadiatric Nursing	2.5
Community	4
Total Credits	10

Nursing Practice III

Course Title	Credit (Contact) Hours
Senior Elective(Education & Management)	6.
Total Credits	6

Introduction:

Certified Nursing Assistant is a 2 year Diploma education program leading to practice as a License Practical Nurse (LPN). The program offers knowledge, skills and professional attitude at lower cost as compare to RN. Upon completion of this program the LPN will be a safe clinical nurse, who can provide care at primary, secondary and tertiary levels in association with RN in hospitals and community settings.

This program is intended to prepare nurses at lesser cost as well as to overcome the shortage of nurses which is an acute problem at national and international levels.

- Cost effective in sense of time and recourses as compared to diploma program
- Provision of training and job opportunities to those females who has lower merit than degree holder nurses in Pakistan.
- To educate nurses with appropriate knowledge, skills and attitudes.
- To produce nurses who can provide basic and rehabilitative health care to the population in rural and urban settings.

Curriculum:

The curriculum for LPN is prepared by PNC, which will be referred as primary guide and where necessary modifications will be made to address the unique needs of the program. The course work will be divided in semester where progression will be determined through internal, continuous tests. At the end each year there shall be board exam conducted the Nursing Examination board. Detailed curricula and assessment plans are available on PNC website.

POLICIES FOR LPN PROGRAMME**Duration of Course:**

Students enrolled in Private/government institutions for 2years (24 month) LPN

Eligibility:

The Applicant must meet one of the following

academic levels:

- Fsc 45% Minimum
- FA 45% Minimum
- Metric with Science 45% Minimum
- Metric with Arts 50% Minimum (for remote area)

Nationality:

Pakistani

Age:

Applicant up to the age of 30 years will be considered, further relaxation up to five years could be obtained from respective university/government. In exceptional cases for further relaxation of age PNC approval can be taken.

Gender:

LPN is only for female.

Marital Status:

Unmarried or married both females are allowed

Physical Fitness:

A medical fitness certificate is required by concerned civil physician/designated physician for all applicants.

LPN CURRICULUM:

YEAR ONE

TOTAL HOURS=1584

(Theory = 528

Clinical = 1056)

PTS/ ORIENTATION EXAMINATION

During the 3rd month (last week) school internal examination will be conducted by internal examiner. If the candidate fails in PTS. She will be given only one chance after 4 weeks of further education, failing that her education will be discontinued. (Terminated)

YEARTWO

TOTAL HOURS = 1584

(Theory = 528

Clinical = 1056)

Nursing Examination Board (NEB)

All students will be required to take NEB for both the years

YEAR ONE = 4 PAPERS

YEAR TWO = 4 PAPERS

Year One

1. English

2. FON (Ethics,

History, Microbiology)

3. Anatomy and

Physiology

4. Islamiat

Theory/Practical

100 Marks

100/100 Marks

100/100 Marks

50 Marks

Year Two

1. English II

2. CHN and Nutrition

3. Med/Surg Nursing

and Pharma

4. Pediatric Nursing

100 Marks

100/100 Marks

100/100 Marks

100/50 Marks

Passing Marks for English and Islamiat is 33% and for all other subjects is 50%

No aggregated marks will be given.

Student fails in theory will have to appear in both (i.e. theory and practical)

Chances of Examination:**First Year**

A student who fails examination(s) can give two re-sit attempts. First re-sit at 8th weeks after the announcement of results and second re-sit after six month with scholarship.

Second Year

A student who fails examination(s) can give two re-sit attempts. First re-sit at 8th weeks after the announcement of results with scholarship and second re-sit after six month without scholarship.

A TYPICAL STUDY PLAN
Certified Nursing Assistant (CNA)

DURATION 2 YEARS

Minimum Degree Requirements: This program comprises a total of 1584 credits.

YEAR 1

Course Title	Credit (Contact) Hours
TORIENTATION/PTS	372
English	60
FON /Ethics/ History of Nursing:	
THEORY	150
NURSING LAB	179
BED SIDE NSG	777
TOTAL	1106
Microbiology	
THEORY	24
PATH LAB	20
TOTAL	44
Anatomy & Physiology	
THEORY	100
SCIENCE LAB	30
TOTAL	130
Islamiat/ Ethics	20
Computer Theory	30
COMPUTER LAB	50
TOTAL	80
Pre./Post Ass/Stdy	72
TOTAL THEORY	528
CLINICAL	1056

YEAR 2

Course Title	Credit (Contact) Hours
English	100
Community Health Nursing/ Nutrition	
Theory	150
Clinical	450
Total	600
Medical Surgical Nursing:	
Theory	150
Clinical	450
Total	600
Pharmacology/ Math	
Theory	50
Lab	06
TOTAL	56
Pediatric Nursing	
Theory	50
Clinical	150
Total	200
Stdy/Post Ass.	28
TOTAL THEORY	528
CLINICAL	1056



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.

A TYPICAL STUDY PLAN
BACHELOR OF SCIENCE MEDICAL LABORATORY TECHNOLOGY (BSc MLT)

DURATION 2 YEARS

Minimum Degree Requirements: This program comprises a total of 68 credits.

YEAR 1
First Semester

Course Code	Course Title	Credit (Contact) Hours
MLEA111	Anatomy- I Micro Techniques	2
MLCB112	Clinical Biochemistry I	3
MLMB113	Microbiology - I	3
MLHT-114	Hematology & Blood Banking - I	2
MLHP115	Human Physiology	2
MLEG116	English	3
MLCP117	Introduction to Computer	3
	Total Credits	18

Second Semester

Course Code	Course Title	Credit (Contact) Hours
MLEA121	Anatomy - II Micro Techniques	2
MLCB122	Clinical Biochemistry II	3
MLMB123	Microbiology - II	3
MLHB-124	Hematology & Blood Banking - II	2
MLIS125	Islamite	1
MLEG126	English	3
MLPS127	Pak Studies	2
	Total Credits	16

YEAR 2**First Semester**

Course Code	Course Title	Credit (Contact) Hours
MLCP231	Clinical Pathology - I	3
MLSL232	Serology - I	3
MLST233	Statistics	3
MLMI234	Medical Instrumentation	3
MLES235	Elective Subject - I	3
MLEG236	English	3
	Total Credits	18

Second Semester

Course Code	Course Title	Credit (Contact) Hours
MLCP241	Clinical Pathology - II	3
MLSL242	Serology - II	3
MLCM243	Community Medicine/ Public Health	3
MLPC244	Pharmacology	3
MLES245	Elective Subject - II	3
MLIS246	Internship	1
	Total Credits	16





Isra Institute of Rehabilitation Sciences

PPDPT Kinesiology

Bio Statistics Doctor of Physical Therapy

Sports Medicine

Manipulative Physical Therapy

Community Based Rehabilitation

M.Phil, PGD-SM&MPT Anatomy

Speech Language Pathology

Pathology

Electro Neuro Physiology

Diagnostic Electro Neurophysiology

Postgraduate Diploma

PhD in Rehabilitation Sciences



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 demands of the rehabilitating patients from injuries and disabilities. IIRS 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.

Eligibility: Minimum requirement – A levels / Intermediate (Pre-Medical) with 50% or Equivalent marks.



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(2+1)
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(2+1)
DPEB484	Evidence Based Practice	3(3+0)
DPOP485	Orthotics & Prosthetics	3(2+1)
DPAM486	Administration & Management	2(2-0)
DPCP487	Clinical Practice IV	3(0+3)
	Total Credits	20

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	Integumentary 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
PDPT-K	Exercise Physiology & Neurophysiology	3(2+1)
PDPT-M	Applied Anatomy	3(2+1)
PDPT-L	Pathology & Microbiology	3(2+1)
PDPT-N	Histology & Embryology	3(2+1)
PDPT-I	Ergonomics & Biomechanics	2(2+0)
PDPT-H	Human Growth & Development	2(2+0)
PDPT-G	Genetics	2(2+0)
PPMI611	Medical Informatics	2(2+0)
	Total Credits	20

Second Semester

Course Code	Course Title	Credit (Contact) Hours
PDPT-C	Pharmacology & Therapeutics	3(3+0)
PDPT-D	Radiology & Imaging	3(2+1)
PPEB616	Evidence Based Practice	3(2+1)
PDPT-A	Clinical Methods in Musculoskeletal & Neuromuscular Physical Therapy	4(3+1)
PDPT-E	Clinical Methods in Cardio-pulmonary Integumentary & Metabolic Physical Therapy	4(3+1)
PDPT-B	Manual Therapy	3(2+1)
	Total Credits	20

YEAR 2
First Semester

Course Code	Course Title	Credit (Contact) Hours
PDPT-P	Primary Care & Emergency Procedures in Physical Therapy	3(2+1)
PDPT-PG	Pediatrics & Gender Health Care in Physical Therapy	4(3+1)
PDPT-GG	Gerontology & Geriatrics Physical Therapy	3(2+1)
PDPT-F	Biostatistics, Research Methodology & Scientific Inquiry	3(3+0)
PDPT-DD	Differential Diagnosis & Clinical Decision Making	3(2+1)
PDPT-Q	Health Education, Learning & Teaching Methodology	2(2+0)
PDPT-R	Molecular Medicine	3(3+0)
	Total Credits	21

Second Semester

Course Code	Course Title	Credit (Contact) Hours
PDPT-CBR	Health Promotion & Wellness in Physical Therapy & Community Based Rehabilitation	2(2+0)
PDPT-PP	Professional Practice	2(2+0)
PDPT-IPT	Clinical Practice In Integumentary PT	1(0+1)
PDPT-MS	Clinical Practice in Musculoskeletal PT	1(0+1)
PDPT-NPT	Clinical Practice in Neurology PT	1(0+1)
PDPT-CPT	Clinical Practice in Cardiopulmonary PT	1(0+1)
PDPT-G	Research Project / Dissertation	6(0+6)
		14
	Total Credits	75



M. Phil & Post Graduate Diploma in Sports Medicine & Manipulative Physical Therapy (M.Phil, PGD-SM&MPT)

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.

A TYPICAL STUDY PLAN
MASTER OF PHILOSOPHY, POSTGRADUATE DIPLOMA IN SPORTS MEDICINE &
MANIPULATIVE PHYSICAL THERAPY (M.Phil, PGD-SM&MPT)

DURATION 2 YEARS

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

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 (2-1)
SMMT 613	Musculoskeletal Sciences (Musculoskeletal Injuries, Diagnosis & Management)	3 (2-1)
SMMT 614	Advance Manipulative Physical Therapy Techniques (Upper, Lower Quadrant & Spine)	3 (1-2)
	Total Credits	12

Second Semester

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

Third Semester

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

Fourth Semester

Course Code	Course Title	Credit (Contact) Hours
SMMT 799	Thesis (Continued)	12 (0+24)
	Total Credits	36



M.Phil & Post Graduate Diploma in Speech Language Pathology (M.Phil, PGD-SLP)

Introduction: The aim of Speech-Language Pathology & Hearing sciences 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, hearing impairment, Voice, Fluency, Cognitive and other related Communication disorders along with Swallowing and feeding 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.

Eligibility Criteria:

- 16- Years of education with any of the following subjects Psychology, linguistics, Child development, physics, Zoology, Special education, behavior sciences, management sciences ,Social sciences & Medical sciences, from a HEC recognized degree awarding institute.
- GAT-Graduate Admission Test by NTS at least 50% score or GRE subject Test by isra University.

Duration: M.Phil (2 Years) PGD (1 Year)

A TYPICAL STUDY PLAN
MASTER OF PHILOSOPHY, SPEECH LANGUAGE PATHOLOGY
(M.PHIL, PGD-SLP)

DURATION M. PHIL (2 YEARS) PGD (1 YEAR)

Minimum Degree Requirements: This program comprises a total of MS/M.Phil 36 credits & PGD 24 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 (2+2)
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 (2+0)
SLHS623	Evidence Based Practice	2 (1+1)
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 M. Phil Speech Language Pathology	Credit (Contact) Hours
SLSD631	Speech Disorders	3(2+1)
SLDC632	Language Disorders in Children	3(2+1)
SLDC633	Rudiments of Audiology	2(1+1)
SLDC634	Clinical Decision Making & Planning Effective Treatment	3(2+1)
	Total Credits	11

Second Semester

Course Code	Course Scheme M. Phil Speech Language Pathology	Credit (Contact) Hours
SLND641	Neurological, Communication & Swallowing Disorders	4(3+1)
SLAC642	Advance Clinical Practum	4(NCH)
SI799	Thesis	6
		14
	Total Credits	43

YEAR 1**First Semester**

Course Code	Course Speech PGD (Speech Language Pathology)	Credit (Contact) Hours
SLHS611	Language Science	2(1+1)
SLHS 612	Biomedical Sciences 1	2(1+1)
SLHS 614	Speech & Hearing Sciences	2(1+1)
SLDC632	Language Disorders in Children	3(2+1)
SLDC633	Rudiments of Audiology	2(1+1)
	Total Credits	11

Second Semester

Course Code	Course Speech PGD (Speech Language Pathology)	Credit (Contact) Hours
SLSD631	Speech Disorders	3(2+1)
SLDC634	Clinical Decision Making & Planning Effective Treatment	3(2+1)
SLND641	Neurological, Communication & Swallowing Disorders	4(3+1)
SLAC642	Advance Clinical Practum	4(3+1)
		14
	Total Credits	25



M.Phil & Post Graduate Diploma in Hearing Sciences (M.Phil, PGD-HS)

Eligibility Criteria:

- 16- Years of education with any of the following subjects Psychology, linguistics, Child development, physics, Zoology, Special education, behavior sciences, management sciences ,Social sciences & Medical sciences, from a HEC recognized degree awarding institute.
- GAT-Graduate Admission Test by NTS at least 50% score or GRE subject Test by isra University.

Duration: M.Phil (2 Years) PGD (1 Year)

A TYPICAL STUDY PLAN
MASTER OF PHILOSOPHY & POST GRADUATE DIPLOMA IN
HEARING SCIENCES

DURATION M. PHIL (2 YEARS) PGD (1 YEAR)

Minimum Degree Requirements: This program comprises a total of MS/M.Phil 36 credits & PGD 24 credits.

YEAR 1
First Semester

Course Code	Course Scheme for M. Phil Hearing Sciences	Credit (Contact) Hours
SLHS611	Language Science	2(1+1)
SLHS 612	Biomedical Sciences 1	2(1+1)
SLHS 613	Child Development	2(2+0)
SLHS 614	Speech & Hearing Sciences	2(1+1)
	Total Credits	8

Second Semester

Course Code	Course Scheme for M. Phil Hearing Sciences	Credit (Contact) Hours
SLHS621	Biomedical Sciences 11	2(1+1)
SLHS622	Biostatistics, Research Methodology & Scientific Inquiry	2(2+0)
SLHS623	Evidence Based Practice	2(1+1)
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 M. Phil Hearing Sciences	Credit (Contact) Hours
HSAA631	Introduction To Audiology & Its Medical & Physiologic Aspects	3(2+1)
HSAA632	Principles Of Audio logical Assessment	3(2+1)
HSAA633	Psychoacoustics And Instrumentation	2(2+0)
HSAA634	Aural Habilitation And Rehabilitation	3(2+1)
	Total Credits	11

Second Semester

Course Code	Course Scheme for M. Phil 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)
HS799	Dissertation	6
		14
	Total Credits	43

YEAR 1**First Semester**

Course Code	Course Speech PGD (Hearing Sciences)	Credit (Contact) Hours
SLHS611	Language Science	2(1+1)
SLHS 612	Biomedical Sciences 1	2(1+1)
SLHS 614	Speech & Hearing Sciences	2(1+1)
HSAA631	Introduction To Audiology & Its Medical & Physiologic Aspects	3(2+1)
HSAA632	Principles Of Audio logical Assessment	3(2+1)
	Total Credits	12

Second Semester

Course Code	Course Speech PGD (Hearing Sciences)	Credit (Contact) Hours
HSAA633	Psychoacoustics And Instrumentation	2(2+0)
HSAA634	Aural Habilitation And Rehabilitation	3(2+1)
HSCD641	Guidance, Counseling, Clinical Decision Making And Related Issues In Audiology	4(3+1)
HSAC642	Advance Clinical Practum	4
		13
	Total Credits	25



M. Phil & PGD, Health, Physical Education & Sports Sciences (HPESS)

Eligibility: 16 years of education or equivalent from a HEC recognized University.

Duration: Minimum 2 years M.Phil & 1 year PGD.

A TYPICAL STUDY PLAN

M. Phil & PGD, Health Physical Education & Sports Sciences (HPESS)

DURATION 2 YEARS M. Phil & 1 YEAR PGD

Minimum Degree Requirements: This program comprises a total of M.Phil 36 credits & PGD 24 credits.

YEAR 1

First Semester

Course Code	Course Title	Credit (Contact) Hours
HPESS 611	Research Methods, Statistics & EBP	3(2+1)
HPESS 612	Applied Kinesiology & Sports Biomechanics	3(2+1)
HPESS 613	Measurement & Evaluation Technology in Physical Education	3(2+1)
HPESS 614	Exercise Physiology & Exercise Prescription	3(2+1)
	Total Credits	12

Second Semester

Course Code	Course Title	Credit (Contact) Hours
HPESS 621	Sports Psychology, Human Growth & Development	3(2+1)
HPESS 622	Health Promotion & Wellness	3(2+1)
HPESS 623	Sports Injuries & Prevention & Rehabilitation	3(2+1)
HPESS 624	Pedagogical Methods in Physical Education	3(3+0)
	Total Credits	12

Second Semester

Course Code	Course Title	Credit (Contact) Hours
HPESS 799	Thesis	12
	Total Credits	12

Second Semester

Course Code	Course Title	Credit (Contact) Hours
HPESS 799	Continue Thesis	12
	Total Credits	36



M.Phil & PGD, Cardiopulmonary Physical Therapy (CPT)

Purpose: The degree program in Cardiopulmonary Physical Therapy is designed to prepare students for roles as contributing members of the modern health care team concerned with treatment, management, and care of patients with breathing, and cardiopulmonary disorders.

Objectives: Objectives include employment opportunities as cardiopulmonary therapy practitioners in hospitals, clinics, research facilities, home care agencies, and alternate care sites. The Cardiopulmonary Physical Therapist will be able to administer gas therapy, humidity therapy, aerosol therapy, and hyperinflation therapy; assist with mechanical ventilation, special therapeutic and diagnostic procedures, cardiopulmonary resuscitation, and airway management techniques; and follow therapeutic protocols. The Cardiopulmonary Physical Therapist works under the supervision of a physician.

Eligibility: 4 years Bachelor degree in Physiotherapy / Physical Therapy or 3 years B.Sc. in Physiotherapy with one year additional certificate course in Physiotherapy or 5 years Doctor of Physical Therapy program or Post Professional DPT or Masters in Physical Therapy or equivalent from a HEC recognized University.

Duration: Minimum 2 years M. Phil & 1 year PGD.

A TYPICAL STUDY PLAN**M.Phil, PGD in Cardiopulmonary Physical Therapy.****DURATION 2 YEARS MS/M.Phil & 1 YEAR PGD****Minimum Degree Requirements:** This program comprises a total of M.Phil 36 credits & PGD 24 credits.**YEAR 1****First Semester**

Course Code	Course Title	Credit (Contact) Hours
CPT611	Cardiopulmonary Sciences.	3 (2+1)
CPT612	Cardiopulmonary Health.	2 (2+0)
CPT613	Physical Assessment.	2 (2+0)
CPT614	Cardiopulmonary Rehabilitation I.	3 (2+1)
CPT615	Biostatistics.	2 (2+0)
	Total Credits	12

Second Semester

Course Code	Course Title	Credit (Contact) Hours
CPT621	Thoracic Diagnostic Radiology and Therapeutic Procedures.	3 (2+1)
CPT622	Evidence Based Practice and Research Methodology.	3 (3+0)
CPT623	Cardiopulmonary Rehabilitation II.	3 (2+1)
CPT624	Emergency Procedures and Critical Care Monitoring.	3 (2+1)
	Total Credits	12

YEAR 2

Course Code	Course Title	Credit (Contact) Hours
CPT799	Theses	12
	Total Credits	36



M. Phil & PGD, Neurological Physical Therapy (NPT)

Purpose: The aim of this program is to develop your understanding of sensory-motor control and learning - particularly how it enables skill acquisition within the context of rehabilitation, and how learning is affected by other physical and psychological factors. In addition to the general entry requirements for the M. Phil program, candidate should have experience of and be able to demonstrate an interest in Neurological Physical Therapy.

Objectives: Understand the basic neurophysiology of sensory motor control, learning and Neuroplasticity.

1. Understand how skills are learnt, consolidated and used.
2. Critically appraise methods of measurement at levels of systems function and participation within the international classification of functioning and health framework.
3. Critically explain current ideas in control and measurement of human movement.
4. Summarize the importance of sensory, psychological, social and cognitive factors in sensory motor learning and skill acquisition.
5. Explain how knowledge of sensory motor learning and measurement is applied in neurological rehabilitation, and demonstrate an ability to translate knowledge into clinical practice.
6. Critically appraise the mechanisms and evidence for the use of technologies in neurological rehabilitation for both therapy and measurement. Critically appraise research into understanding mechanisms of sensory motor control and learning, interventions, measurement and methods of management in rehabilitation.
7. Critically appraise research into understanding mechanisms of sensory motor control and learning, interventions, measurement and methods of management in rehabilitation.

Eligibility: 4 years Bachelor degree in Physiotherapy / Physical Therapy or 3 years B.Sc. in Physiotherapy with one year additional certificate course in Physiotherapy or 5years Doctor of Physical Therapy program or Post Professional DPT or Masters in Physical Therapy or equivalent from a HEC recognized University.

Duration: 2 years M. Phil, 1 year PGD

A TYPICAL STUDY PLAN**M.Phil, PGD in Neurological Physical Therapy.****DURATION 2 YEARS MS/M.Phil, 1 YEAR PGD****Minimum Degree Requirements:** This program comprises a total of M.Phil 36 credits & PGD 24 credits.**YEAR 1****First Semester**

Course Code	Course Title	Credit (Contact) Hours
NPT611	Fundamentals of Neurological Rehabilitation	2 (2+0)
NPT612	Applied Neuro-anatomy & Clinical Neuroscience	3 (2+1)
NPT613	Rehabilitation of Neurological Disorders I	3 (2+1)
NPT614	Exercise Sciences	2 (2+0)
NPT615	Biostatistics	2 (2+0)
	Total Credits	12

Second Semester

Course Code	Course Title	Credit (Contact) Hours
NPT621	Fundamentals of Neurological diseases	2 (2+0)
NPT622	Neuro-diagnosis, Case Studies of Persons with Neuromuscular Disorders	3 (2+1)
NPT623	Rehabilitation of Neurological Disorders II	3 (2+1)
NPT624	Evidence Based Clinical Practice and Research Methodology	2 (2+0)
NPT625	Advanced Neurological Physical Therapy Techniques	2 (0+2)
	Total Credits	12

YEAR 2

Course Code	Course Title	Credit (Contact) Hours
NPT799	Theses	12
	Total Credits	36



M.Phil & PGD, Orthopedic Physical Therapy (OPT)

Purpose: The degree program in Orthopedic Physical Therapy is designed to prepare the students for working as contributing members of the modern health care team concerned with treatment, management, and care of patients with Musculoskeletal disorders.

In addition to the general entry requirements for the M. Phil program, student should have the experience to be able to demonstrate an interest in Orthopedics Rehabilitation.

Objectives: This course has been designed to introduce basic orthopedic science, orthopedic practice principles, and treatment techniques required in the day to day management of patients with movement impairments, functional limitations, and disabilities due to musculoskeletal pathologies affecting the extremities. Clinically related orthopedic sciences including anatomy, biomechanics, pathology and radiology will serve as the foundation for technique application and overall patient management. Practice principles will include evidence based practice, clinical decision making skills, clinical hypothesis building, treatment planning and progression. The technique portion includes physical examination and interventions for the extremities including advanced active and passive motion examination, translatory movement evaluation, and select differential evaluation techniques. Soft tissue, articular and therapeutic exercise interventions for the extremities will be emphasized.

Eligibility: 4 years Bachelor Degree in Physiotherapy/ Physical Therapy or 3 years B.Sc. in Physiotherapy with one year additional certificate course in Physiotherapy or 5years Doctor of Physical Therapy program or Post Professional DPT or Masters in Physical Therapy or equivalent from a HEC recognized University.

Duration: Minimum 2 years M. Phil & 1 year PGD.

A TYPICAL STUDY PLAN**M.Phil, PGD in Orthopedic Physical Therapy****DURATION 2 YEARS M.Phil & 1 YEAR PGD****Minimum Degree Requirements:** This program comprises a total of M.Phil 36 credits & PGD 24 credits.**YEAR 1****First Semester**

Course Code	Course Title	Credit (Contact) Hours
OPT611	Fundamentals of Orthopedic Rehabilitation	2 (2+0)
OPT612	Applied Movement Sciences	3 (3+0)
OPT613	Principles of Orthopedic Medicine	2 (2+0)
OPT614	Orthopedic Management I	3 (2+1)
OPT615	Biostatistics	2 (2+0)
	Total Credits	12

Second Semester

Course Code	Course Title	Credit (Contact) Hours
OPT621	Orthopedic Clinical Methods	2 (2+0)
OPT622	Manual Therapy	3 (2+1)
OPT623	Orthopedic Management II	3 (2+1)
OPT624	Clinical Pharmacology of Musculoskeletal System.	2 (2+0)
OPT625	Evidence Based Clinical Practice and Research Methodology	2 (2+0)
	Total Credits	12

YEAR 2

Course Code	Course Title	Credit (Contact) Hours
OPT699	Theses	12
	Total Credits	36



M.Phil & PGD, Prosthetics & Orthotics (PO)

Introduction: Rehabilitation of persons with locomotor disabilities or neuromuscular disorder is a team work, where centre of attention is the person with disabilities. The team usually comprises of the Physical medicine and Rehabilitation Specialist (Physiatrist) who is usually the leader, Prosthetics and Orthotics, Physiotherapist, Occupational therapist, Social worker and Rehabilitation Nurse. Depending upon the need, other professionals like Orthopedic Surgeons, engineer, psychologist, geriatrist and other related professionals are also included in the team.

General planning of the total rehabilitation of the disabled is usually done by the Physiatrist. The role of Prosthetics and Orthotics is important. It is she/he, who fabricates and fits the prosthesis or orthotic to the persons with disabilities both temporary and permanent often referred as “Patient” and thus helps make the patient independent, confident and useful member of the society.

Aims and Objectives:

1. To provide better prosthetic and Orthotic care in the treatment of physically challenged in the rehabilitation setting.
2. To provide the students with clinical problems solving skills for lifelong learning combined with advanced biomechanical education.
3. To provide expert knowledge in Master in prosthetic Orthotic education.
4. To help the society & institutes and national requirements in the field of prosthetics & Orthotic with a growing technological advancement and human resource development.
5. To promote research and development in the field of P & O & rehabilitation science to enhance quality of life.

Eligibility: 4 years Bachelor degree in Orthotics and Prosthetics or equivalent from a HEC recognized University.

Duration: Minimum 2 years M. Phil & 1 year PGD.

A TYPICAL STUDY PLAN**M.Phil/PGD in Orthotics and Prosthetics****DURATION 2 YEARS M.Phil & 1 YEAR PGD****Minimum Degree Requirements:** This program comprises a total of M.Phil 36 credits & PGD 24 credits.**YEAR 1****First Semester**

Course Code	Course Title	Credit (Contact) Hours
PO611	Biomechanics & Kinesiology	2 (2+0)
PO612	Advances in Lower Extremity Orthotics	3 (2+1)
PO613	Advances in Lower Extremity Prosthetics	3 (2+1)
PO614	Biostatistics & Research Methodology	2 (2+0)
PO615	Information Technology & Management Skills.	2 (2+0)
	Total Credits	12

Second Semester

Course Code	Course Title	Credit (Contact) Hours
PO621	Advances in Materials for prosthetics & Orthotics. Mobility Aids in Rehabilitation.	3 (3+0)
PO622	Advances in Upper Extremity Orthotics.	3 (2+1)
PO623	Advances in Upper Extremity Prosthetics.	3 (2+1)
PO624	Advances in Spinal Orthotics.	3 (2+1)
		12
	Total Credits	

YEAR 2

Course Code	Course Title	Credit (Contact) Hours
PO799	Theses	12
	Total Credits	36



PhD in Rehabilitation Sciences

Introduction: 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 indepth, 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

Eligibility Criteria:

- M. Phil/MS/Equivalent Degree(18-Years of Education) in Physical Therapy, Speech Language Therapy / Hearing sciences, occupational Therapy, Orthosis/Prothesis, CBR & Disability, Sports Medicine & Pain Management, Rehabilitation medicine, Electroneurophysiology, Nursing and Clinical Psychology .
- Minimum CGPA 3.00 or First Division

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
DPRS734	Counseling in Rehabilitation	02
	Elective - 03	02
DPRS799	Dissertation	09
	Second Semester	
DPRS799	Dissertation	09

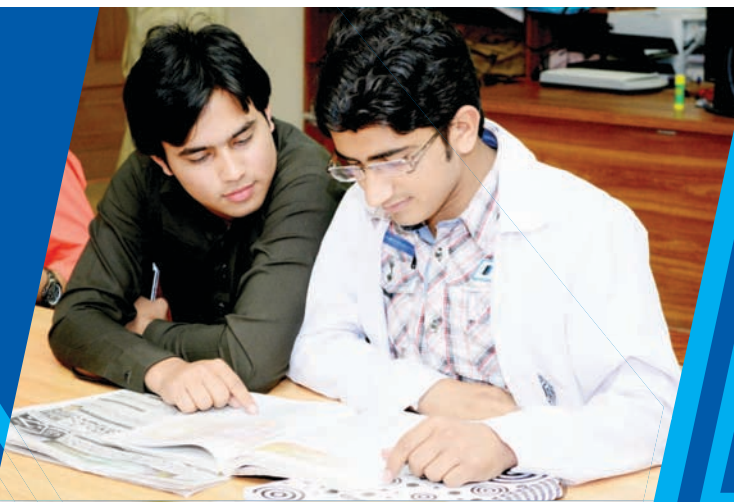
YEAR 3
First Semester

Course Code	Course Title	Credit (Contact) Hours
DPRS799	Dissertation	09
	Second Semester	
DPRS799	Dissertation	09
	Total Credits	54

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



Fiber Optics
Computer Vision

Optimal Controls Project
Stochastic Processes Bio Statistics

Switching Theory
Network Programming

Circuit Analysis

Digital Signal Processing

Network Security
Optimization Techniques

Advanced FPGAs





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.

Bachelor of Engineering (Electrical)

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.

BS (Electronics)

This is a four year, full-time program of 136 credits. It offers courses covering a broad spectrum ranging from basic circuit systems to advanced integrated circuits. The program is designed to produce graduates who can meet the growing industrial demand of qualified personnel in design, manufacturing and maintenance of electronic systems.

BS (Information & Communication Technology)

This is a four year, full-time program of 136 credits. It offers a mixed blend of computer science, management and communication. The program is designed to produce graduates who can utilize their technical expertise and interpersonal skills to meet the job requirements of the information technology industry and play a vital role in the growing entrepreneurship in these areas.

Associate of Applied Sciences (Software Engineering)

The primary objective of the Software Engineering program is to produce well-rounded graduates who have a strong foundation in theoretical concepts in computing. Can apply these concepts to provide computer based solutions for problems. The ability to identify and use appropriate software engineering methodologies and tools to model, simulate, and test their design for large scale software systems. Strong academic preparation to pursue careers in local and international IT industry. Been enabled for continuing education through formal or informal methods.

Associate of Applied Sciences (Telecommunication)

Telecommunication is a discipline related to the use of engineering tools to solve telecommunication problems in business organizations and industries. The undergraduate Telecommunication program has been developed to serve the needs of the modern society by training students who want to be specialized in Telecommunication system

analysis and telecommunication software development. Furthermore, the program aims to prepare the students for self and life-long learning, the skills that are necessary for the students to keep up with the current technologies and remain proficient throughout their careers.

Associate of Applied Sciences (Business Administration)

The degree is planned to give a broad knowledge of the useful areas of a company, and their interconnection, while also allowing for specialization in a particular area. BBA programs thus expose students to a alteration of "core subjects" and allow students to specialize in a specific academic area. The degree also develops the student's practical managerial skills, communication skills and business decision-making capability.

Many programs thus incorporate training and practical experience, in the form of case projects, presentations, internships, industrial visits, and interaction with experts from the 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.

Bachelor of Business Administration

This is a four-year, full time degree program of 138 credits. It imparts essential knowledge in various domains of business administration, economics, accounting, finance & marketing,

and gives an introduction to computer applications in business and trends in information technology. The program offers electives in a variety of specialization areas.

Master of Business Administration

This is a two-year, full time, program of 36 credit hours. The core curriculum covers advanced level courses with emphasis on financial management, international business management, managerial economics, and statistical analysis for management, managerial policy, and marketing management. Students who wish to enter this program with a two year business related bachelors degree or a four years non-business degree will be required to take additional credits as per HEC regulations.



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

Department of Electronic and Computer Engineering		
BS & BE Programs		
Minimum Qualifications Duration Coursework Credits Project Credits	F.Sc. (Pre-Engineering/ICS) 60% / DAE Minimum 4 years 136 Credits 06 Credits	
B-Tech (Pass/Hons) Program		
Minimum Qualifications Duration Coursework Credits Project Credits	DAE (Relevant Discipline) / F.Sc. (Pre-Engg)/Equivalent Pass Minimum 2 years 65 Credits 05 Credits	
	Honors Minimum 4 years 136 Credits 06 Credits	
M.Sc Electronics Program		
Minimum Qualifications Duration Coursework Credits Project Credits	B.Sc. In Mathematics and Physics / B-Tech in Electronics / Electrical Minimum 2 years 60 Credits 06 Credits	
MS Program		
Minimum Qualifications Duration Coursework Credits Research Credits	16 years of education: Bachelor of Engineering (Electronic, Electrical, Industrial Electronics, Telecommunication), MSc. Electronics, M.Sc. Computer Science, M.Sc. Applied Physics. Minimum 2 years Thesis 24 12	
	Non-Thesis 30 00	
PhD Program		
Minimum Qualifications Duration Coursework Credits Research Credits	MS Engg (relevant field) / M Phil Electronics, Telecommunication / MS Computer Science 3-5 years 18 Credits 40 Credits	

ATYPICAL 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+1)
ESBE-112	Basic Electronics	4 (3+1)
GSAP-113	Applied Physics	4 (3+1)
HSLG-114	English composition and comprehension	2 (2+0)
MSCA-115	Calculus & Analytical Geometry	3 (3+0)
HSIS-116	Islamic Studies	2 (2+0)
	Total Credits	18

Second Semester

Course Code	Course Title	Credit (Contact) Hours
MSLA-121	Linear Algebra	3(3+0)
HSPS-122	Pakistan Studies	2(2+0)
ESEC-123	Electronic Circuits and Devices	4(3+1)
HSBC-124	Business Communications	2(2+0)
MSES-125	Elements of Statistics and Probability	3(3+0)
	Supporting Science Elective I	3(2+1)
	Total Credits	17

YEAR 2

First Semester

Course Code	Course Title	Credit (Contact) Hours
MSCV-211	Complex Variables and Transforms	3 (3+0)
ESDL-212	Digital Logic Design	4 (3+1)
CSSM-213	Semiconductor Theory	4 (3+1)
ESCA-214	Circuit Theory and Analysis	4 (3+1)
HSTR-215	Technical Report Writing	2 (2+0)
	Total Credits	17

Second Semester

Course Code	Course Title	Credit (Contact) Hours
ESNA-221	Network Analysis	4(3+1)
TCSS-222	Electromagnetic Field Theory	3(3+0)
ESIM-223	Instrumentation & Measurements	4(3+1)
TCSS-311	Signal & Systems	3(3+0)
	Supporting Science Elective-II	3(3+0)
	Total Credits	17

YEAR 3
First Semester

Course Code	Course Title	Credit (Contact) Hours
MSNA-224	Numerical Analysis	3(3+0)
ESDE-312	Digital Electronics	4(3+1)
TCDC-313	Analog and Digital Communication	4(3+1)
	GE/University Elective-I	3(3+0)
	Supporting Science Elective-III	3(3+0)
	Total Credits	17

Second Semester

Course Code	Course Title	Credit (Contact) Hours
ESCS-321	Control Systems	3(3+0)
ESOE-322	Opto-Electronics	3(3+0)
ESMI-323	Microprocessor & Interfacing Techniques	4(3+1)
	ES Elective-I	3(3+0)
	ES Elective-II	4(3+1)
	Total Credits	18

YEAR 4

First Semester

Course Code	Course Title	Credit (Contact) Hours
ESLO-411	Laser & Fiber Optics	4(3+1)
TCWP-412	Data Communication & Computer Networks	4(3+1)
HSPP-413	Professional Practices	2(2+0)
	GE/ University Elective-II	3(3+0)
	ES Elective III	3(3+0)
ESES-499A	ES Project I	2(0+2)
	Total Credits	17

Second Semester

Course Code	Course Title	Credit (Contact) Hours
	GE/University Elective-III (Entrepreneurship)	2(2+0)
ESVD-422	VLSI Design	3(3+0)
	ES Elective-IV	3(3+0)
	ES Elective-V	3(3+0)
ESES-499B	ES Project II	4(0+4)
	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)



ATYPICAL STUDY PLAN

BACHELOR OF SCIENCE (INFORMATION TECHNOLOGY), BS (IT)

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
CSIT 111	Introduction to Information and Communication Technology	3(2+3)
CSPF 112	Programming Fundamentals	4(3+3)
MTCA 113	Calculus and Analytical Geometry	3(3+0)
HSEN 114	English Composition and Comprehension	3(3+0)
HSPS 115	Pakistan Studies	2(2+0)
	University Elective I	3(3+0)
	Total Credits	18

Second Semester

Course Code	Course Title	Credit (Contact) Hours
MTDS 121	Discrete Structures	3(3+0)
ESBE 122	Basic Electronics	3(2+3)
CSOP 123	Object Oriented Programming	4(3+3)
HSEN 124	Communication Skills	3(3+0)
HSIS 125	Islamic Studies / Ethics	2(2+0)
MTES 126	Probability and Statistics	3(3+0)
	Total Credits	18

YEAR 2
First Semester

Course Code	Course Title	Credit (Contact) Hours
ITTM 211	Technology Management	3(3+0)
CSDL 212	Digital Logic and Design	4(3+3)
CSDS 213	Data Structures and Algorithms	4(3+3)
CSDC 214	Data Communication and Computer Networks	3(3+0)
	University Elective - II	3(3+0)
	Total Credits	17

Second Semester

Course Code	Course Title	Credit (Contact) Hours
CSSE 221	Software Engineering	4(3+3)
ITIS 222	Information Systems	3(3+0)
CSOS 223	Operating Systems	3(3+0)
CSDB 224	Database Systems	4(3+3)
ITMD 225	Multimedia Systems and Design	3(2+3)
	Total Credits	17

YEAR 3**First Semester**

Course Code	Course Title	Credit (Contact) Hours
ITOD 311	Object Oriented Analysis and Design	3(2+3)
ITDA 312	Database Administration	3(2+3)
ITWT 313	Web Systems and Technologies	3(2+3)
	IT Elective - I	3(3+0)
	University Elective - III	3(3+0)
	Total Credits	15

Second Semester

Course Code	Course Title	Credit (Contact) Hours
CSHC 321	Human Computer Interaction	3(2+3)
ITIP 322	Internet Architecture and Protocols	3(3+0)
ITDS 323	Data and Network Security	3(3+0)
HSEN 324	Technical Report Writing	3(3+0)
	IT Elective - II	3(3+0)
	IT Elective - III	3(2+3)
	Total Credits	18

YEAR 4
First Semester

Course Code	Course Title	Credit (Contact) Hours
ITSA 411	System Integration and Architecture	3(3+0)
ITPM 412	IT Project Management	3(3+0)
	IT Elective - IV	3(3+0)
	IT Elective - V	3(3+0)
ITIT 499-A	BSIT Project - I	3(0+9)
	Total Credits	15

Second Semester

Course Code	Course Title	Credit (Contact) Hours
HSPP 421	Professional Practices	3(3+0)
ITSA 422	Systems and Network Administration	3(2+3)
ITCC 423	Cloud Computing	3(3+0)
	IT Elective - VI	3(3+0)
	IT Elective - VII	3(3+0)
ITIT 499-B	BSIT Project - II	3(0+9)
	Total Credits	18

BS(IT) Electives

Course Code	Course Title	Credit (Contact) Hours
CSDA 222	Design & Analysis of Algorithms	3(2+3)
CSVP 312	Visual Programming	3(2+3)
CSIP 326	Internet Programming & Web Development	3(2+3)
CSMC 313	Mobile and Pervasive Computing	3(3+0)
CSIN 413	Internship	3 (0+9)
CSCG 423	Computer Graphics	3(2+3)
CSAI 412	Artificial Intelligence	3(2+3)
SEQA 314	Software Quality Assurance	3 (2+3)
CSSA 322	Software Architecture & Design	3(3+0)
CSSP 412	Software Project Management	3(3+0)
SESR 311	Software Requirement & Specification	3(3+0)
CSTA 411	Theory of Automata	3(3+0)
CSCC 422	Compiler Construction	3 (2+3)
CSDS 424	Data Science	3 (2+3)
MSEC 484	E-Commerce	3(3+0)
CSML 316	Machine Learning	3 (2+3)
CSNL 325	Natural Language Processing	3 (2+3)
CSDP 414	Distributed Programming	3 (2+3)
CSCD 415	Cryptography & Data Security	3(3+0)
ITMI 326	Network Management & Security	3 (2+3)
CSPL 425	Programming Language Concepts	3(3+0)

A TYPICAL STUDY PLAN
BACHELOR OF SCIENCE (ELECTRONICS), BS (ES)

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)
ESED 123	Electronic Devices and Circuits	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
MTCV 211	Complex Variables and Transforms	3 (3+0)
ESDL 212	Digital Logic and Design	4 (3+3)
ESCT 213	Circuit Theory and Analysis	4 (3+3)
HSEN 214	English III - Technical Report Writing	3 (3+0)
CSED 215	Computer Aided Engineering Drawing	3 (2+3)
	Total Credits	17

Second Semester

Course Code	Course Title	Credit (Contact) Hours
ESDE 221	Digital Electronics	4 (3+3)
ESIM 222	Instrumentation and Measurements	4 (3+3)
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	18

YEAR 3
First Semester

Course Code	Course Title	Credit (Contact) Hours
TCSS 311	Signals and Systems	4 (3+3)
ESEF 312	Electromagnetic Field Theory	3 (3+0)
	ES Elective I	4 (3+4)
	General Education Elective I	3 (3+0)
	Supporting Science Elective II	3 (3+0)
	Total Credits	17

Second Semester

Course Code	Course Title	Credit (Contact) Hours
ESCS 321	Control Systems	4 (3+3)
ESMI 322	Microprocessor and Interfacing Techniques	4 (3+3)
TCAD 323	Analog & Digital Communication	3 (2+3)
ESOE 324	Opto Electronics	3 (3+0)
	ES Elective II	4 (3+3)
	Total Credits	18

YEAR 4

First Semester

Course Code	Course Title	Credit (Contact) Hours
ESVD 411	VLSI Design	4 (3+3)
TCRT 412	Radio & TV Engineering	3 (3+0)
	General Education Elective II	3 (3+ 0)
	ES Elective III	3 (3+0)
ESES 499A	BSES Project I	2 (0+6)
	Total Credits	15

Second Semester

Course Code	Course Title	Credit (Contact) Hours
HSPP 421	Professional Practices	2 (2+0)
	General Education Elective III	3 (3+0)
	ES ELECTIVE IV	3 (3+0)
	ES ELECTIVE V	3 (3+0)
ESES 499B	BSES Project II	4 (0+12)
	Total Credits	15

ES Electives

Course Code	Course Title	Credit (Contact) Hours
ESIN 341	Internship	3 (0+9)
CSDA 311	Design and Analysis of Algorithms	3 (2+3)
ESNA 374	Navigation Aids	3 (2+3)
ESFP 375	FPGA Based System Design	4 (3+3)
CSMC 353	Mobile Computing	4 (3+3)
CSDI 361	Digital Image Processing	4 (3+3)
TCDS 381	Digital Signal Processing	4 (3+3)
CSOS 312	Operating Systems	4 (3+3)
CSAI 412	Artificial Intelligence	4 (3+3)
CSOP 123	Object Oriented Programming	4 (3+3)
TCOF 382	Optical Fiber Communication	4 (3+3)
TCRF 485	RF & Microwave Engineering	4 (3+3)
ESPE 372	Power Electronics	4 (3+3)
TCCS 411	Communication Systems	4 (3+3)
CSSP 362	Speech Processing	4 (3+3)
ESAE 371	Analog Electronics	3 (3+0)
ESFR 471	Fundamental of Robotics	3 (3+0)
ESES 472	Embedded System	3 (3+0)
CSCA 413	Computer Architecture	3 (3+0)
ESLO 474	Laser & Fiber Optics	3 (3+0)
ESIE 473	Industrial Electronics	3 (3+0)
ESFL 475	Fuzzy Logic & Simulation	3 (3+0)
TCIT 412	Information Theory & Coding	3 (3+0)
TCBD 481	Broadband Digital Networks	3 (3+0)
ESRT 373	Radio and TV Engineering	3 (3+0)
CSMS 464	Multimedia System Design	3 (3+0)
TCRS 482	Radar Systems Engineering	3 (3+0)
TCMW 484	Mobile and Wireless Communication	3 (3+0)
TCSC 483	Satellite Communication	3 (3+0)
TCWA 383	Wave Propagation & Antennas	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)
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)
ITIA 461	Information System Audit	3 (3+0)
ITBA 462	Business Process Automation	3 (3+0)

Supporting Science Electives for BS (CS, ICT & ES)

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)

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 course work that includes a final year project of 06 credits.

YEAR 1
First Semester

Course Code	Course Title	Credit (Contact) Hours
MTCA-111	Calculus & Analytical Geometry	3(3+0)
EELC-112	Linear Circuit Analysis	4(3+3)
CSIC-113	Introduction to Computing	2(1+3)
HSFE-114	Functional English	3(3+0)
HSIS-115	Islamic Studies	2(2+0)
NSAP-116	Applied Physics	4(3+3)
	Total Credits	18

Second Semester

Course Code	Course Title	Credit (Contact) Hours
MTLA-121	Linear Algebra	3(3+0)
EEEN-122	Electrical Network Analysis	4(3+3)
EEED-123	Electronic Devices & Circuits	4(3+3)
EECA-124	Computer Aided Engineering Drawing	1(0+3)
HSPS-125	Pakistan Studies	2(2+0)
CEEM-126	Engineering Mechanics	3(3+0)
	Total Credits	17

YEAR 2**First Semester**

Course Code	Course Title	Credit (Contact) Hours
MTDE-211	Differential Equations	3(3+0)
METD-212	Applied Thermodynamics	3(3+0)
EEDL-213	Digital Logic Design	4(3+3)
HSCS-214	Communication Skills	3(3+0)
CSPF-215	Programing Fundamentals	3(2+3)
SSSC-216	Sociology	2(2+0)
	Total Credits	18

Second Semester

Course Code	Course Title	Credit (Contact) Hours
MTCV-221	Complex Variables and Transforms	3(3+0)
CSDA-222	Data Structures & Algorithms	3(2+3)
EESS-223	Signals & Systems	4(3+3)
EEET-224	Electromagnetic Field Theory	3(3+0)
	Breadth Core-I	4(3+3)
	Total Credits	17

YEAR 3
First Semester

Course Code	Course Title	Credit (Contact) Hours
EEPM-311	Probability Methods in Engineering	3(3+0)
EEEM-312	Electrical Machines	4(3+3)
EELC-313	Linear Control Systems	4(3+3)
MSEM-314	Engineering Economics & Management	3(3+0)
	Breadth Core-II	4(3+3)
	Total Credits	18

Second Semester

Course Code	Course Title	Credit (Contact) Hours
MTNA-321	Numerical Analysis	3(3+0)
EEMS-322	Microprocessor Systems	4(3+3)
EECS-323	Communication Systems	4(3+3)
MSEP-324	Engineering Professional Practices	3(3+0)
EEFP-325	Fundamentals of Electrical Power	3(3+0)
	Total Credits	17

YEAR 4

First Semester

Course Code	Course Title	Credit (Contact) Hours
EEFY-411A	Final Year Project-I	3(0+3)
HSTR-412	Technical Report Writing	3(3+0)
SSOB-413	Organizational Behavior	3(3+0)
	Depth Elective-I	4(3+3)
	Depth Elective-II	3(3+0)
	Total Credits	16

Second Semester

Course Code	Course Title	Credit (Contact) Hours
EEFY-411B	Final Year Project-II	3(0+3)
	Depth Elective -III	4(3+3)
	Depth Elective-IV	4(3+3)
	Depth Elective-V	4(3+3)
	Total Credits	15

Electronics Engineering Breadth-Core Courses (Current Stream)

Course Code	Course Title	Credit (Contact) Hours
EEIM-225	Instrumentation & Measurement	4(3+3)
EEEC-315	Electronic Circuit Design	4(3+3)

Electronics Engineering Depth Elective Courses (Current Stream)

Course Code	Course Title	Credit (Contact) Hours
EEVD-422	VLSI Design	4(3+3)
EEDE-416	Digital Electronics	4(3+3)
EEPE-414	Power Electronics	4(3+3)
EERA-423	Robotics & Automation	4(3+3)
EEDS-421	Digital Signal Processing	4(3+3)
EEME-417	Microwave Engineering	4(3+3)
EEDS-418	Digital System Design	4(3+3)
EEDE-425	Optoelectronics	4(3+3)
EEDC-415	Digital Control Systems	3(3+0)
EEES-424	Embedded Systems	4(3+3)

Electrical Power Engineering Breadth-Core Courses (Prospective Stream)

Course Code	Course Title	Credit (Contact) Hours
EEIM-225	Instrumentation & Measurement	4(3+3)
EEPT-315	Electrical Power Transmission	4(3+3)

Electrical Power Engineering Depth Elective Courses (Prospective Stream)

Course Code	Course Title	Credit (Contact) Hours
EEPG-415	Power Generation	3(3+0)
EEAC-419	AC Machines	4(3+3)
EEPD-416	Power Distribution & Utilization	4(3+3)
EEPE-414	Power Electronics	4(3+3)
EEPP-417	Power System Protection	4(3+3)
EEPA-422	Power System Analysis	4(3+3)
EEPC-423	Power System Operation & Control	4(3+3)
EEHV-418	High Voltage Engineering	4(3+3)
EEPS-425	Power System Stability & Control	4(3+3)
EEAE-424	Advanced Electrical Machines	4(3+3)
EEDS-421	Digital Signal Processing	4(3+3)

Telecommunication Engineering Breadth-Core Courses (Prospective Stream)

Course Code	Course Title	Credit (Contact) Hours
CSCN-225	Data Communication & Computer Networking	4 (3+3)
EEEC-315	Electronic Circuit Design	4 (3+3)

Telecommunication Engineering Depth Elective Courses (Prospective Stream)

Course Code	Course Title	Credit (Contact) Hours
EEOF-416	Optical Fiber Communication	4(3+3)
EERS-425	Radar Systems	4(3+3)
EEME-423	Microwave Engineering	4(3+3)
EEWP-422	Wave Propagation & Antennas	4(3+3)
EEDS-417	Digital System Design	4(3+3)
EEOE-418	Optoelectronics	4(3+3)
EEDC-415	Digital Control Systems	3(3+0)
EEES-424	Embedded Systems	4(3+3)
EEDE-414	Digital Electronics	4(3+3)
EEDS-421	Digital Signal Processing	4(3+3)
EEDC-426	Digital Communication	3(3+0)

Computer Systems Engineering Breadth-Core Courses (Prospective Stream)

Course Code	Course Title	Credit (Contact) Hours
CSCN-225	Data Communication & Computer Networking	4 (3+3)
CSOS-315	Operating Systems	4 (3+3)

Computer Systems Engineering Depth Elective Courses (Prospective Stream)

Course Code	Course Title	Credit (Contact) Hours
CSCA-415	Computer Architecture	3(3+0)
EEES-424	Embedded Systems	4(3+3)
CSDS-422	Data Structures & Algorithms	4(3+3)
CSDD-423	Database Design & Management Systems	4(3+3)
CSMS-425	Multimedia System	4(3+3)
CSSE-426	Software Engineering	4(3+3)
CSAI-414	Artificial Intelligence	4(3+3)
CSCD-419	Computer Graphics	4(3+3)
CSDI-416	Digital Image Processing	4(3+3)
CSCC-417	Compiler Construction	4(3+3)
CSBI-418	Bioinformatics	4(3+3)
EEDS-421	Digital Signal Processing	4(3+3)

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 (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
BTSP393	Probability & Stochastic Processes	3
BTSP323	Bio-Signal Processing	3
BTBM333	Biomechanics	3
BTSP334	Bio-Signal Processing Lab	1
BTIC343	Integrated Circuits	3
BTM353	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 (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
ASSOCIATE OF APPLIED SCIENCE (ELECTRONICS)****DURATION 2 YEARS**

Minimum Degree Requirements: This program comprises a minimum of 66 credit hours of coursework.

**YEAR 1
First Semester**

Course Code	Course Title	Credit (Contact) Hours
HMLG 111	English Composition & Comprehension	3(3+0)
HMPS 112	Pakistan Studies	2(2+0)
MTCA 111	Calculus & Analytical Geometry	3(3+0)
CSIC 101	Introduction to Computers	3(2+3)
TCAP 102	Applied Physics	4(3+3)
HMIS 113	Islamic Studies	1(1+0)
	Total Credits	16

Second Semester

Course Code	Course Title	Credit (Contact) Hours
HMTR 211	Technical Report Writing	3(3+0)
MTCV 112	Complex Variable & Transforms	3(3+0)
CSDL 241	Digital Logic Design	4(3+3)
TCAC 103	Circuit Analysis	4(3+3)
ESBE 102	Basic Electronics	4(3+3)
	Total Credits	18

YEAR 2

First Semester

Course Code	Course Title	Credit (Contact) Hours
TCET 362	Power & Industrial Electronics	3(2+3)
ESAD 201	Analog & Digital communication	4(3+3)
ESCA 210	Computer-Aided Engineering	1(0+3)
ESEC 202	Electronic Circuit Design	4(3+3)
	Elective I	3(3+0)
	Total Credits	15

Second Semester

Course Code	Course Title	Credit (Contact) Hours
ESMI 341	Microprocessor & Interfacing Techniques	3(2+3)
ESFC 332	Feedback Control Systems	4(3+3)
ESIM 111	Instrumentation & Measurement	4(3+3)
	Elective II	3(3+0)
ESES 499	Project	3(0+9)
	Total Credits	17

**Associate of Applied Science (Electronics)
Electives**

Course Code	Course Title	Credit (Contact) Hours
ESFL 468	Fuzzy Logic & Simulation	3(3+0)
TCET 362	Electromagnetic Field Theory	3(3+0)
ESMA 491	Mechatronics Applications	3(3+0)
ESOE 380	Opto Electronics	4(3+3)
ESRA 405	Robotics & Automation	3(2+3)



**A TYPICAL STUDY PLAN
ASSOCIATE OF APPLIED SCIENCE (SOFTWARE ENGINEERING)****DURATION 2 YEARS****Minimum Degree Requirements:** This program comprises a minimum of 66 credit hours of coursework.**YEAR 1
First Semester**

Course Code	Course Title	Credit (Contact) Hours
HMLG 111	English Composition & Comprehension	3(3+0)
HMPS 112	Pakistan Studies	2(2+0)
MTCA 111	Calculus & Analytical Geometry	3(3+0)
CSIC 101	Introduction to Computers	3(2+3)
CSWD 153	Web Development	4(3+3)
HMIS 113	Islamic Studies	1(1+0)
	Total Credits	16

Second Semester

Course Code	Course Title	Credit (Contact) Hours
CSOP 152	Object Oriented Programming	4(3+3)
MTDM 114	Discrete Mathematics	3(3+0)
CSDL 241	Digital Logic Design	4(3+3)
MSBC 213	Business Communication	3(3+0)
CSDS 252	Database Design & Management	4(3+3)
	Total Credits	18

YEAR 2

First Semester

Course Code	Course Title	Credit (Contact) Hours
CSDS 252	Data Structures	4(3+3)
HMTR 211	Technical Report Writing	3(3+0)
CSSE 321	Software Engineering	4(3+3)
CSVP 253	Visual Programming	4(3+3)
	Total Credits	15

Second Semester

Course Code	Course Title	Credit (Contact) Hours
CSJP 354	Java Programming	4(3+3)
CSIP 352	Internet Programming & Management	4(3+3)
	Elective I	3(3+0)
	Elective II	3(3+0)
CSCS 499	Project	3(0+9)
	Total Credits	17

**Associate of Applied Science (Software Engineering)
Electives**

Course Code	Course Title	Credit (Contact) Hours
CSSA 421	System Analysis & Design	3(3+0)
CSDP 452	Distributed Programming	3(3+0)
CSPL 462	Programming Language Concepts	3(3+0)
CSTA 461	Theory of Automata	3(3+0)
CSNM 437	Network Management & Security	3(3+0)
CSHC 425	Human Computer Interaction	3(3+0)



**A TYPICAL STUDY PLAN
ASSOCIATE OF APPLIED SCIENCE (TELECOMMUNICATION)****DURATION 2 YEARS****Minimum Degree Requirements:** This program comprises a minimum of 66 credit hours of coursework.**YEAR 1****First Semester**

Course Code	Course Title	Credit (Contact) Hours
HMLG 111	English Composition & Comprehension	3(3+0)
HMPS 112	Pakistan Studies	1(1+0)
MTCA 111	Calculus & Analytical Geometry	3(3+0)
CSIC 101	Introduction to Computers	3(2+3)
TCAP 102	Applied Physics	4(3+3)
HMIS 113	Islamic Studies	2(2+0)
	Total Credits	16

Second Semester

Course Code	Course Title	Credit (Contact) Hours
HMTR 211	Technical Report Writing	3(3+0)
MTCV 112	Complex Variable & Transforms	3(3+0)
CSDC 236	Data & Computer Communication	4(3+3)
CSDL 241	Digital Logic Design	4(3+3)
ESBE 102	Basic Electronics	4(3+3)
	Total Credits	18

YEAR 2
First Semester

Course Code	Course Title	Credit (Contact) Hours
TCOF 451	Optical Fiber Communication	4(3+3)
TCDE 201	Digital Electronics	3(2+3)
TCSS 211	Signal and Systems Electromagnetic Field Theory	3(3+0)
TCET 362	Analog & Digital communication	4(3+3)
ESAD 201	Broadband Digital Networks	3(3+0)
TCBD 444	Total Credits	17

Second Semester

Course Code	Course Title	Credit (Contact) Hours
TCMW 441	Mobile & Wireless Communication	3(3+0)
TCWP 461	Wave Propagation & Antennas	4(3+3)
	Elective I	3(3+0)
	Elective II	3(3+0)
TCTC 499	Project	3(0+9)
	Total Credits	16

Associate of Applied Science (Telecommunication)

Electives

Course Code	Course Title	Credit (Contact) Hours
ESRE 322	Radio & TV Engineering	3(3+0)
TCSC 442	Satellite Communication	3(3+0)
CSNM 437	Network Management & Security	3(3+0)
TCTS 322	Transmission & Switching Systems	3(3+0)
TCET 362	Electromagnetic Field Theory	3(3+0)
TCIT 414	Information & Coding Theory	3(3+0)



A TYPICAL STUDY PLAN
ASSOCIATE OF APPLIED SCIENCE (BUSINESS ADMINISTRATION)

DURATION 2 YEARS

Minimum Degree Requirements: This program comprises a minimum of 66 credit hours of coursework.

YEAR 1
First Semester

Course Title	Credit (Contact) Hours
Introduction to Computers	3(3+0)
English-I& II	3(3+0)
Fundamentals of Accounting	3(3+0)
Statistics	3(3+0)
Pakistan Studies/ Islamic Studies	3(3+0)
Leadership Skills	3(3+0)
Total Credits	18

Second Semester

Course Title	Credit (Contact) Hours
Business Communications	3(3+0)
Introduction to Business	3(3+0)
Principles of Marketing	3(3+0)
Principles of Management	3(3+0)
Business Mathematics	3(3+0)
Total Credits	15

YEAR 2**First Semester**

Course Title	Credit (Contact) Hours
Microeconomics	3(3+0)
Technical Report Writing	3(3+0)
Financial Accounting	3(3+0)
Introduction to Business Finance	3(3+0)
Elective-I	3(3+0)
Total Credits	15

Second Semester

Course Title	Credit (Contact) Hours
Macroeconomics	3(3+0)
Human Resource Management	3(3+0)
Money & Banking	3(3+0)
Organization Development	3(3+0)
Internship	3(3+0)
Elective-II	3(3+0)
Total Credits	18

Associate of Applied Science (Business Administration) Electives
Banking

Course Title	Credit (Contact) Hours	Contact Hrs per Semester
Banking Law and Practice	3 (3+0)	48
International Banking	3 (3+0)	48
Consumer Banking	3 (3+0)	48
Credit Analysis & Investment Banking	3 (3+0)	48

Management

Course Title	Credit (Contact) Hours	Contact Hrs per Semester
Organizational Development	3 (3+0)	48
Change Management	3 (3+0)	48
Total Quality Management	3 (3+0)	48
Crises Management	3 (3+0)	48
Comparative Management	3 (3+0)	48
Knowledge Management	3 (3+0)	48
Project Management	3 (3+0)	48

Human Resources Management

Course Title	Credit (Contact) Hours	Contact Hrs per Semester
Recruitment and Selection	3 (3+0)	48
Training and Development	3 (3+0)	48
Personal Management	3 (3+0)	48
Managerial Skills	3 (3+0)	48
Compensation Management	3 (3+0)	48
Leadership and Team Management	3 (3+0)	48

Finance

Course Title	Credit (Contact) Hours	Contact Hrs per Semester
Financial Statement Analysis	3 (3+0)	48
Investment and Portfolio Management	3 (3+0)	48
Insurance Management	3 (3+0)	48
Risk Management	3 (3+0)	48
Islamic Banking & Finance	3 (3+0)	48
Financial Products in Islamic Banking	3 (3+0)	48

Marketing

Course Title	Credit (Contact) Hours	Contact Hrs per Semester
Sales Management	3 (3+0)	48
International Marketing	3 (3+0)	48
Brand Management	3 (3+0)	48
Cyber Marketing	3 (3+0)	48
Services Marketing	3 (3+0)	48
Retail Management	3 (3+0)	48

**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

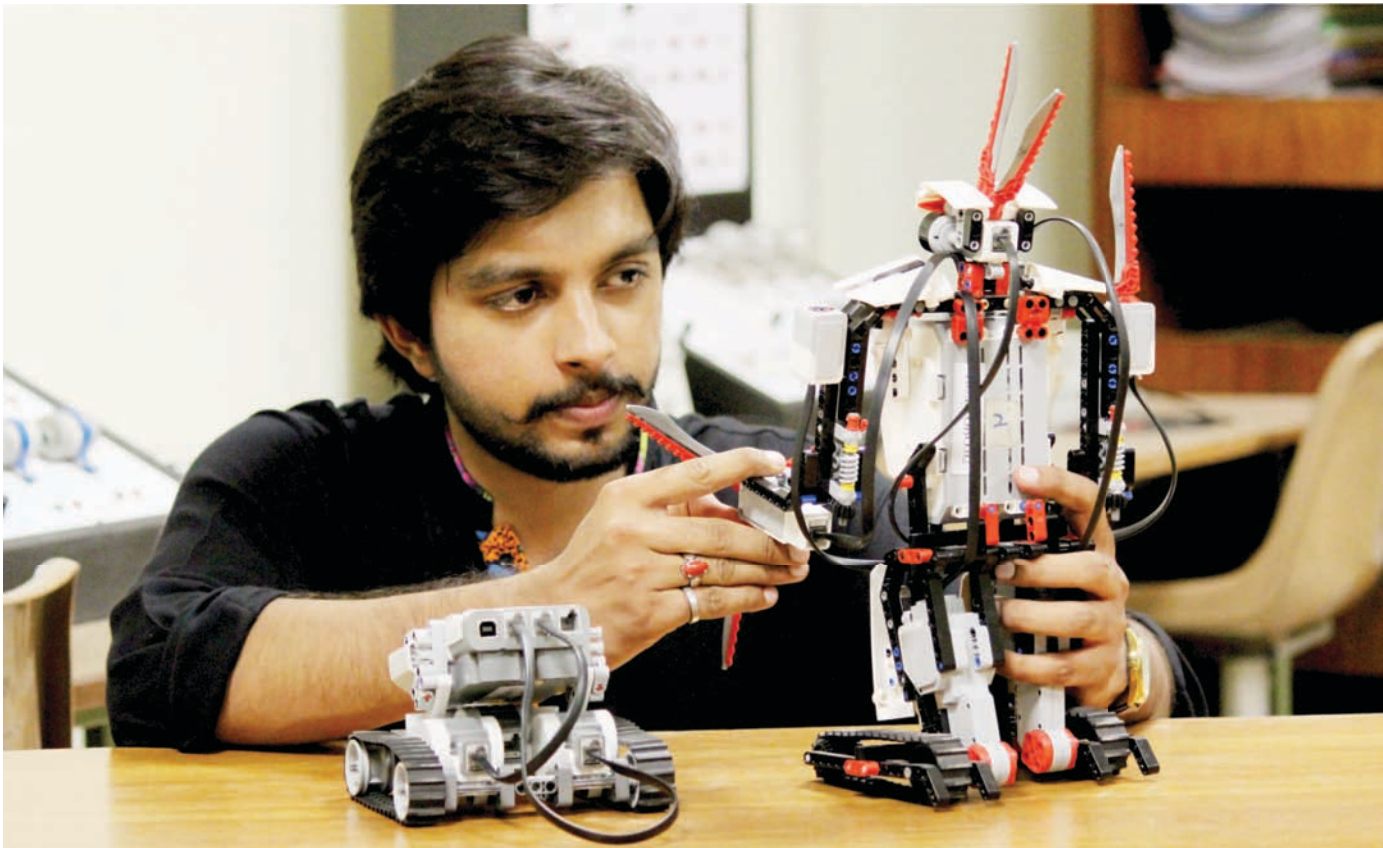
Course Code	Course Title	Credit (Contact) Hours
AP 4321	Applied Optics	3
AP 4322	Advanced Methods of Mathematical Physics	3
AP 4323	Semiconductor Devices & Circuit Theory	3
AP 4324	Methods & Techniques of Experimental Physics	3
AP 4325	Communication Systems	3
AP 4426	Digital Signal Processing	3
AP 4427	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**

The courses offered in this program comprise of four semesters.

DURATION 2 YEARS**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

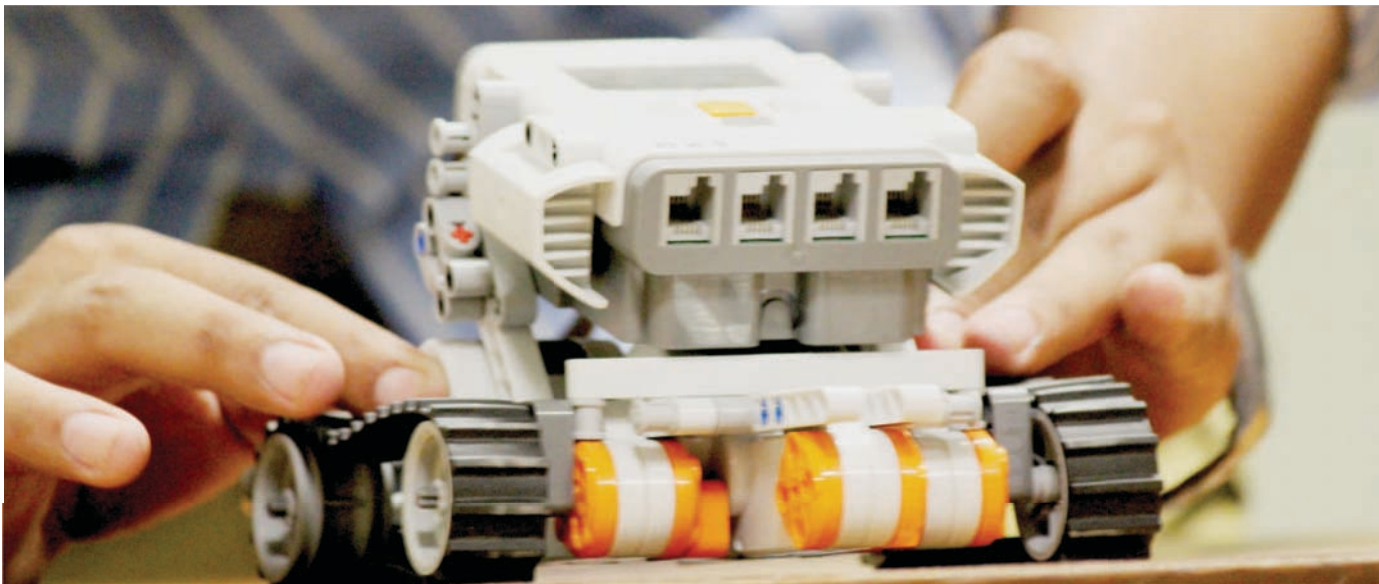
Course Code	Course Title	Credit (Contact) Hours
ELPR331	Probability & Random Variables	3(3+0)
ELCM411	Communication I	4(3+3)
ELEL422	Electronics II	4(3+3)
ELSP414	Digital Signal Processing	4(3+3)
ELCS413	Control Systems	3(3+0)
	Total Credits	158

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



MBBS DPT

Masters Ph.D Applications

Entry Test Financial Assistance

Policy Selection Criteria

Rehabilitation Sciences

Fee Packages

PPDPT Short List

Nursing Scholarships

Interviews Foreign Students

Admission Plan

Foreign Students





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
B.Sc (Medical Lab Technology)	B.Sc (MLT)	02
M. Phil	Anatomy, Biochemistry, Physiology, Pharmacology, Histopathology, Hematology	02
Ph. D	Anatomy, Biochemistry, Physiology, Pharmacology, Histopathology, Hematology	03
Doctor of Medicine	Internal Medicine, Paediatrics, Cardiology, Radiology, Dermatology	04
Master of Surgery	General Surgery, Ophthalmology, Gynae & Obs & Anesthesiology	04

Diploma Program		Year(s)
Diploma	Ophthalmology, Cardiology, Child Health, Gynae & Obs, Dermatology, Radiology	02

FCPS/MCPS Residency Training Program		Year(s)
FCPS	All major fields	04
MCPS	All major fields	02

Isra College of Nursing

Degree Program		Year(s)
Bachelor of Science in Nursing	Post RN BScN	02
License Practical Nursing Program	LPN	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
MS	DENP, CPT, NPT, OPT	02
M.Phil	CBRDS, SM&MPT, HPE&SS, SLP&HS, PO	02
PGD	SLP&HS, HPE&SS, PO, CPT, NPT, OPT	01
Ph. D	Rehabilitation Sciences	03

School of Engineering & Applied Sciences

Degree Program		Year(s)
Bachelor of Science (Computer Science)	BS (CS)	04
Bachelor of Science (Electronics)	BS (ES)	04
Bachelor of Science (Information & Communication Technology)	BS (ICT)	04
Bachelor of Engineering (Electrical)	BE (EE)	04
Bachelor of Technology (Hons)	B-Tech (Electrical, Electronics, Civil, Biomedical)	04
Associate of Applied Science	(ES, SE, TC, BA)	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 apron

(white) 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	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
BS (CS), BS (IT), BS (TC), BS (SE), BS (ES), B.Tech	HSC (Pre-Engineering, Pre-Medical, Computers, Commerce and Economics), minimum 45% marks
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/attestation.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)
M. Phil	Please refer to relevant sections of the Faculty of Medicine & Allied Medical Sciences, School of Engineering & Applied Sciences as the case may be
PhD	
MD, MS, MDS, M.Sc	

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 interviewers. 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 individual/website. 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

Street 7/A, Block-5, Gulshan-e-Iqbal, Karachi

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. Students who fail to deposit the fees in due time may be disallowed from attending classes and appearing in examination. He may be even debarred from college (Heavy late fee will be always applied after the last date).

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 separate 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 1,000
University Fee (Annual)	1st Year PKR 100,000 2nd & Onwards PKR 50,000	USD 1,000
Tuition Fee (Annual)	PKR 735,000	USD 13,000
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 from new and existing students. 2. Refund will be as per PM&DC Policy.		

M.Phil, M.Sc & Diploma Programs in FM&AMS (2 Years Program)

Fee Items	Category A (Paid + Full time Bond)	Category B (Unpaid)	Category C (Unpaid)
Admission Fee (One Time)	PKR 50,000	PKR 50,000	PKR 50,000
University Fee (Annual)	PKR 50,000	PKR 50,000	PKR 50,000
Tuition Fee (Annual)	PKR 400,000	PKR 400,000	PKR 400,000
Misc. Fee	PKR 50,000	PKR 50,000	PKR 50,000
	No Tuition Fee & 3 Years Service Bond	No Tuition Fee & 2 Years Service Bond	Full Tuition Fee & 1 Years Service Bond

MS, MD & PhD Programs in FM&AMS (4 Years Program)

Fee Items	Category A (Paid + Full time Bond)	Category B (Unpaid)	Category C (Unpaid)
Admission Fee (One Time)	PKR 50,000	PKR 50,000	PKR 50,000
University Fee (Annual)	PKR 50,000	PKR 50,000	PKR 50,000
Tuition Fee (Annual)	PKR 450,000	PKR 450,000	PKR 450,000
Misc. Fee (Once & Non Refundable)	PKR 50,000	PKR 50,000	PKR 50,000
	No Tuition Fee & 4 Years Service Bond	No Tuition Fee & 2 Years Service Bond	Full Tuition Fee & 1 Years Service Bond

Note: As per Government directive 5% Advance Tax will be charged over total fee (The tax will be applicable on two lac and above fee per annum)

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.

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 24,000

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 235,000	USD 3,200	USD 4,300
Security Deposit (Once & Refundable)	PKR 10,000	USD 500	USD 1,000

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 (Annual)	PKR 106,000	USD 1,600	USD 2,000

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 16,000	USD 550	USD 650

Note: As per Government directive 5% Advance Tax will be charged over total fee (The tax will be applicable on two lac and above fee per annum)
 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.

Ph.D in Rehabilitation Sciences

Fee Items	Category C
Admission Fee (One Time)	PKR 55,100
University Fee (Semester)	PKR 68,000
Tuition Fee (Semester)	PKR 115,000

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

Fee Items	Category C
Admission Fee (One Time)	PKR 12,600
University Fee (Semester)	PKR 14,000
Tuition Fee (Semester)	PKR 53,000
Security Deposit (Once & Refundable)	PKR 5,000

MS&PGD (Diagnostic Electroneuro Physiology)

Fee Items	Category C
Admission Fee (One Time)	PKR 12,600
University Fee (Semester)	PKR 14,000
Tuition Fee (Semester)	PKR 53,000
Security Deposit (Once & Refundable)	PKR 5,000

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

Fee Items	Category C
Admission Fee (One Time)	PKR 12,600
University Fee (Semester)	PKR 14,000
Tuition Fee (Semester)	PKR 71,000
Security Deposit (Once & Refundable)	PKR 10,000

Note: As per Government directive 5% Advance Tax will be charged over total fee (The tax will be applicable on two lac and above fee per annum)

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.

Nursing Postgraduate

Fee Items	Category A
Admission Fee (One Time)	PKR 20,000
University Fee (Semester)	PKR 10,000
Tuition Fee (Semester)	PKR 48,000

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

Fee Items	Category A
Admission Fee (One Time)	PKR 17,000
Tuition Fee (Per Course)	PKR 15,000

M.Sc. (Electronics)

Fee Items	Category A
Admission Fee (One Time)	PKR 15,000
Other Charges (Every Semester)	PKR 6,000
Tuition Fee (Semester)	PKR 35,000

BE (Electrical)

Fee Items	Category A (Regular)	Category B (Overseas)	Category C (Foreigner)
Admission Fee (One Time)	PKR 15,000	PKR 65,000	PKR 100,000
Other Charges (Every Semester)	PKR 11,000	PKR 11,000	PKR 11,000
Tuition Fee (Every Semester)	PKR 73,000	PKR 145,000	PKR 200,000

Note: As per Government directive 5% Advance Tax will be charged over total fee (The tax will be applicable on two lac and above fee per annum)
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.

BS (CS, Electronics, ICT)

Fee Items	Category A (Regular)	Category B (Overseas)	Category C (Foreigner)
Admission Fee (One Time)	PKR 10,000	PKR 30,000	PKR 50,000
Other Charges (Every Semester)	PKR 6,000	PKR 14,000	PKR 16,000
Tuition Fee (Every Semester)	PKR 35,000	PKR 80,000	PKR 96,000

B. Tech (ET, ELT, Civil, BM)

Fee Items	Category A
Admission Fee (One Time)	PKR 10,000
Other Charges (Every Semester)	PKR 6,000
Tuition Fee (Semester)	PKR 27,000

Associate Degree (Bachelor of Technology)

Fee Items	Category A, B & C
Admission Fee (One Time)	PKR 10,000
Other Charges (Every Semester)	PKR 6,000
Tuition Fee (Every Semester)	PKR 32,000

Note: As per Government directive 5% Advance Tax will be charged over total fee (The tax will be applicable on two lac and above fee per annum)

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.

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.

SPIE ISRA UNIVERSITY CHAPTER

SPIE is an international society advancing an interdisciplinary approach to the science and application of light. The SPIE affiliated groups are working around the world with Head Quarters in USA.

The society advance emerging technologies

through interdisciplinary information exchange, continuing education, publications, patent precedent, and career and professional growth. SPIE Chapter at School of Engineering & Applied Sciences was formed on November 2014. In December, Its official body was elected to manage operations of SPIE in this campus.

ACADEMIC & INDUSTRIAL LINKAGES

Isra University has signed MoU with following Universities / Organizations
Ball State University, Indiana, USA
University of Abertay Dundee, Scotland, UK
Mehran University of Engineering & Technology, Jamshoro
University of Sindh, Jamshoro
University of Karachi
Shifa College of Medicine, Islamabad
Project Management Institute, Karachi
Islamabad Diagnostic Center
Sindh Agriculture University, Tando Jam
Liaquat University of Medical & Health Sciences, Jamshoro

TECHNOLOGY INCUBATION CELL (TIC)

Technology Incubation Cell (TIC) program initiated by ISRA University in 2011. The proposed mission of the incubator is to stimulate the establishment and growth of technology-based start-up companies and other compatible businesses. By fulfilling this mission, the incubator would contribute to job creation, and provide for enhanced economic health to the region. Business incubators accelerate the successful development of entrepreneurial companies through an array of business support resources and services. The technology business incubator would provide new and emerging technology and compatible businesses with an environment that would support their start-up phase and increase their likelihood of success. The proposed incubator includes facility space, flexible leases, shared use of common office equipment, direct business assistance and guidance, mentoring, networking to capital, and other technical resources. A network of existing

resources in the community would be developed to support incubator client needs.

eTech is the first member company of the TIC. Incubator graduates commercialize technologies, create jobs, and strengthen local economies. eTech is a dynamic engineering company, specialized in R&D and designing of high quality Science & Engineering equipment for professional training and academia. The focal endeavor of the company is innovation and commercialization of ideas and develops cost-effective training systems. eTech have the high quality, good performance designed products for various applications. Their products assure preeminent quality with accuracy, reliability and performance.

eTech only believe in providing finest quality products to our valuable customer, product & services include training equipment for academia and developers, medical devices, product development, manufacturing, consultancy and training and industrial solutions.

The eTech is also conducting research and development, supporting and deploying technologies, systems, and returning products for our clients. Their expertise includes signal processing and algorithm development, medical devices, robotics, video processing, persistent surveillance, biometric, signals and electronic intelligence, software engineering, training systems, and wireless communications. The eTech emphasizes on the producing of advanced systems and products to help country and global prosperity.

eTech sincerely believe that success and prosperity of our country and world can be determine by good services, integrity, values and innovation. Following areas genuinely are in focus at eTech.

ISRA STUDENT WELFARE ASSOCIATION (ISWA)

The association shall be a non-profit, non-political, professional, educational, humanitarian organization. The objective of this association shall be to bring the students and alumni into one compact organization.



Teaching Staff



Dean

Teaching Staff Skills

Lecturer Registrar

Medical Officer Chairperson

Associate Instructor

Assistant Demonstrator

Knowledge Professor

Highly Qualified Department

Coordination Administrator

Senior Registrar Visiting Faculty

5th National Rehabilitation Conference (NRC)

“Empowering Professionals through Advancements in Rehabilitation Sciences”

February 25 - 26th 2017

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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**

Altaf G. Shaikh
Pro-Vice Chancellor

Umar 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 NAFEEES MEDICAL COLLEGE

Pro-Vice Chancellor/Principal
Umar Ali Khan
MBBS, M Phil, FCPS, PhD
Professor of Physiology

Division of Basic Medical Sciences

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

Department of Anatomy

Muhammad Azam Qureshi
MBBS, M Phil
Professor

Khadija Iqbal
MBBS, FCPS
Professor

Nusrat Zareen
MBBS, FCPS
Professor

Saira Jawed
MBBS, M Phil
Assistant Professor

Abdul Ghafar Shah
MBBS, MSc, M Phil
Assistant Professor

Khalida Moeed
MBBS, M Phil
Assistant Professor

Department of Physiology

Umar Ali Khan
MBBS, M Phil, FCPS, PhD
Professor

Ghulam Mustafa Lodhi
MBBS, M Phil, PhD
Professor

Munazza Asad
MBBS, FCPS
Associate Professor

Sobia Humaira
MBBS, M Phil
Assistant Professor

Nida Naeem
MBBS, M Phil
Assistant Professor

Saadia Zaineb
MBBS, M Phil
Assistant Professor

Department of Biochemistry

Waseem Kausar
MBBS, M Phil
Professor

Fatahiya Kashif Naqvi
MBBS, M. Phil
Professor

Naveeda Zaigham
MBBS, M Phil
Assistant Professor

Abdul Ghafoor Ch
Assistant Professor
PhD

Roomisa Anis
MBBS, M Phil
Assistant Professor

Department of Pharmacology

Zahid Iqbal
M Phil PhD
Associate Professor

Azmat Ali
MBBS, M Phil
Assistant Professor

Sohail Ahmed
MBBS, M Phil
Assistant Professor

Ayesha Aftab
MBBS, M Phil
Assistant Professor

Department of Pathology

Noor Khan Lakhnana
MBBS, MCPS, M Phil
Professor of Histopathology

Syed Ahsan Abbas Kazmi
MBBS, M. Phil
Associate Professor of Chemical Pathology

Humaira Zafar
MBBS, M. Phil
Associate Professor Microbiology

Kiran Tauseef Bukhari
MBBS, M. Phil
Associate Professor Haemetology

Aftab Ahmed Khan
MBBS, FCPS
Assistant Professor Haemetology

Mudasira Zahid
MBBS, FCPS
Assistant Professor Histopathology

Hamna Alvi
MBBS, Dip in Clinical Pathology, M Phil
Assistant Professor Microbiology

Ayesha Ali Rana
MBBS, FCPS
Assistant Professor

Department of Forensic Medicine

Muhammad Arshad
MBBS, DMJ
Assistant Professor

Department of Community Medicine

Shahzad Akhtar Aziz
MBBS, MPH
Professor

Farrah Ahmed
MBBS, MPH, MBA
Associate Professor

Pir Bakhsh Khokhar
MBBS, MCPS, M.Sc
Assistant Professor

Irum Yasir
MBBS, MSPH
Assistant Professor

Waseem Tariq Gill
MBBS, MRCGP,
Assistant Professor

Abdul Naeem
MBBS, MCPS
Senior Lecturer

Clinical Health Sciences

Salman Ahmed Tipu
MBBS, FCPS, FRCS
Associate Professor Surgery
Vice Dean Clinical Sciences

Department of Medicine

Shujhat Hussain
MBBS, FCPS
Professor

Muhammad Khawar Hussain Khan
Professor
MBBS, MRCP

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

Anjum Ilahi
MBBS, MRCP, Dip Card
Associate Professor

Rizwan Uppal
MBBS, MCPS, FCPS
Assistant Professor

Jehanzeb Maqsood
MBBS, FCPS
Assistant Professor

Syed Saif Ur Rehman
MBBS, FCPS
Assistant Professor

Abida Mateen Ansari
MBBS, FCPS
Assistant Professor

Department of Surgery

Ishtiaq Ahmed
MBBS, FCPS
Professor

Asif Zafar
MBBS, MCPS, FRCS
Professor

Maliha Younus
MBBS, FCPS
Professor

Salman Ahmed Tipu
MBBS, FCPS, FRCS
Associate Professor

Ihtasham Muhammad Chaudhry
MBBS, MCPS, FCPS
Associate Professor

Abdul Basit
MBBS, FCPS Orthopedic
Associate Professor Orthopedics

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

Mumtaz Akhtar
MBBS, FCPS
Assistant Professor

Aamar Munir
MBBS, FCPS Orthopedics
Assistant Professor Orthopedics

Department of Gynae/Obs

Asma Tanvir Usmani
MBBS, MRCOG
Professor

Rukhsana Ayub Aslam
MBBS, FCPS (FAIMER Fellow USA)
Associate Professor

Zeba Manzar
MBBS, MCPS, FCPS
Associate Professor

Jawaria Faisal
MBBS, FCPS
Assistant Professor

Ayesha Basharat
MBBS, FCPS
Assistant Professor

Sadaf Abbas
MBBS, FCPS
Assistant Professor

Adiba Ahsan
MBBS, FCPS
Assistant Professor

Fatima Chaudhry
MBBS, FCPS
Senior Registrar

Sidra Amir
MBBS, FCPS
Senior Registrar

Department of Paediatrics

Asifa Murtaza
MBBS, DACH, DAMS, PhD
Professor

Faisal Raza Malik
MBBS, MCPS, FCPS
Professor

Zeeshan Ghani
MBBS, FCPS
Associate Professor

Sadaf Ibrahim
MBBS, FCPS
Assistant Professor

Department of Diagnostic Radiology

Aisha Asim
MBBS, FCPS
Assistant Professor

Samreen Aslam
MBBS, FCPS
Assistant Professor

Asim Shahzad
MBBS, MCPS, FCPS
Assistant Professor

Umar Abid Saeed
MBBS, FCPS
Assistant Professor

Asma Naheed
MBBS, FCPS
Assistant Professor

Kamil Shujhat
MBBS, FCPS
Assistant Professor

Ayesha Ehsan
MBBS, FCPS
Assistant Professor

Sana Kundi
MBBS, FCPS
Assistant Professor

Saima Ashraf
MBBS, FCPS
Assistant Professor

Maryam Aslam
MBBS, FCPS
Assistant Professor

Department of Dermatology

Tariq Mehmood
MBBS, FCPS
Professor

Fawad Muzaffar
MBBS, FCPS
Assistant Professor

Department of E.N.T

Muhammad Azeem Aslam
MBBS, FCPS
Professor

Muhammad Jamalullah
MBBS, FCPS
Professor

Mehreen Babur
MBBS, FCPS
Assistant Professor

Department of Anaesthesia

Faiz Muhammad Tareen
MBBS, MCPS, PhD
Professor

Masood Ahmed
MBBS, MCPS
Assistant Professor

Ghulam Sarwar Gondal
MBBS, MCPS
Assistant Professor

Sammar Fatima
MBBS, MCPS
Consultant

Yousaf Khan
MBBS
Anesthetist

Malik Saleem
MBBS
Anesthetist

Department of Ophthalmology

Syed Imtiaz Ali
MBBS, DO, FRCS
Professor

Muhammad Saeed Khan
MBBS, MCPS, FCPS, FRCS
Associate Professor

Ayisha Shakeel
MBBS, MCPS, M.R.C. OPhth, FRCS
Assistant Professor

Hammad Sarwar
MBBS, FCPS
Assistant Professor

Yawar Iqbal
MBBS, FCPS
Assistant Professor

Department of Psychiatry

Faisal Rashid
MBBS, FCPS
Assistant Professor

Mahapara Mazhar
MBBS, FCPS
Assistant Professor

Department of Medical Education

Rukhsana Ayub Aslam
MBBS, FCPS, (FAIMER Fellow)
Associate Professor of Gynae/Obs

Ara Tekian
PhD, MHPE
Adjunct Professor of Medical Education University of Illinois at
Chicago USA

Khairunnissa S Uttanwala
RN, Post RN BScN, MHPE
Vice Principal Nursing

Khadija Iqbal
MBBS, FCPS, MHPE
Professor of Anatomy

Munazza Asad
MBBS, FCPS, DCPS
Associate Professor of Physiology

Ayesha Aleem Qureshi
BDS
Senior Lecturer

Isra College of Nursing

Khairunnissa S Uttanwala
RN, Post RN BScN, MHPE
Vice Principal

Shahzad Inayat
BS Nursing
Instructor

Humaira Jabeen
Instructor
RN,RM, Post RN

Nadia Noreen
Instructor
RN ,RM, Post RN BScN

Zartasha Riasat
Instructor
RN, RM, Post RN BScN

Zoya Sushma
Instructor
RN, RM ,Post RN BScN

Uzma Shaheen
Instructor
RN ,RM ,Post RN BScN

Medical Laboratory Technology

Syed Ahsan Kazmi
Associate Professor
MBBS, M Phil

Abdul Salam
Senior Lecturer
BSc Medical Tech

Sarah Rafique
Coordinator
MSc (Biochemistry)

Saddiq Gul
Lecturer
M. Phil (Microbiology)

Sabir
Lecturer

Anum
Demonstrator

Amina
Lecturer

Huma
Demonstrator

Najia
Demonstrator

Naveed Alam
Demonstrator

Hammad
Demonstrator

Faizan
Demonstrator

Shakeel
Demonstrator

Islamic Studies & English

Riaz Saeed
Assistant Professor, Islamic Studies
MA, M Phil

Amina Begum
Lecturer, English
MA English

School of Engineering & Applied Sciences

Tanveer Ahmad Cheema
Chairperson, Department of Electrical Engineering
M.Phil (Quaid e Azam University),
Ph. D (Muhammad Ali Jinnah University)
Associate Professor

Mustafa Minhas
Director, School of Engineering & Applied Sciences
ME-Biomedical Engineering (UNSW, Australia)
Assistant Professor

Tayyab Hussain Malik
M.Phil (Quaid E Azam University)
Assistant Professor

Adnan Aziz
MS (MAJU Islamabad)
Assistant Professor

Hannan Adeel
MSEE (Isra University)
Assistant Professor

Anwar Manzar
Assistant Professor

Abdul Daud Khan
MS-Telecommunication (UET-Peshawar)
Assistant Professor

Naveed Aqdas
Ph.D (MAJU Islamabad)
Consultant

Ijaz Mansoor Qureshi
Ph.D (MAJU Islamabad)
Consultant

Adnan Javed
M.Phil (Physics) (FUUAST, Islamabad)
Lecturer

Muhammad Abdullah
MS Robotic & Intelligent System (Orebro Uni, Sweden)
Lecturer

Manzoor Khattak
MA English (University of Peshawar)
Lecturer

Abid Mahmood (Study Leave)
M.Phil (Quaid Azam University Islamabad)
Lecturer

Ahsen Ilyas
BE Electronics (Muhammad Ali Jinnah University, Islamabad)
Lecturer

Hamza Ikhlq
MSEE (COMSATS, Islamabad)
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Kiran Mujeeb
M.Phil (Quaid E Azam University)
Lecturer

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BE (Electronics) (FUUAST, Islamabad)
Lecturer

Muhammad Ahmed
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Lecturer

Kashif Zaheer
BE (Civil) BUITEMS
Lecturer

Siraj ud Din
BE(Civil) UET Peshawar
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MS Electronic Engineering
Adjunct Faculty

Muhammad Ramzan
M.Phil (Quaid E Azam University)
Adjunct Faculty

Abubaker Shabbir
BSEE (International Islamic University, Islamabad)
Lab Engineer

Talha Qayum
BSEE (International Islamic University)
Lab Engineer

Sadaf Shafquat
MSC-Engineering Management (Brunel University London)
Lecturer

Shafaq Hassan
BS-Electrical Engineering (International Islamic University Islamabad)
Lab Engineer

Rizwan Babar
Bachelor of Electrical Engineering (Iqra University Islamabad)
Lab Engineer

Sara Ali Khan
Bachelor of Computer Systems Engineering
(K.P.K University of Engineering & Technology Peshawar)
Lab Engineer

Younis Khan
BEE-Electronics (Air University Islamabad)
Lab Engineer

Naeem Isra
BS Electronic Engineering (IIU Islamabad)
Lab Engineer

Isra Institute of Rehabilitation Sciences
Muhammad Naveed Babur
PP-DPT Riphah University Islamabad
Principal/Associate Profrssor

Waqar Ahmed Awan
PP-DPT Riphah Intl University Islamabad
Vice Principal/Assistant Professor

Shaista Habib Ullah
PhD (Disability Studies) USA
Adjunct Professor

Mirza Shamim Baig
MD.FRCS UK
Adjunct Professor

Tahir Masood
PhD Health Physical Edu Sport Sciences Finland
Assistant Professor

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PP-DPT Riphah Intl University Islamabad
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Senior Lecturer

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PP-DPT Isra University, Islamabad Campus
Senior Lecturer

Muhammad Irfan Sattar
BSPT University of Karachi
Lecturer

Muhammad Ibrar
PP-DPT Isra University, Islamabad Campus
Lecturer

Hafiz Manana Haider
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Assistant Professor, Incharge NPT

Shoukat Hayat
PP-DPT Isra University, Islamabad Campus
Senior Lecturer

Sarah Kafeel
PP-DPT Riphah University Islamabad
Senior Lecturer

Shahrukh Muneer
DPT, Rawalpindi Medical College
Lecturer

Sahira Bano
BSPT Riphah Intl University Islamabad
Lecturer

Saima Aslam
DPT, Rawalpindi Medical College
Lecturer

Naveed Arshad
PP-DPT Isra University, Islamabad Campus
Lecturer

Madiha Shah
DPT Riphah Intl University Islamabad
Clinical Instructor

Asma Irshad
DPT Riphah Intl University Islamabad
Lecturer

Fatima Akram
BSPT Riphah University Islamabad
Clinical Instructor

Sundas Zia
BSPT University of Health Sciences, Lahore
Clinical Instructor

Noureen Farooq
BSPT University of Health Sciences, Lahore
Clinical Instructor

Sonia Munir
BSPT Riphah University Islamabad
Clinical Instructor

Maria Liaquat
BSPT University of Health Sciences, Lahore
Research Associate

Anam Aftab
PP-DPT Riphah Intl University Islamabad
Senior Lecturer/In Charge DPT

Baber Naseer Anjum
MA English California University, USA
Associate Professor

Nazia Mumtaz
MS SLP Riphah University Islamabad
Assistant Professor/In-Charge M.Phil, SLP & HS

Faseeha Shafqat
M.Sc Psychology University of Punjab
Research Associate

(PIRS)

Saima Ghufraan
BSVS (Pakistan Institute of Community Ophthalmology)
Khyber Medical University
Lecturer

Arifa Sajjad
BSVS (Pakistan Institute of Community Ophthalmology)
Khyber Medical University
Lecturer

Qasim
BSVS (Pakistan Institute of Community Ophthalmology)
Khyber Medical University
Lecturer

Ghulam Ali
BSVS (College of Allied Vision Sciences)
King Edwards Medical University
Lecturer

Faisal
BSVS (Rawalpindi Medical College) Uni of Health Sciences
Lecturer

Samina Ahmed
BS (Audiology), (Quaid e Azam Medical College), Uni of Health Sciences
Lecturer

Shehrish Khan
BS (Audiology), (Quaid e Azam Medical College), Uni of Health Sciences
Lecturer

Zubair
BS (Audiology), (Quaid e Azam Medical College), Uni of Health Sciences
Lecturer

Irtiza Kazmi
BS (O&P), Pakistan Institute of Prosthetics & Orthotics
Lecturer

Anum Usman
BS (O&P), Rawalpindi Medical College, Uni of Health Sciences
Lecturer



Islamabad Campus:

AL NAFEES MEDICAL COLLEGE & HOSPITAL

Lethrar 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

Islamabad City Campus:

SCHOOL OF ENGINEERING & APPLIED SCIENCES

Plot No. 176, Sohni Road, I-10/3, Islamabad.

Tel: (+92 51) 8358360-61 Fax: (+92 51) 8358362

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