

Sarhad Institute of Allied Health Sciences

In the present health care system, the health service revolves around the doctors, nurses, and health technicians. The technician is diploma holders having very limited skills and knowledge and for below requirements to influence the health care delivery effectively. The need was felt by the authorities concerned that a cadre of professionals be produced having enhanced knowledge, skill and behaviors that should be able to add to health care delivery systems effectively and improve the services provisions in the country generally and in the province of Khyber Pakhtunkhwa specially.

The idea was conceived to have an institute producing technologists to meet the requirement. As a result, the Sarhad Institute of Allied Health Sciences (SIAHS) was established in January 2021 as a constituent institute of Sarhad University of Sciences and Information Technology to meet the perceived idea and offered BS Programs having 8 semester (4 Years) in Health, Dental, Medical Imaging, Surgical, Anesthesia, and Human Nutrition and Dietetics Technologies. In Fall-2022, BS Programs of Optometry and Cardiac Care Technology were offered. In Fall 2024 Enrollment in BS Emergency & Intensive Care Technology was allowed. In Fall 2026, admission in Renal Dialysis Technology and Aesthetics & Skin Care Technology will be offered. The institute has special emphasis on character building, and awareness on medical ethics so that a cadre of empathetic professionals be produced and could be able to adopt ethical approaches in the health care positions.

Vision

To produce qualified Health Professionals to deliver at national and international level.

Mission

Producing qualified Health Professional in their respective disciplines and enable them to serve the ailing humanity by applying modern teaching / learning strategies to improve the health care system of the country in General and Khyber Pakhtunkhwa in Particular.

Programs Offered:

- ♦ Doctor of Physiotherapy (DPT)
- ♦ Bachelor of Science in Anesthesia Technology
- ♦ Bachelor of Science in Cardiac Care Technology
- ♦ Bachelor of Science in Dental Technology
- ♦ Bachelor of Science in Emergency & Intensive Care Tech.
- ♦ Bachelor of Science in Health Technology
- ♦ Associate Degree in Medical Lab Technology
- ♦ Bachelor of Science in Medical Lab Technology
- ♦ Bachelor of Science in Human Nutrition & Dietetics
- ♦ Bachelor of Science in Optometry Technology
- ♦ Bachelor of Science in Medical Imaging Technology
- ♦ Bachelor of Science in Renal Dialysis Technology
- ♦ Bachelor of Science in Surgical Technology
- ♦ Bachelor of Science in Cardiac Perfusion Technology
- ♦ Bachelor of Science in Aesthetics & Skin Care Technology

Faculty Members, Sarhad Institute of Allied Health Sciences

Main Campus

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Director SIAHS,
MBBS,
KMC, Peshawar

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Dong-a University, South Korea

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Associate Professor,
Ph.D Botany,
AWKUM

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Ph.D Microbiology,
University of Peshawar

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Hazara University, Mansehra

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MS Neurological Physical Therapy,
KMU, Peshawar

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DPT,
KMU, Peshawar

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MS Musculoskeletal Physical Therapy,
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BS Health Technology,
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Bachelor of Vision Sciences,
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Mr. Shamail Ali Waheed,

Lecturer (Jr)
BS Cardiovascular Technology,
Azad Jammu Kashmir, University



DPT (Doctor of Physiotherapy)

Recognized by Allied Health Professionals Council (AHPC)

Program Details:

Program Code	107
Number of Courses	61 + 6 SCP + Research Project + Supervised Internship
Credit Hours	190
Minimum Duration	10 Semesters, 5 Years
Maximum Duration	15 Semesters, 7.5 Years
Minimum CGPA Required To Earn Degree	2.00

Eligibility Criteria:

- ◆ F. Sc. (Pre-Medical) or A-Levels with Equivalency Certificate from IBCC Islamabad with at least 60% Marks or an equivalent certificate from a recognized institution.
- ◆ Candidate with Diploma in relevant field with at least 50% marks in annual system or 2.00 CGPA on the scale of 4.00 in semester system with equivalency certificate from IBCC Islamabad are eligible to apply.
- ◆ Candidate will have to pass an entry test and an aptitude interview conducted by the University.

Program Learning Objectives:

- ◆ To develop a deep understanding of human anatomy, physiology, Pathology, Medicines, surgeries and kinesiology specifically related to Physiotherapy.
- ◆ To equip the students with practical skills in operating the equipment's and procedures of the technique including manual therapy, therapeutic exercises and the use of modalities in the field of Physiotherapy and rehabilitations.
- ◆ To inculcate critical thinking and problem-solving skills to create and implement effective, evidence-based treatment plans in rehabilitation.
- ◆ To enhance students understanding of professional and ethical standards in emphasizing the patients of Physiotherapy and rehabilitation ensuring safety, quality and effective communication with in the health care team.
- ◆ To prepare the graduates for leadership roles and continuous development in the field of rehabilitation including participation in research, education and advocacy.

Program Learning Outcomes:

- ◆ Graduates will demonstrate a comprehensive understanding of medicines, surgical interventions, anatomy, physiology, biochemistry and pathology of the human body relevant to physiotherapy and rehabilitation practices.
- ◆ Graduates will demonstrate the ability to deliver high quality patient-centered care that effectively address a variety of Musculo-skeletal, neurological and cardio-pulmonary conditions.
Graduates will be competent to exhibit proficiency in operating and troubleshooting physiotherapy and rehabilitation equipment's and techniques.
- ◆ Graduates will adhere to the highest ethical standards demonstrating a professionalism, effective communications and commitment to patient safety and quality care.
- ◆ Graduated will demonstrate a leadership role in physiotherapy and rehabilitation, engaging in continuous learning, research and professional advancement in the field and improved patient outcome.

Scheme of Studies

1st Semester		
Course Code	Course Title	Cr. Hrs. 17
DPT 100	Anatomy-I	2-1
DPT 103	Physiology-I	2-1
DPT 105	Kinesiology-I	2-1
ENG 100	Functional English	3-0
GE 110	Introduction to Philosophy	2-0
ND 101	Basic Nutrition	2-0
QT 101	Understanding of Holy Quran-I (Only for Muslims)	0-1
MR 101	Minority Rights in the Constitution of Pakistan-I (Only for Non-Muslims)	1-0

2nd Semester		
Course Code	Course Title	Cr. Hrs. 18
DPT 110	Anatomy-II	2-1
DPT 113	Physiology-II	2-1
DPT 115	Kinesiology-II	2-1
GE 116	Quantitative Reasoning-I	3-0
ENG 116	Expository Writing	3-0
GH 103	Pakistan Studies	2-0
QT 300	Understanding of Holy Quran-II (Only for Muslims)	0-1
MR 300	Minority Rights in the Constitution of Pakistan-II (Only for Non-Muslims)	1-0

3rd Semester		
Course Code	Course Title	Cr. Hrs. 18
DPT 221	Anatomy-III	2-1
DPT 223	Physiology-III	2-1
DPT 240	Medical Physics	2-1
HS 112	Introduction to Medical Biochemistry	2-1
IT 107	Application of ICT	2-1
GE 119	Quantitative Reasoning-II	3-0

4th Semester		
Course Code	Course Title	Cr. Hrs. 18
DPT 234	Anatomy- IV (Neuroanatomy)	2-1
DPT 210	Biomechanics and Ergonomics	2-1
GE 115	Introduction to Sociology	2-0
GE 109	Ideology and Constitution of Pakistan	2-0
GE 305	Civics and Community Engagement	2-0
GE 203	Entrepreneurship	2-0
GH 101/102	Islamic Studies/Value, Ethics and Society (For Non Muslims)	2-0
GS 306	Bioethics	2-0

5th Semester		
Course Code	Course Title	Cr. Hrs. 20
DPT 310	Physiology- IV (Exercise Physiology)	2-1
DPT 315	Pharmacology and Therapeutic-I	2-0
DPT 313	Physical Agents and Electrotherapy-I	2-1
DPT 318	Community Medicine and Rehabilitation	2-1
HS 204	General Pathology	2-1
AI 323	Artificial Intelligence in Health Care	3-0
DPT 319	Supervised Clinical Practice-I	0-3

6th Semester		
Course Code	Course Title	Cr. Hrs. 19
DPT 333	Pharmacology and Therapeutic-II	2-0
DPT 322	Physical Agents and Electrotherapy-II	2-1
DPT 320	Therapeutic Exercise and Techniques	2-1
DPT 323	Manual Therapy	2-1
MB 200	Basic Medical Microbiology	2-1
BIO 307	Molecular Biology and Genetics	2-0
DPT 329	Supervised Clinical Practice-II	0-3

7th Semester		
Course Code	Course Title	Cr. Hrs. 19
DPT 411	Medicine-I	3-0
DPT 413	Surgery-I	3-0
DPT 418	Musculoskeletal Physical Therapy	2-1
DPT 415	Radiology and Diagnostics Imaging	2-1
RES 312	Scientific Writing and Research Methodology	3-0
DPT 430	Supervised Clinical Practice-III	0-4

8th Semester		
Course Code	Course Title	Cr. Hrs. 20
DPT 444	Neurological Physical Therapy	2-1
DPT 432	Medicine-II	3-0
DPT 434	Surgery-II	3-0
DPT 460	Sports Physical Therapy	1-1
MA 219	Biostatistics	3-0
DPT 440	Professional Practice in Health Care	2-0
DPT 461	Supervised Clinical Practice-IV	0-4

Summer Semester		
Course Code	Course Title	Cr. Hrs. 03
SI 450	Supervised Internship	0-3

9th Semester

Course Code	Course Title	Cr. Hrs. 20
DPT 511	Cardiopulmonary Physical Therapy	2-1
DPT 457	Prosthetics and Orthotics	2-0
DPT 535	Clinical Decision Making and Differential Diagnosis	3-0
DPT 540	Emergency Procedure in Physical Therapy	1-1
DPT 451	Evidence Based Practice	2-1
DPT 568	Geriatric Physical Therapy	2-1
DPT 550	Supervised Clinical Practice-V	0-4

10th Semester

Course Code	Course Title	Cr. Hrs. 18
DPT 335	Sustainable Development Goals: Health and Wealth Being	2-1
DPT 541	Integumentary Physical Therapy	1-1
DPT 555	Women Health Physical Therapy	2-1
DPT 557	Pediatric Physical therapy	2-1
DPT 579	Supervised Clinical Practice-VI	0-4
RES 485	Capstone Project	0-3



Bachelor of Science in Anesthesia Technology

Recognized by Allied Health Professionals Council (AHPC)

Program Details	(4 Years)	(2.5 Years)	(2 Years)
Program Code	198	305	304
Number of Courses	51 + 4 SCP + SI + Capstone Project	29 + 4 SCP + SI + Capstone Project	21 + 4 SCP + SI + Capstone Project
Credit Hours	141	89	70
Minimum Duration	8 Semesters, 4 Years	5 Semesters, 2.5 Years	4 Semesters, 2 Years
Maximum Duration	12 Semesters, 6 Years	9 Semesters, 4.5 Years	8 Semesters, 4 Years
Minimum CGPA To Earn Degree	2.00	2.00	2.00

Eligibility Criteria:

- ◆ **4 Years:** Candidates with HSSC (Pre-Medical / Relevant Technology) or A-Levels with equivalency certificate from IBCC Islamabad with at least 50% marks are eligible to apply.
Candidate with Diploma from any Medical Faculty in relevant field with at least 50% marks in annual system or 2.00 CGPA on the scale of 4.00 in semester system with equivalency certificate from IBCC Islamabad are eligible to apply.
- ◆ **2.5 Years:** The candidates holding Associate Degree in non-relevant Allied Health disciplines with at least 50% marks in annual system or at least 2.00 CGPA on the scale of 4.00 from any recognized university/DAI, he will be allowed to take admission in 2.5 years track subject to departmental approval. In such cases he or she will attend the Bridge Semester of the same discipline and will follow the scheme of study from 5th till 8th semester.
- ◆ **2 Years:** Candidates holding Associate Degree in Relevant Technology with at least 2.00 CGPA on the scale of 4.00 from any recognized university/DAI will join from the 5th semester of their degree program. The candidate will study more credit hour's than he has studied in his previous university/DAI. Candidates will have to appear in an entry test / interview to be conducted by any registered Testing Agency or University.

Program Objectives:

- ◆ To make students understand the types (General, Local, Spinal) of anesthesia.
- ◆ To help students attain in-depth knowledge of Anatomy, Physiology, Biochemistry and Pathology of Respiratory and Nervous System.
- ◆ To enable the students to have necessary technical skills to operate, manage & maintain the anesthesia equipment including Anesthesia machines, Ventilators and Continuous Positive Airway Pressure (CPAP) machine and other instruments used for General, Spinal and Local anesthesia.
- ◆ To inculcate ethical principles and professional standards in students making them useful members of the anesthesia team.
- ◆ To enable students to carry out research activities on their own in the field of anesthesia technology for improved care of the patients.

Program Learning Outcomes:

- ◆ Graduates will demonstrate a comprehensive understanding of Anatomy, Physiology, Biochemistry and Pathology of Respiratory and Nervous System.
- ◆ Graduates will exhibit proficiency in operating the anesthesia equipment and techniques to ensure optimal patient care.
- ◆ Graduates will apply evidence-based practices and critical thinking skills to effectively manage the anesthesia procedure and respond to clinical challenges.
- ◆ Graduates will adhere to the highest ethical standards demonstrating professionalism, effective communication and commitment to patient safety and quality care.
- ◆ Graduates will be able to work as an effective member of anesthesia team.
- ◆ Graduates will engage in research in the field of anesthesia to improve patient care

Scheme of Studies

Bridge Semester (for BS 2.5 years program)

Course Code	Course Title	Cr. Hrs. 19
AN 100	Introduction to Anesthesia Technology	2-0
AHS 107	First Aid & Emergency Care	1-1
AHS 109	Introduction to Medical Equipment & Technology	2-1
AHS 113	Patient Safety & Infection Control	1-1
AHS 221	Introduction to Public Health and Epidemiology	3-0
MB 200	Basic Medical Microbiology	2-1
AHS 219	Introduction to Nursing Practice	2-1
QT 101	Understanding of Holy Quran - I (for Muslims)	0-1
MR 101	Minority Rights in the Constitution of Pakistan - I (for Non-Muslims)	1-0

1st Semester

Course Code	Course Title	Cr. Hrs. 18
AHS 101	Human Anatomy	2-1
AHS 103	Human Physiology	2-1
AHS 105	Introduction to Medical Biochemistry	1-1
GE 116	Quantitative Reasoning - I (Pre-Calculus)	3-0
ENG 100	Functional English	3-0
GH101/102	Islamic Studies/ Value, Ethics and Society (For Non-Muslims)	2-0
GE 115	Introduction to Sociology	2-0

2nd Semester

Course Code	Course Title	Cr. Hrs. 17
AN 100	Introduction to Anesthesia Technology	2-0
AHS 107	First Aid & Emergency Care	1-1
AHS 109	Introduction to Medical Equipment & Technology	2-1
AHS 111	Introduction to Allied Health Sciences - I	2-0
AHS 113	Patient Safety & Infection Control	1-1
GE 119	Quantitative Reasoning - II (Introduction to Statistics)	3-0
IT 107	Applications of ICT	2-1

3rd Semester

Course Code	Course Title	Cr. Hrs. 18
AHS 209	Introduction to Allied Health Sciences - II	2-0
AHS 200	General Pathology	2-1
AHS 221	Introduction to Public Health and Epidemiology	3-0
GE 110	Introduction to Philosophy	2-0
GE 205	Civics and Community Engagement	2-0
MB 200	Basic Medical Microbiology	2-1
GE 109	Ideology and Constitution of Pakistan	2-0
QT 101	Understanding of Holy Quran - I (for Muslims)	0-1
MR 101	Minority Rights in the Constitution of Pakistan - I (for Non-Muslims)	1-0

4th Semester

Course Code	Course Title	Cr. Hrs. 18
AHS 214	General Pharmacology	2-1
ENG 116	Expository Writing	3-0
AHS 217	Healthcare Systems & Policies	2-0
AHS 213	Healthcare Marketing & Management	2-0
AHS 219	Introduction to Nursing Practice	2-1
GE 307	Entrepreneurship	2-0
GH 103	Pakistan Studies	2-0
QT 300	Understanding of Holy Quran - II (for Muslims)	0-1
MR 300	Minority Rights in the Constitution of Pakistan - II (for Non-Muslims)	1-0

5th Semester

Course Code	Course Title	Cr. Hrs. 18
AN 202	Physiology related to Anesthesia	2-1
AN 323	Hematology related to Anesthesia	2-1
AN 204	Physics related to Anesthesia	1-1
AN 303	Anesthesia Equipment	1-1
AN 315	Anesthetic Drugs	2-1
AN 317	Cardiac Electrophysiology	1-1
AN 319	Supervised Clinical Practice - I	0-3

6th Semester

Course Code	Course Title	Cr. Hrs. 16
AN 327	Mechanical Ventilation	1-1
AN 307	Anesthesia & Co-existing Diseases	2-1
RES 312	Scientific Writing and Research Methods	3-0
AN 321	Advances in Anesthesia	2-0
AN 325	Infection Control	3-0
AN 329	Supervised Clinical Practice - II	0-3

Summer Semester

Course Code	Course Title	Cr. Hrs. 03
SI 450	Supervised Internship	0-3

Bachelor of Science in Anesthesia Technology

7th Semester

Course Code	Course Title	Cr. Hrs.18
AN 425	Anesthesia for General, Orthopedic & Oncological Surgery	1-1
AN 419	Anesthesia & Critical Care	1-1
AN 421	Anesthesia for Cardiothoracic, Neuro & Transplant Surgery	1-1
AN 423	Anesthesia for ENT, Ophthalmic, Dental & Daycare Procedures	1-1
AN 435	Pain Management and Palliative Care	1-1
AN 433	Fluid and Electrolyte Therapy	1-1
AI 323	Artificial Intelligence in Health Care	3-0
AN 437	Supervised Clinical Practice – III	0-3

8th Semester

Course Code	Course Title	Cr. Hrs.15
AN 427	Anesthesia for Pediatric, Obstetric & Special Population Surgery	2-1
AN 431	Emergency Anesthesia, Simulation & Ethical Practice	2-1
AN 429	Complications related to Anesthesia	2-1
AN 439	Supervised Clinical Practice – IV	0-3
RES 485	Capstone Project	0-3



Bachelor of Science in Cardiac Care Technology

Recognized by Allied Health Professionals Council (AHPC)

Program Details	(4 Years)	(2.5 Years)	(2 Years)
Program Code	300	306	301
Number of Courses	52 + 4 SCP + SI + Capstone Project	30 + 4 SCP + SI + Capstone Project	22 + 4 SCP + SI + Capstone Project
Credit Hours	136	84	65
Minimum Duration	8 Semesters, 4 Years	5 Semesters, 2.5 Years	4 Semesters, 2 Years
Maximum Duration	12 Semesters, 6 Years	9 Semesters, 4.5 Years	8 Semesters, 4 Years
Minimum CGPA To Earn Degree	2.00	2.00	2.00

Eligibility Criteria:

- ◆ **4 Years:** Candidates with HSSC (Pre-Medical / Relevant Technology) or A-Levels with equivalency certificate from IBCC Islamabad with at least 50% marks are eligible to apply.
Candidate with Diploma from any Medical Faculty in relevant field with at least 50% marks in annual system or 2.00 CGPA on the scale of 4.00 in semester system with equivalency certificate from IBCC Islamabad are eligible to apply.
- ◆ **2.5 Years:** The candidates holding Associate Degree in non-relevant Allied Health disciplines with at least 50% marks in annual system or at least 2.00 CGPA on the scale of 4.00 from any recognized university/DAI, he will be allowed to take admission in 2.5 years track subject to departmental approval. In such cases he or she will attend the Bridge Semester of the same discipline and will follow the scheme of study from 5th till 8th semester.
- ◆ **2 Years:** Candidates holding Associate Degree in Relevant Technology with at least 2.00 CGPA on the scale of 4.00 from any recognized university/DAI will join from the 5th semester of their degree program. The candidate will study more credit hour's than he has studied in his previous university/DAI. Candidates will have to appear in an entry test / interview to be conducted by any registered Testing Agency or University.

Program Objectives:

- ◆ To provide students with a comprehensive understanding of cardiovascular system and its functioning.
- ◆ To develop knowledge and skills in diagnosing and treating various cardiovascular diseases and conditions.
- ◆ To train students in the use of diagnostic tools and technologies specific to cardiology, such as electrocardiography, Echocardiography, Exercise tolerance test, Holter monitoring, electrophysiology and catheterization laboratories.
- ◆ To foster critical thinking and research skills related to cardiology, including the interpretation of medical literature and data analysis.
- ◆ To prepare students for further education or careers in cardiology, healthcare or related fields through a strong Foundation of theoretical knowledge and practical experience.

Program Learning Outcomes:

- ◆ Will be able to support the medical expert (cardiologist / senior health care professionals) in a competent and professional manner.
- ◆ Will be equipped with the knowledge of cardiac diagnostic setups like electrophysiology laboratories, cardiac catheterization, laboratories, electrocardiography (ECG), echocardiography, exercise tolerance test, (ETT) and Holter monitoring.
- ◆ With advanced training in the newest technology, they will be able to open the door to new research in cardiology technology.
- ◆ Will play a significant role in improving the quality of healthcare facilities all over world.

Scheme of Studies

Bridge Semester (for BS 2.5 years program)

Course Code	Course Title	Cr. Hrs. 19
CRD 100	Introduction to Cardiac Care Technology	2-0
AHS 107	First Aid & Emergency Care	1-1
AHS 109	Introduction to Medical Equipment & Technology	2-1
AHS 113	Patient Safety & Infection Control	1-1
AHS 221	Introduction to Public Health and Epidemiology	3-0
MB 200	Basic Medical Microbiology	2-1
AHS 219	Introduction to Nursing Practice	2-1
QT 101	Understanding of Holy Quran - I (for Muslims)	0-1
MR 101	Minority Rights in the Constitution of Pakistan - I (for Non-Muslims)	1-0

1st Semester

Course Code	Course Title	Cr. Hrs. 18
AHS 101	Human Anatomy	2-1
AHS 103	Human Physiology	2-1
AHS 105	Introduction to Medical Biochemistry	1-1
GE 116	Quantitative Reasoning - I (Pre-Calculus)	3-0
ENG 100	Functional English	3-0
GH101/102	Islamic Studies/ Value, Ethics and Society (For Non-Muslims)	2-0
GE 115	Introduction to Sociology	2-0

2nd Semester

Course Code	Course Title	Cr. Hrs. 17
CRD 100	Introduction to Cardiac Care Technology	2-0
AHS 107	First Aid & Emergency Care	1-1
AHS 109	Introduction to Medical Equipment & Technology	2-1
AHS 111	Introduction to Allied Health Sciences - I	2-0
AHS 113	Patient Safety & Infection Control	1-1
GE 119	Quantitative Reasoning - II (Introduction to Statistics)	3-0
IT 107	Applications of ICT	2-1

3rd Semester

Course Code	Course Title	Cr. Hrs. 18
AHS 209	Introduction to Allied Health Sciences - II	2-0
AHS 200	General Pathology	2-1
AHS 221	Introduction to Public Health and Epidemiology	3-0
GE 110	Introduction to Philosophy	2-0
GE 205	Civics and Community Engagement	2-0
MB 200	Basic Medical Microbiology	2-1
GE 109	Ideology and Constitution of Pakistan	2-0
QT 101	Understanding of Holy Quran - I (for Muslims)	0-1
MR 101	Minority Rights in the Constitution of Pakistan - I (for Non-Muslims)	1-0

4th Semester

Course Code	Course Title	Cr. Hrs. 18
AHS 214	General Pharmacology	2-1
ENG 116	Expository Writing	3-0
AHS 217	Healthcare Systems & Policies	2-0
AHS 213	Healthcare Marketing & Management	2-0
AHS 219	Introduction to Nursing Practice	2-1
GE 307	Entrepreneurship	2-0
GH 103	Pakistan Studies	2-0
QT 300	Understanding of Holy Quran - II (for Muslims)	0-1
MR 300	Minority Rights in the Constitution of Pakistan - II (for Non-Muslims)	1-0

5th Semester

Course Code	Course Title	Cr. Hrs. 16
CRD 201	Cardiopulmonary Anatomy	1-1
CRD 303	Cardiopulmonary Physiology	1-1
MLT 202	Hematology	1-1
CRD 307	Echocardiography - I	1-1
CRD 206	Electrocardiography - I	1-1
MA 219	Biostatistics	3-0
CRD 327	Supervised Clinical Practice - I	0-3

6th Semester

Course Code	Course Title	Cr. Hrs. 17
CRD 325	Clinical Medicine	1-1
CRD 320	Echocardiography - II	2-1
CRD 305	Electrophysiology	1-1
CRD 318	Medical Physics	2-0
CRD 314	Interventional Cardiology	1-1
AI 323	Artificial Intelligence in Health Care	3-0
CRD 329	Supervised Clinical Practice - II	0-3

Summer Semester

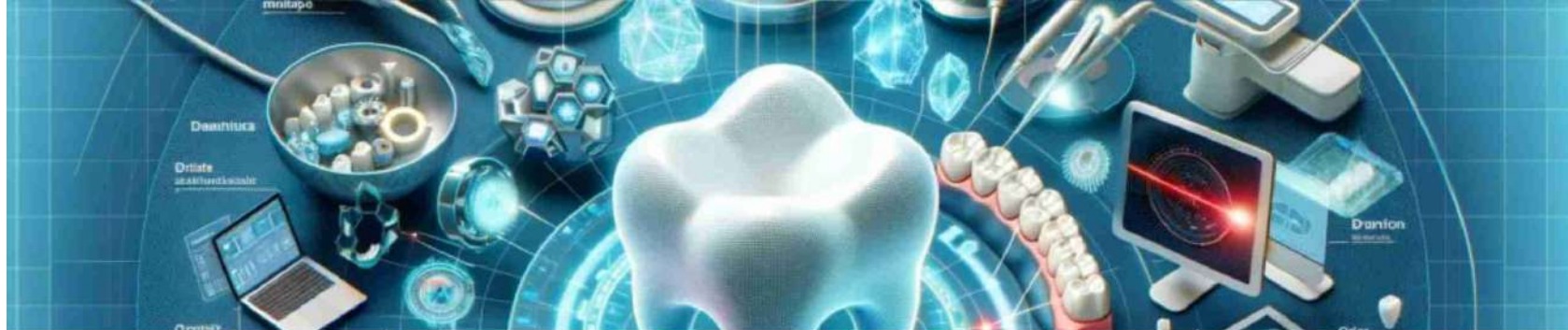
Course Code	Course Title	Cr. Hrs. 03
SI 450	Supervised Internship	0-3

7th Semester

Course Code	Course Title	Cr. Hrs. 16
CRD 406	Heart Diseases	1-1
CRD 400	Diagnostic Equipment in Cardiology	1-1
CRD 419	Cardiac Rhythm Management	1-1
CRD 421	Cardiovascular Pharmacology	1-1
CRD 311	Electrocardiography - II	1-1
RES 312	Scientific Writing & Research Methods	3-0
CRD 425	Supervised Clinical Practice - III	0-3

8th Semester

Course Code	Course Title	Cr. Hrs. 13
CRD 404	Nuclear Cardiology	1-1
CRD 324	Critical Care	1-1
CRD 411	Preventive Cardiology	2-0
CRD 423	Professional Ethics and Legal Aspects in Cardiac Care Technology	1-0
CRD 435	Supervised Clinical Practice - IV	0-3
RES 485	Capstone Project	0-3



Bachelor of Science in Dental Technology

Recognized by Allied Health Professionals Council (AHPC)

Program Details	(4 Years)	(2.5 Years)	(2 Years)
Program Code	197	308	307
Number of Courses	50 + 4 SCP + SI + Capstone Project	29 + 4 SCP + SI + Capstone Project	21 + 4 SCP + SI + Capstone Project
Credit Hours	139	87	68
Minimum Duration	8 Semesters, 4 Years	5 Semesters, 2.5 Years	4 Semesters, 2 Years
Maximum Duration	12 Semesters, 6 Years	9 Semesters, 4.5 Years	8 Semesters, 4 Years
Minimum CGPA To Earn Degree	2.00	2.00	2.00

Eligibility Criteria:

- ◆ **4 Years:** Candidates with HSSC (Pre-Medical / Relevant Technology) or A-Levels with equivalency certificate from IBCC Islamabad with at least 50% marks are eligible to apply.
Candidate with Diploma from any Medical Faculty in relevant field with at least 50% marks in annual system or 2.00 CGPA on the scale of 4.00 in semester system with equivalency certificate from IBCC Islamabad are eligible to apply.
- ◆ **2.5 Years:** The candidates holding Associate Degree in non-relevant Allied Health disciplines with at least 50% marks in annual system or at least 2.00 CGPA on the scale of 4.00 from any recognized university/DAI, he will be allowed to take admission in 2.5 years track subject to departmental approval. In such cases he or she will attend the Bridge Semester of the same discipline and will follow the scheme of study from 5th till 8th semester.
- ◆ **2 Years:** Candidates holding Associate Degree in Relevant Technology with at least 2.00 CGPA on the scale of 4.00 from any recognized university/DAI will join from the 5th semester of their degree program. The candidate will study more credit hour's than he has studied in his previous university/DAI. Candidates will have to appear in an entry test / interview to be conducted by any registered Testing Agency or University.

Program Learning Objectives:

- ◆ To have in-depth knowledge of Anatomy, Physiology, Biochemistry and Pathology of Head & Neck.
- ◆ To enable the students to have necessary technical skills to operate, manage & maintain the Dental Chair, Dental X-Ray, Autoclave and other equipment and dental material for optimal use.
- ◆ To enable the dental technologist to fabricate prosthodontics and orthodontics appliances, crown, bridges and surgical splints.
To inculcate ethical principles and professional standards in students making them useful members of the dental surgical team.
- ◆ To perform an effective roll in the field of dentistry to improve the community dental health.
- ◆ To inculcate research articles reading habits to keep up with new knowledge in the field.

Program Learning Outcomes:

- ◆ Graduates will demonstrate a comprehensive understanding of Anatomy, Physiology, Biochemistry and Pathology of Head & Neck.
- ◆ Graduates will exhibit proficiency in operating and maintaining the dental equipment and material to ensure optimal patient care.
- ◆ Graduates will apply evidence-based practices and critical thinking skills to effectively manage the dental procedure and respond to clinical challenges.
- ◆ Graduates will adhere to the highest ethical standards demonstrating professionalism, effective communication and commitment to patient safety and quality care.
- ◆ Graduates will be able to work as an effective member of dental surgical team.
- ◆ Graduates will engage in research in the field of anesthesia to improve patient care.

Scheme of Studies

Bridge Semester (for BS 2.5 years program)

Course Code	Course Title	Cr. Hrs. 19
DT 100	Introduction to Dental Technology	2-0
AHS 107	First Aid & Emergency Care	1-1
AHS 109	Introduction to Medical Equipment & Technology	2-1
AHS 113	Patient Safety & Infection Control	1-1
AHS 221	Introduction to Public Health and Epidemiology	3-0
MB 200	Basic Medical Microbiology	2-1
AHS 219	Introduction to Nursing Practice	2-1
QT 101	Understanding of Holy Quran - I (for Muslims)	0-1
MR 101	Minority Rights in the Constitution of Pakistan - I (for Non-Muslims)	1-0

1st Semester

Course Code	Course Title	Cr. Hrs. 18
AHS 101	Human Anatomy	2-1
AHS 103	Human Physiology	2-1
AHS 105	Introduction to Medical Biochemistry	1-1
GE 116	Quantitative Reasoning - I (Pre-Calculus)	3-0
ENG 100	Functional English	3-0
GH101/102	Islamic Studies/ Value, Ethics and Society (For Non-Muslims)	2-0
GE 115	Introduction to Sociology	2-0

2nd Semester

Course Code	Course Title	Cr. Hrs. 17
DT 100	Introduction to Dental Technology	2-0
AHS 107	First Aid & Emergency Care	1-1
AHS 109	Introduction to Medical Equipment & Technology	2-1
AHS 111	Introduction to Allied Health Sciences - I	2-0
AHS 113	Patient Safety & Infection Control	1-1
GE 119	Quantitative Reasoning - II (Introduction to Statistics)	3-0
IT 107	Applications of ICT	2-1

3rd Semester

Course Code	Course Title	Cr. Hrs. 18
AHS 209	Introduction to Allied Health Sciences - II	2-0
AHS 200	General Pathology	2-1
AHS 221	Introduction to Public Health and Epidemiology	3-0
GE 110	Introduction to Philosophy	2-0
GE 205	Civics and Community Engagement	2-0
MB 200	Basic Medical Microbiology	2-1
GE 109	Ideology and Constitution of Pakistan	2-0
QT 101	Understanding of Holy Quran - I (for Muslims)	0-1
MR 101	Minority Rights in the Constitution of Pakistan - I (for Non-Muslims)	1-0

4th Semester

Course Code	Course Title	Cr. Hrs. 18
AHS 214	General Pharmacology	2-1
ENG 116	Expository Writing	3-0
AHS 217	Healthcare Systems & Policies	2-0
AHS 213	Healthcare Marketing & Management	2-0
AHS 219	Introduction to Nursing Practice	2-1
GE 307	Entrepreneurship	2-0
GH 103	Pakistan Studies	2-0
QT 300	Understanding of Holy Quran - II (for Muslims)	0-1
MR 300	Minority Rights in the Constitution of Pakistan - II (for Non-Muslims)	1-0

5th Semester

Course Code	Course Title	Cr. Hrs. 16
DT 210	Tooth Morphology	1-1
DT 333	Prosthodontics - I	1-1
DT 203	Oral Biology & Histology	2-1
DT 321	Minor Oral surgery	2-1
DT 323	Endodontics	2-1
DT 327	Supervised Clinical Practice - I	0-3

6th Semester

Course Code	Course Title	Cr. Hrs. 18
DT 329	Dental Material	1-1
DT 214	Fundamental of Implantology	1-1
DT 325	Prosthodontics - II	1-1
RES 312	Scientific Writing & Research Methods	3-0
DT 214	Periodontology	2-1
AI 323	Artificial Intelligence in Healthcare	3-0
DT 415	Supervised Clinical Practice - II	0-3

Summer Semester

Course Code	Course Title	Cr. Hrs. 03
SI 450	Supervised Internship	0-3

Bachelor of Science in Dental Technology

7th Semester

Course Code	Course Title	Cr. Hrs.16
DT 315	Oral Pathology and Oral Medicine - I	1-1
DT 317	Paediatric Dentistry	1-1
DT 311	Fundamental of Oral and Maxillofacial Radiology	1-1
DT 301	Orthodontics - I	1-1
DT 305	Community and Preventive Dentistry	2-0
MA 219	Biostatistics	3-0
DT 421	Supervised Clinical Practice -III	0-3

8th Semester

Course Code	Course Title	Cr. Hrs. 15
DT 319	Orthodontics - II	1-1
DT 417	Oral Pathology and Oral Medicine - II	1-1
DT 419	Restorative Dentistry	2-1
DT 411	Medical Emergencies in Dental Practice	1-1
DT 433	Supervised Clinical Practice - IV	0-3
RES 485	Capstone Project	0-3



Bachelor of Science in Emergency & Intensive Care Technology

Recognized by Allied Health Professionals Council (AHPC)

Program Details	(4 Years)	(2.5 Years)	(2 Years)
Program Code	246	310	309
Number of Courses	52 + 4 SCP + SI + Capstone Project	30 + 4 SCP + SI + Capstone Project	22 + 4 SCP + SI + Capstone Project
Credit Hours	138	86	67
Minimum Duration	8 Semesters, 4 Years	5 Semesters, 2.5 Years	4 Semesters, 2 Years
Maximum Duration	12 Semesters, 6 Years	9 Semesters, 4.5 Years	8 Semesters, 4 Years
Minimum CGPA To Earn Degree	2.00	2.00	2.00

Eligibility Criteria:

- ◆ **4 Years:** Candidates with HSSC (Pre-Medical / Relevant Technology) or A-Levels with equivalency certificate from IBCC Islamabad with at least 50% marks are eligible to apply.
Candidate with Diploma from any Medical Faculty in relevant field with at least 50% marks in annual system or 2.00 CGPA on the scale of 4.00 in semester system with equivalency certificate from IBCC Islamabad are eligible to apply.
- ◆ **2.5 Years:** The candidates holding Associate Degree in non-relevant Allied Health disciplines with at least 50% marks in annual system or at least 2.00 CGPA on the scale of 4.00 from any recognized university/DAI, he will be allowed to take admission in 2.5 years track subject to departmental approval. In such cases he or she will attend the Bridge Semester of the same discipline and will follow the scheme of study from 5th till 8th semester.
- ◆ **2 Years:** Candidates holding Associate Degree in Relevant Technology with at least 2.00 CGPA on the scale of 4.00 from any recognized university/DAI will join from the 5th semester of their degree program. The candidate will study more credit hour's than he has studied in his previous university/DAI. Candidates will have to appear in an entry test / interview to be conducted by any registered Testing Agency or University.

Program Learning Objectives:

- ◆ To abreast the students with a deep understanding of Anatomy, Physiology, Pharmacology and Biochemistry of the human body.
- ◆ To equip the students with modern techniques and skills necessary to operate and maintain the equipment's in ready and functioning conditions available in the department of emergency and ICU.
- ◆ To familiarize the students about clinical settings to develop competency in monitoring and adjusting parameters for the patients in emergency and ICU.
- ◆ To grasp the knowledge about the ethical principles and professional standards by the students, making them responsible and useful member of the team managing casualties and patients in crisis in ICU.
- ◆ To impart training of administrative and communication skills to perform in the environment efficiently to show the expertise in legal implications of emergency cases and application of professional attitude during the management of crisis.

Program Learning Outcomes:

- ◆ Graduates will be able to demonstrate the knowledge of human structure, functions and disease process.
- ◆ Graduates will exhibit the knowledge regarding the techniques, skills and attitude necessary to perform safely and accurately all basic and advanced life support procedures in emergency or critical care trauma and other pathetic conditions of the patient in ICU.
- ◆ Graduates will emphasize proficiency in operating the equipment's in emergency and ICU and apply the techniques to ensure optimal patient care.
- ◆ Graduates will adhere to the highest ethical standards demonstrating professionalism, effective communication and commitment to patient safety and quality care.
- ◆ Graduates will demonstrate leadership in covering the emergencies and treating intensive care patient's technology, engaging in continuous learning, research and advance proposal in the field to improve patient outcome.

Bachelor of Science in Emergency & Intensive Care Technology

Scheme of Studies

Bridge Semester (for BS 2.5 years program)

Course Code	Course Title	Cr. Hrs. 19
EIC 100	Introduction to Emergency & Intensive Care Technology	2-0
AHS 107	First Aid & Emergency Care	1-1
AHS 109	Introduction to Medical Equipment & Technology	2-1
AHS 113	Patient Safety & Infection Control	1-1
AHS 221	Introduction to Public Health & Epidemiology	3-0
MB 200	Basic Medical Microbiology	2-1
AHS 219	Introduction to Nursing Practice	2-1
QT 101	Understanding of Holy Quran - I (for Muslims)	0-1
MR 101	Minority Rights in the Constitution of Pakistan - I (for Non-Muslims)	1-0

1st Semester

Course Code	Course Title	Cr. Hrs. 18
AHS 101	Human Anatomy	2-1
AHS 103	Human Physiology	2-1
AHS 105	Introduction to Medical Biochemistry	1-1
GE 116	Quantitative Reasoning - I (Pre-Calculus)	3-0
ENG 100	Functional English	3-0
GH101/102	Islamic Studies/ Value, Ethics and Society (For Non-Muslims)	2-0
GE 115	Introduction to Sociology	2-0

2nd Semester

Course Code	Course Title	Cr. Hrs. 17
EIC 100	Introduction to Emergency & Intensive Care Technology	2-0
AHS 107	First Aid & Emergency Care	1-1
AHS 109	Introduction to Medical Equipment & Technology	2-1
AHS 111	Introduction to Allied Health Sciences - I	2-0
AHS 113	Patient Safety & Infection Control	1-1
GE 119	Quantitative Reasoning - II (Introduction to Statistics)	3-0
IT 107	Applications of ICT	2-1

3rd Semester

Course Code	Course Title	Cr. Hrs. 18
AHS 209	Introduction to Allied Health Sciences - II	2-0
AHS 200	General Pathology	2-1
AHS 221	Introduction to Public Health and Epidemiology	3-0
GE 110	Introduction to Philosophy	2-0
GE 205	Civics and Community Engagement	2-0
MB 200	Basic Medical Microbiology	2-1
GE 109	Ideology and Constitution of Pakistan	2-0
QT 101	Understanding of Holy Quran - I (for Muslims)	0-1
MR 101	Minority Rights in the Constitution of Pakistan - I (for Non-Muslims)	1-0

4th Semester

Course Code	Course Title	Cr. Hrs. 18
AHS 214	General Pharmacology	2-1
ENG 116	Expository Writing	3-0
AHS 217	Healthcare Systems & Policies	2-0
AHS 213	Healthcare Marketing & Management	2-0
AHS 219	Introduction to Nursing Practice	2-1
GE 307	Entrepreneurship	2-0
GH 103	Pakistan Studies	2-0
QT 300	Understanding of Holy Quran - II (for Muslims)	0-1
MR 300	Minority Rights in the Constitution of Pakistan - II (for Non-Muslims)	1-0

5th Semester

Course Code	Course Title	Cr. Hrs. 18
EIC 300	Intensive Care Monitoring-I	1-1
EIC 302	Respiratory Therapy	1-1
EIC 304	Surgical Emergency	1-1
EIC 306	Emergency & its Types	1-1
EIC 308	Fundamental of Emergency	1-1
EIC 310	Burn & Toxicology	3-0
EIC 312	Basic & Advance Life Support	1-1
EIC 314	Supervised Clinical Practice I	0-3

6th Semester

Course Code	Course Title	Cr. Hrs. 18
EIC 321	Anesthesia Equipment for EIC	1-1
RES 312	Scientific Writing & Research Methods	3-0
EIC 323	Neonatal & Pediatric Critical Care	1-1
EIC 325	Trauma Emergency - I	1-1
EIC 327	Cardiovascular Emergency	1-1
EIC 329	Intensive Care Monitoring-II	1-1
EIC 331	Medical Emergency	1-1
EIC 333	Supervised Clinical Practice II	0-3

Summer Semester

Course Code	Course Title	Cr. Hrs. 03
SI 450	Supervised Internship	0-3

7th Semester

Course Code	Course Title	Cr. Hrs.15
EIC 400	Obstetrical Critical Care	1-1
AI 323	Artificial Intelligence in Healthcare	3-0
EIC 402	Diagnostic Imaging	2-1
EIC 404	Trauma Emergency - II	1-1
EIC 406	Ambulance Operation & Management	2-0
EIC 408	Supervised Clinical Practice III	0-3

8th Semester

Course Code	Course Title	Cr. Hrs. 13
PH 416	Disaster Management	2-0
MD 315	Medicine	2-1
EIC 421	Surgical Intensive Care	1-1
EIC 423	Supervised Clinical Practice IV	0-3
RES 485	Capstone/Research	0-3



Bachelor of Science in Health Technology

Recognized by Allied Health Professionals Council (AHPC)

Program Details	(4 Years)	(2.5 Years)	(2 Years)
Program Code	193	302	243
Number of Courses	50 + 4 SCP + SI + Capstone Project	29 + 4 SCP + SI + Capstone Project	20 + 4 SCP + SI + Capstone Project
Credit Hours	139	87	68
Minimum Duration	8 Semesters, 4 Years	5 Semesters, 2.5 Years	4 Semesters, 2 Years
Maximum Duration	12 Semesters, 6 Years	9 Semesters, 4.5 Years	8 Semesters, 4 Years
Minimum CGPA To Earn Degree	2.00	2.00	2.00

Eligibility Criteria:

- ◆ **4 Years:** Candidates with HSSC (Pre-Medical / Relevant Technology) or A-Levels with equivalency certificate from IBCC Islamabad with at least 50% marks are eligible to apply.
Candidate with Diploma from any Medical Faculty in relevant field with at least 50% marks in annual system or 2.00 CGPA on the scale of 4.00 in semester system with equivalency certificate from IBCC Islamabad are eligible to apply.
- ◆ **2.5 Years:** The candidates holding Associate Degree in non-relevant Allied Health disciplines with at least 50% marks in annual system or at least 2.00 CGPA on the scale of 4.00 from any recognized university/DAI, he will be allowed to take admission in 2.5 years track subject to departmental approval. In such cases he or she will attend the Bridge Semester of the same discipline and will follow the scheme of study from 5th till 8th semester.
- ◆ **2 Years:** Candidates holding Associate Degree in Relevant Technology with at least 2.00 CGPA on the scale of 4.00 from any recognized university/DAI will join from the 5th semester of their degree program. The candidate will study more credit hour's than he has studied in his previous university/DAI. Candidates will have to appear in an entry test / interview to be conducted by any registered Testing Agency or University.

Program Learning Objectives:

- ◆ To have in-depth knowledge of human Anatomy, Physiology, Biochemistry and Pathology.
- ◆ To enable the students to have the necessary skills to work in all the healthcare outlets from primary to tertiary health care facilities.
- ◆ To enable the health technologist to have the basic knowledge of operating commonly available medical and surgical equipment in the wards and emergency units of healthcare facility.
- ◆ To inculcate ethical principles and professional standards in the students to deliver primary healthcare services in the community.
- ◆ To enable the students to focus on preventive aspect of field of health specifically targeting on preventable diseases through EPI vaccination program in the community.

Program Learning Outcomes:

- ◆ Graduates will demonstrate a comprehensive understanding of human Anatomy, Physiology, Biochemistry and Pathology.
- ◆ Graduates will exhibit necessary skills to work in all the healthcare outlets from primary to tertiary health care facilities.
- ◆ Graduates will demonstrate operating commonly available medical and surgical equipment in the wards and emergency units of healthcare facility. Graduates will effectively demonstrate ethical principles and professional standards to deliver primary healthcare services in the community.
- ◆ Graduates will show focused approach on preventive aspect of field of health specifically focusing on preventable diseases through running effective EPI vaccination program in the community.
- ◆ Graduates will adhere to the highest ethical standards demonstrating professionalism and effective communication to gain trust of the community for better acceptance of healthcare services being provided.

Scheme of Studies

Bridge Semester (for BS 2.5 years program)

Course Code	Course Title	Cr. Hrs. 19
HT 100	Introduction to Health Technology	2-0
AHS 107	First Aid & Emergency Care	1-1
AHS 109	Introduction to Medical Equipment & Technology	2-1
AHS 113	Patient Safety & Infection Control	1-1
AHS 221	Introduction to Public Health and Epidemiology	3-0
MB 200	Basic Medical Microbiology	2-1
AHS 219	Introduction to Nursing Practice	2-1
QT 101	Understanding of Holy Quran - I (for Muslims)	0-1
MR 101	Minority Rights in the Constitution of Pakistan - I (for Non-Muslims)	1-0

1st Semester

Course Code	Course Title	Cr. Hrs. 18
AHS 101	Human Anatomy	2-1
AHS 103	Human Physiology	2-1
AHS 105	Introduction to Medical Biochemistry	1-1
GE 116	Quantitative Reasoning - I (Pre-Calculus)	3-0
ENG 100	Functional English	3-0
GH101/102	Islamic Studies/ Value, Ethics and Society (For Non-Muslims)	2-0
GE 115	Introduction to Sociology	2-0

2nd Semester

Course Code	Course Title	Cr. Hrs. 17
HT 100	Introduction to Health Technology	2-0
AHS 107	First Aid & Emergency Care	1-1
AHS 109	Introduction to Medical Equipment & Technology	2-1
AHS 111	Introduction to Allied Health Sciences - I	2-0
AHS 113	Patient Safety & Infection Control	1-1
GE 119	Quantitative Reasoning - II (Introduction to Statistics)	3-0
IT 107	Applications of ICT	2-1

3rd Semester

Course Code	Course Title	Cr. Hrs. 18
AHS 209	Introduction to Allied Health Sciences - II	2-0
AHS 200	General Pathology	2-1
AHS 221	Introduction to Public Health and Epidemiology	3-0
GE 110	Introduction to Philosophy	2-0
GE 205	Civics and Community Engagement	2-0
MB 200	Basic Medical Microbiology	2-1
GE 109	Ideology and Constitution of Pakistan	2-0
QT 101	Understanding of Holy Quran - I (for Muslims)	0-1
MR 101	Minority Rights in the Constitution of Pakistan - I (for Non-Muslims)	1-0

4th Semester

Course Code	Course Title	Cr. Hrs. 18
AHS 214	General Pharmacology	2-1
ENG 116	Expository Writing	3-0
AHS 217	Healthcare Systems & Policies	2-0
AHS 213	Healthcare Marketing & Management	2-0
AHS 219	Introduction to Nursing Practice	2-1
GE 307	Entrepreneurship	2-0
GH 103	Pakistan Studies	2-0
QT 300	Understanding of Holy Quran - II (for Muslims)	0-1
MR 300	Minority Rights in the Constitution of Pakistan - II (for Non-Muslims)	1-0

5th Semester

Course Code	Course Title	Cr. Hrs. 17
HT 300	The Endocrine Diseases	2-0
HT 302	The Infectious & Tropical Diseases	2-0
HT 304	Renal Diseases, Fluid and Electrolytes	2-1
HT 306	The Respiratory Diseases	2-0
HT 308	The Diseases of Digestive System	2-0
HT 310	Primary Health Care	3-0
HT 312	Supervised Clinical Practice I	0-3

6th Semester

Course Code	Course Title	Cr. Hrs. 17
RES 312	Scientific Writing & Research Methods	3-0
HT 322	Blood Disorder	2-1
HT 324	Cardiovascular Diseases	2-0
HT 326	Neurological Disorder	2-0
HT 328	Diseases of Children	2-0
HT 330	Poisoning	2-0
HT 332	Supervised Clinical Practice II	0-3

Summer Semester

Course Code	Course Title	Cr. Hrs. 03
SI 450	Supervised Internship	0-3

Bachelor of Science in Health Technology

7th Semester

Course Code	Course Title	Cr. Hrs. 15
HT 400	Skin Diseases	2-1
HT 402	Mother Child Health & Vaccination	2-1
SR 313	General Surgery & Urology	2-1
AI 323	Artificial Intelligence in Health Care	3-0
HT 404	Supervised Clinical Practice III	0-3

8th Semester

Course Code	Course Title	Cr. Hrs. 16
PH 400	Mental Health	3-0
HT 412	Rheumatology & Bone Diseases	2-1
HT 414	Diseases of Ear, Nose & Throat	2-0
HT 416	Clinical Ophthalmology	2-0
HT 418	Supervised Clinical Practice IV	0-3
RES 485	Capstone Project	0-3



Associate Degree in Medical Lab Technology

Recognized by Allied Health Professionals Council (AHPC)

Program Details:

Program Code	167
Number of Courses	32
Credit Hours	75
Minimum Duration	4 Semesters, 2 Years
Maximum Duration	10 Semesters, 5 Years
Minimum CGPA Required To Earn Degree	2.00

Program Learning Objectives:

The two year AD MLT program will acquaint the students with the knowledge in the field of Medical Laboratory Technology and its related academic and applied aspects. The program aims to prepare the students to effectively assist the senior health professionals in the delivery of quality health services from primary to the tertiary level

Eligibility Criteria:

- ◆ Candidates with HSSC (Pre-Medical / MLT) or A-Levels with equivalency certificate from IBCC Islamabad with at least 50% marks are eligible to apply.
- ◆ Candidate with Diploma in relevant field with at least 50% marks in annual system or 2.00 CGPA on the scale of 4.00 in semester system with equivalency certificate from IBCC Islamabad are eligible to apply.
- ◆ Candidates will have to appear in an entry test to be conducted by any registered Testing Agency or University.
- ◆ Candidates will appear in an interview to be conducted by the University.

Program Learning Outcomes:

The skilled graduates will efficiently and professionally discharge their duties in the functioning of medical laboratory. The graduates will be able to assist the doctors in discharging the duty.

Scheme of Studies

1st Semester

Course Code	Course Title	Cr. Hrs. 18
AHS 101	Human Anatomy	2-1
AHS 103	Human Physiology	2-1
AHS 105	Introduction to Medical Biochemistry	1-1
GE 116	Quantitative Reasoning - I (Pre-Calculus)	3-0
ENG 100	Functional English	3-0
GH 101/102	Islamic Studies/ Value, Ethics and Society (For Non-Muslims)	2-0
GE 115	Introduction to Sociology	2-0

2nd Semester

Course Code	Course Title	Cr. Hrs. 19
MLT 109	Introduction to Medical Lab Technology	2-0
AHS 107	First Aid & Emergency Care	1-1
AHS 109	Introduction to Medical Equipment & Technology	2-1
AHS 111	Introduction to Allied Health Sciences - I	2-0
AHS 113	Patient Safety & Infection Control	1-1
GE 119	Quantitative Reasoning - II (Introduction to Statistics)	3-0
IT 107	Applications of ICT	2-1
MLT 110	Fundamentals of Hematology	1-1

3rd Semester

Course Code	Course Title	Cr. Hrs. 18
AHS 209	Introduction to Allied Health Sciences - II	2-0
AHS 200	General Pathology	2-1
AHS221	Introduction to Public Health and Epidemiology	3-0
GE 110	Introduction to Philosophy	2-0
GE 205	Civics and Community Engagement	2-0
GE 109	Ideology and Constitution of Pakistan	2-0
MB 200	Basic Medical Microbiology	2-1
QT 101	Understanding of Holy Quran - I (for Muslims)	0-1
MR 101	Minority Rights in the Constitution of Pakistan-I (for Non-Muslims)	1-0

4th Semester

Course Code	Course Title	Cr. Hrs. 20
AHS 214	General Pharmacology	2-1
ENG 116	Expository Writing	3-0
AHS 217	Healthcare Systems & Policies	2-0
AHS 213	Healthcare Marketing & Management	2-0
AHS 219	Introduction to Nursing Practice	2-1
GE 307	Entrepreneurship	2-0
GH 103	Pakistan Studies	2-0
MLT 111	RBC Disorders	1-1
QT 300	Understanding of Holy Quran - II (for Muslims)	0-1
MR 300	Minority Rights in the Constitution of Pakistan-II (for Non-Muslims)	1-0



Bachelor of Science in Medical Lab Technology

Recognized by Allied Health Professionals Council (AHPC)

Program Details	(4 Years)	(2.5 Years)	(2 Years)
Program Code	154	218	219
Number of Courses	49 + 4 SCP + Internship + Capstone Project	26 + 4 SCP + Internship + Capstone Project	19 + 4 SCP + Internship + Capstone Project
Credit Hours	144	93	74
Minimum Duration	8 Semesters, 4 Years	5 Semesters, 2.5 Years	4 Semesters, 2 Years
Maximum Duration	12 Semesters, 6 Years	9 Semesters, 4.5 Years	8 Semesters, 4 Years
Minimum CGPA To Earn Degree	2.00	2.00	2.00

Eligibility Criteria:

- ◆ **4 Years:** F.Sc (Pre-Medical / MLT) or A-Level with equivalence certificate from IBCC, Islamabad with at least 50% marks.
Candidates with Diploma in relevant field with at least 50% marks in annual system or 2.00 CGPA on the scale of 4.00 in semester system with equivalency certificate from IBCC Islamabad are eligible to apply.
 - ◆ **2.5 Years:** Candidates holding 14 years of Bachelor degree in Biological Sciences with at least 50% marks in annual system or Associate Degree in any Allied Health disciplines, other than MLT, with at least 2.00 CGPA on the scale of 4.00 from any recognized university/DAI will join from the Bridge semester of their degree program. After Bridge Semester, the scheme from 5th till 8th Semester will be followed.
 - ◆ **2 Years:** Candidates holding Associate Degree in MLT with at least 2.00 CGPA on the scale of 4.00 from any recognized university/ institution will join from the 5th semester of their degree program. The candidate will study more credit hour's than he has studied in his previous university/DAI.
- Candidates needs to pass an entry test or an aptitude interview conducted by the University.

Program Learning Outcomes:

- ◆ Graduates will demonstrate in-depth knowledge of Anatomy, Physiology, Biochemistry and disease process especially general and special pathology of human body
- ◆ Graduates will exhibit proficiency to manage & maintain the laboratory cleanliness and sterilization of laboratory instruments and maintenance of the machines and equipment's requires for caring out different tests of the patients.
- ◆ Graduates will adhere to the highest ethical standards demonstrating professionalism, effective communication and commitment to avoid contamination in order to ensure the patient safety and quality care.
- ◆ Graduates will be able to work as an effective member of laboratory team.
- ◆ Graduates will engage in continuous professional development, research and education in the field of medical laboratory to improve patient care.

Program Learning Objectives:

- ◆ To have in-depth knowledge of Physiology, Biochemistry, Pathology and Anatomy of human body focusing on diagnostic elements.
- ◆ To enable the students to have necessary technical skills to operate, manage, troubleshoot & maintenance of Laboratory equipment.
- ◆ To enable to maintain protective and cross contamination free environment in the Laboratory and patient sample taking area.
- ◆ To inculcate ethical principles and professional standards in students making them useful members of the medical laboratory team.
- ◆ To keep abreast with academic research to have new knowledge undergoing in the field.

Bridge Semester (for BS 2.5 years program)

Course Code	Course Title	Cr. Hrs.19
AHS 101	Human Anatomy	2-1
AHS 103	Human Physiology	2-1
AHS 200	General Pathology	2-1
MLT 216	RBC Disorders	2-1
MB 200	Basic Medical Microbiology	2-1
AHS 214	General Pharmacology	2-1
QT 101	Understanding of Holy Quran-I (Only for Muslims)	0-1
MR 101	Minority Rights in the Constitution of Pakistan-I (Only for Non-Muslims)	1-0

Scheme of Studies

1st Semester

Course Code	Course Title	Cr. Hrs. 18
AHS 101	Human Anatomy	2-1
AHS 103	Human Physiology	2-1
AHS 105	Introduction to Medical Biochemistry	1-1
GE 116	Quantitative Reasoning - I (Pre-Calculus)	3-0
ENG 100	Functional English	3-0
GH 101/102	Islamic Studies/ Value, Ethics and Society (For Non-Muslims)	2-0
GE 115	Introduction to Sociology	2-0

2nd Semester

Course Code	Course Title	Cr. Hrs. 17
MLT 109	Introduction to Medical Lab Technology	2-0
AHS 107	First Aid & Emergency Care	1-1
AHS 109	Introduction to Medical Equipment & Technology	2-1
AHS 111	Introduction to Allied Health Sciences - I	2-0
AHS 113	Patient Safety & Infection Control	1-1
GE 119	Quantitative Reasoning - II (Introduction to Statistics)	3-0
IT 107	Applications of ICT	2-1

3rd Semester

Course Code	Course Title	Cr. Hrs. 18
AHS 209	Introduction to Allied Health Sciences - II	2-0
AHS 200	General Pathology	2-1
AHS 221	Introduction to Public Health and Epidemiology	3-0
GE 110	Introduction to Philosophy	2-0
GE 205	Civics and Community Engagement	2-0
GE 109	Ideology and Constitution of Pakistan	2-0
MB 200	Basic Medical Microbiology	2-1
QT 101	Understanding of Holy Quran - I (for Muslims)	0-1
MR 101	Minority Rights in the Constitution of Pakistan-I (for Non-Muslims)	1-0

4th Semester

Course Code	Course Title	Cr. Hrs. 18
AHS 214	General Pharmacology	2-1
ENG 116	Expository Writing	3-0
AHS 217	Healthcare Systems & Policies	2-0
AHS 213	Healthcare Marketing & Management	2-0
AHS 219	Introduction to Nursing Practice	2-1
GE 307	Entrepreneurship	2-0
GH 103	Pakistan Studies	2-0
QT 300	Understanding of Holy Quran - II (for Muslims)	0-1
MR 300	Minority Rights in the Constitution of Pakistan-II (for Non-Muslims)	1-0

5th Semester

Course Code	Course Title	Cr. Hrs. 18
MLT 329	Hematology-I	2-1
MLT 327	Clinical Biochemistry	2-1
MLT 323	Clinical Bacteriology and Virology	2-1
MLT 331	Medical Laboratory Instrumentations	2-1
MLT 337	Molecular Biology	2-1
MLT 339	Supervised Clinical Practice - I: Biochemistry	0-3

6th Semester

Course Code	Course Title	Cr. Hrs. 18
MLT 318	Chemical Pathology	2-1
MLT 333	Medical Parasitology & Mycology	2-1
RES 312	Scientific Writing & Research Methods	3-0
MA 219	Biostatistics	3-0
MLT 437	Hematology-II	2-1
MLT 321	Supervised Clinical Practice - II: Microbiology	0-3

Summer Semester

Course Code	Course Title	Cr. Hrs. 03
SI 450	Supervised Internship	0-3

7th Semester

Course Code	Course Title	Cr. Hrs. 18
MLT 407	Immunology & Serology	2-1
MLT 433	Blood Bank & Transfusion Medicine	2-1
CS 338	Bioinformatics	2-1
MLT 431	Biomarkers in Disease Diagnosis	2-1
MLT 435	Forensic & Toxicology	2-1
MLT 429	Supervised Clinical Practice - III: Hematology	0-3

8th Semester

Course Code	Course Title	Cr. Hrs. 17
AI 323	Artificial Intelligence in Health Care	3-0
MLT 423	Clinical Lab Management	2-0
MLT 425	Cytology and Histotechniques	2-1
MLT 325	Biotechnology	2-1
MLT 439	Supervised Clinical Practice - IV: Immunology and Serology	0-3
RES 485	Capstone Project	0-3



Bachelor of Science in Human Nutrition & Dietetics

Recognized by Allied Health Professionals Council (AHPC)

Program Details	(4 Years)	(2.5 Years)	(2 Years)
Program Code	196	316	245
Number of Courses	47 + 2 SCP + Certifications + SI + Capstone Project	26 + 2 SCP + Certifications + SI + Capstone Project	20 + 2 SCP + Certifications + SI + Capstone Project
Credit Hours	141	90	73
Minimum Duration	8 Semesters, 4 Years	5 Semesters, 2.5 Years	4 Semesters, 2 Years
Maximum Duration	12 Semesters, 6 Years	9 Semesters, 4.5 Years	8 Semesters, 4 Years
Minimum CGPA To Earn Degree	2.00	2.00	2.00

Eligibility Criteria:

- ◆ **4 Years:** Candidates with HSSC (Pre-Medical/Pre Engineering/Food related subject/DAE in food related subjects) or A-Levels with equivalency certificate from IBCC Islamabad with at least 50% marks are eligible to apply.
Candidate with Diploma in relevant field with at least 50% marks in annual system or 2.00 CGPA on the scale of 4.00 in semester system with equivalency certificate from IBCC Islamabad are eligible to apply.
- ◆ **2.5 Years:** The candidates holding Associate Degree in non-relevant Allied Health disciplines with at least 50% marks in annual system or at least 2.00 CGPA on the scale of 4.00 from any recognized university/DAI, he will be allowed to take admission in 2.5 years track subject to departmental approval. In such cases he or she will attend the Bridge Semester of the same discipline and will follow the scheme of study from 5th till 8th semester.
- ◆ **2 Years:** Candidates holding Associate Degree in Human Nutrition & Dietetics or Equivalent degree with at least 2.00 CGPA on the scale of 4.00 from any recognized university/DAI will join from the 5th semester of their degree program. The candidate will study more credit hour's than he has studied in his previous university/DAI.

Candidates will have to appear in an entry test / interview to be conducted by any registered Testing Agency or University.

Program Learning Objectives:

- ◆ To abreast the students with a deep understanding of Anatomy, Physiology, Pharmacology and Biochemistry especially relevant to the field of nutrition and dietetics which is intake of food, its absorption, assimilation and utilization by the human body.
- ◆ To impart the student the knowledge of good nutrition important for the normal growth, development, delaying aging, healthy pregnancy outcomes, maintaining a healthy body and reducing the risks of chronic diseases leading to overall health of wellbeing.
- ◆ To develop the fundamental education of nutrition in order to help the individuals to establish food habits and practices that are consistent with the nutritional needs of the body and adopted to the cultural patterns and food resources in the area in which they live.
- ◆ To prepare the graduates for leadership roles and continuous professional developments in the field of nutrition, engaging themselves in research, education and advocacy.
- ◆ To enhance the students understanding of professional and ethical standards, emphasizing patients' safety, quality assurance and effective communication within the nutrition and dietetic team.

Program Learning Outcomes:

- ◆ Graduates will be able to demonstrate the knowledge of human structure, its functions and intake of food, digestion, its absorption, assimilation, utilization and disease process.
- ◆ Graduates will exhibit the knowledge regarding nutritional assessment techniques, skills and attitude necessary to diagnose health problems due to consumption of non-optimal quantities of the nutrients.
- ◆ Graduates will grasp the knowledge about the microbial contamination of foods and factors effecting the growth of microorganisms leading to food born infections, intoxications and role of probiotics in our daily life.
- ◆ Graduates will adhere to the highest ethical standards demonstrating professionalism, effective communication and commitment to patient safety and quality care.
- ◆ Graduates will play leadership role in the field of nutrition and dietetics, engaging themselves in continuous learning, research and advance proposal in the field to improve patient outcome.

Scheme of Studies

Bridge Semester (for BS 2.5 years program)

Course Code	Course Title	Cr. Hrs. 17
HND 100	Introduction to Food Science and Technology	2-1
HND 102	Fundamentals of Human Nutrition and Dietetics	3-0
HND 106	Macro and Micro Nutrients	3-0
HND 108	Food Microbiology and Biotechnology	2-1
HND 201	Food Safety & Quality Management	3-0
HND 203	Functional Foods & Nutraceuticals	2-0

1st Semester

Course Code	Course Title	Cr. Hrs. 18
GE 116	Quantitative Reasoning-I (Pre-Calculus)	3-0
ENG 100	Functional English	3-0
AHS 101	Human Anatomy	2-1
AHS 103	Human Physiology	2-1
HND 100	Introduction to Food Science and Technology	2-1
HND 102	Fundamentals of Human Nutrition and Dietetics	3-0

2nd Semester

Course Code	Course Title	Cr. Hrs. 17
GE 119	Quantitative Reasoning-II (Introduction to Statistics)	3-0
IT 107	Applications of ICT	2-1
GE 115	Introduction to Sociology	2-0
HND 106	Macro and Micro Nutrients	3-0
HND 108	Food Microbiology and Biotechnology	2-1
GE 109	Ideology & Constitution of Pakistan	2-0
QT 101	Understanding of Holy Quran-I (only for Muslims)	0-1
MR 101	Minority Rights in the Constitution of Pakistan-I (only for Non-Muslims)	1-0

3rd Semester

Course Code	Course Title	Cr. Hrs. 16
GH 101/102	Islamic Studies/ Value, Ethics and Society (For Non-Muslims)	2-0
GH 103	Pakistan Studies	2-0
GE 110	Introduction to Philosophy	2-0
HND 201	Food Safety & Quality Management	3-0
HND 203	Functional Foods & Nutraceuticals	2-0
MB 200	Basic Medical Microbiology	2-1
GE 205	Civics and Community Engagement	2-0

4th Semester

Course Code	Course Title	Cr. Hrs. 17
GE 307	Entrepreneurship	2-0
ENG 116	Expository Writing	3-0
AHS 200	General Pathology	2-1
HND 210	Clinical Biochemistry	2-1
HND 212	Food Service Management	1-1
HND 214	Fundamentals of Food Systems	3-0
QT 300	Understanding of Holy Quran-II (for Muslims)	0-1
MR 300	Minority Rights in the Constitution of Pakistan-II (for Non-Muslims)	1-0

The student may Exit with Associate Degree in Human Nutrition & Dietetics after completion of 04 semesters in BS HND degree program subject to given terms and conditions.

5th Semester

Course Code	Course Title	Cr. Hrs. 18
HND 300	Analytical Techniques in Food and Nutrition	1-2
HND 302	Community and Public Health Nutrition	3-0
HND 304	Nutrition through life cycle	3-0
HND 306	Meal Planning and Management	2-1
HND 308	Nutritional Assessment	2-1
HND 310	Dietetics-I	2-1

6th Semester

Course Code	Course Title	Cr. Hrs. 19
HND 320	Food & Drug Laws and Regulations	2-0
HND 322	Research Methods in Food and Nutrition	1-1
HND 324	Food Product Development	1-2
HND 326	Dietetics-II	2-1
HND 328	Supervised Practicum-I	0-3
HND 330	Nutritional Psychology	3-0
HND 332	Nutrition in Emergencies	3-0

Summer Semester

Course Code	Course Title	Cr. Hrs. 03
SI 450	Supervised Internship	0-3

7th Semester

Course Code	Course Title	Cr. Hrs.18
HND 401	AI in Food & Nutrition	3-0
HND 403	*Food and Nutrition Certifications	0-3
HND 405	Supervised Practicum-II	0-3
HND 407	Nutrition Education & Counseling	2-1
HND 409	Maternal & Child Nutrition	3-0
HND 411	Nutrition & Mental Health	3-0

*BS Human Nutrition & Dietetics students are required to complete three certifications (equivalent to 3 credit hours in total) over the period of four-year program as a mandatory condition for degree completion. Each certification will be considered equivalent to 1 credit hour if it comprises at least 16 hours. The respective department will guide students in selecting relevant certifications, ensuring alignment with current market needs and the program's objectives.

8th Semester

Course Code	Course Title	Cr. Hrs. 15
HND 431	Food and Nutrition Policies	3-0
HND 433	Nutritional Epidemiology	3-0
HND 435	Nutrition Metabolism & Endocrinology	3-0
HND 437	Nutrition Program Planning and Evaluation	3-0
RES 485	Capstone Project	0-3



Bachelor of Science in Optometry Technology

Recognized by Allied Health Professionals Council (AHPC)

Program Details	(4 Years)	(2.5 Years)	(2 Years)
Program Code	224	312	311
Number of Courses	52 + 4 SCP + SI + Capstone Project	30 + 4 SCP + SI + Capstone Project	22 + 4 SCP + SI + Capstone Project
Credit Hours	142	90	71
Minimum Duration	8 Semesters, 4 Years	5 Semesters, 2.5 Years	4 Semesters, 2 Years
Maximum Duration	12 Semesters, 6 Years	9 Semesters, 4.5 Years	8 Semesters, 4 Years
Minimum CGPA To Earn Degree	2.00	2.00	2.00

Eligibility Criteria:

- ◆ **4 Years:** Candidates with HSSC (Pre-Medical / Relevant Technology) or A-Levels with equivalency certificate from IBCC Islamabad with at least 50% marks are eligible to apply.
Candidate with Diploma from any Medical Faculty in relevant field with at least 50% marks in annual system or 2.00 CGPA on the scale of 4.00 in semester system with equivalency certificate from IBCC Islamabad are eligible to apply.
- ◆ **2.5 Years:** The candidates holding Associate Degree in non-relevant Allied Health disciplines with at least 50% marks in annual system or at least 2.00 CGPA on the scale of 4.00 from any recognized university/DAI, he will be allowed to take admission in 2.5 years track subject to departmental approval. In such cases he or she will attend the Bridge Semester of the same discipline and will follow the scheme of study from 5th till 8th semester.
- ◆ **2 Years:** Candidates holding Associate Degree in Relevant Technology with at least 2.00 CGPA on the scale of 4.00 from any recognized university/DAI will join from the 5th semester of their degree program. The candidate will study more credit hour's than he has studied in his previous university/DAI. Candidates will have to appear in an entry test / interview to be conducted by any registered Testing Agency or University.

Program Learning Objectives:

The Vision Sciences department has been developed to provide access to undergraduate education in a diverse range of specialties in the field of Optometry. The students will carry out full eye examinations and gain specialist skills such as pediatric, binocular vision, contact lens and dispensing. In addition, they will examine patients with a range of eye diseases and gain experience in dispensing spectacles.

The key purpose of the program is to provide optometrists with up-to-date research-based clinical and theoretical knowledge of a wide range of fields, particularly in primary care optometry. Emphasis is placed on 'share-care' or 'co-management' of patients with other medical disciplines and the expansion of the optometrist's role in ocular therapeutics.

The program integrates clinical and theoretical knowledge, making extensive use of expert practitioners. The program enables optometrists to continue development and accumulation of knowledge and expertise relating to ocular health care and vision science during their professional careers.

Program Learning Outcomes:

- At the end of 4 years program, student should have basic knowledge and skills required to work as an optometrist and are supposed to have the following performance capabilities.
- ◆ Able to differentiate / detect normal and abnormal eyes.
 - ◆ Able to take history of the patient with refractive errors
 - ◆ Able to examine the anterior segment of the eyes prescribe eye glass
 - ◆ Able to perform screening for refractive error
 - ◆ Able to carry out basic optometric procedures
 - ◆ Able to have basic knowledge about various diagnostic optometric procedures
 - ◆ Able to educate patients regarding eye care
 - ◆ Able to carry out basic contact lens fitting low vision & orthotics assessment
 - ◆ Able to initiate research in the area of optometry

Scheme of Studies

Bridge Semester (for BS 2.5 years program)

Course Code	Course Title	Cr. Hrs. 19
OPT 100	Introduction to Optometry Technology	2-0
AHS 107	First Aid & Emergency Care	1-1
AHS 109	Introduction to Medical Equipment & Technology	2-1
AHS 113	Patient Safety & Infection Control	1-1
AHS 221	Introduction to Public Health & Epidemiology	3-0
MB 200	Basic Medical Microbiology	2-1
AHS 219	Introduction to Nursing Practice	2-1
QT 101	Understanding of Holy Quran - I (for Muslims)	0-1
MR 101	Minority Rights in the Constitution of Pakistan - I (for Non-Muslims)	1-0

1st Semester

Course Code	Course Title	Cr. Hrs. 18
AHS 101	Human Anatomy	2-1
AHS 103	Human Physiology	2-1
AHS 105	Introduction to Medical Biochemistry	1-1
GE 116	Quantitative Reasoning - I (Pre-Calculus)	3-0
ENG 100	Functional English	3-0
GH101/102	Islamic Studies/ Value, Ethics and Society (For Non-Muslims)	2-0
GE 115	Introduction to Sociology	2-0

2nd Semester

Course Code	Course Title	Cr. Hrs. 17
OPT 100	Introduction to Optometry Technology	2-0
AHS 107	First Aid & Emergency Care	1-1
AHS 109	Introduction to Medical Equipment & Technology	2-1
AHS 111	Introduction to Allied Health Sciences - I	2-0
AHS 113	Patient Safety & Infection Control	1-1
GE 119	Quantitative Reasoning - II (Introduction to Statistics)	3-0
IT 107	Applications of ICT	2-1

3rd Semester

Course Code	Course Title	Cr. Hrs.18
AHS 209	Introduction to Allied Health Sciences - II	2-0
AHS 200	General Pathology	2-1
AHS 221	Introduction to Public Health and Epidemiology	3-0
GE 110	Introduction to Philosophy	2-0
GE 205	Civics and Community Engagement	2-0
MB 200	Basic Medical Microbiology	2-1
GE 109	Ideology and Constitution of Pakistan	2-0
QT 101	Understanding of Holy Quran - I (for Muslims)	0-1
MR 101	Minority Rights in the Constitution of Pakistan - I (for Non-Muslims)	1-0

4th Semester

Course Code	Course Title	Cr. Hrs.18
AHS 214	General Pharmacology	2-1
ENG 116	Expository Writing	3-0
AHS 217	Healthcare Systems & Policies	2-0
AHS 213	Healthcare Marketing & Management	2-0
AHS 219	Introduction to Nursing Practice	2-1
GE 307	Entrepreneurship	2-0
GH 103	Pakistan Studies	2-0
QT 300	Understanding of Holy Quran - II (for Muslims)	0-1
MR 300	Minority Rights in the Constitution of Pakistan - II (for Non-Muslims)	1-0

5th Semester

Course Code	Course Title	Cr. Hrs. 18
OPT 201	Anatomy of the Eye	2-1
OPT 203	Physiology of the Eye	2-1
OPT 200	Clinical Refraction & Instrument Optics	2-0
OPT 202	Basic Clinical Skills & Basic Community Ophthalmology	2-0
OPT 207	Geometrical and Physical Optics	2-1
OPT 208	Skills for Adv. Visual Function Assessment	1-1
OPT 211	Supervised Clinical Practice - I	3-0

6th Semester

Course Code	Course Title	Cr. Hrs. 18
HT 334	Introduction to Otolaryngology (ENT)	2-1
OPT 216	Ocular Pharmacology	2-1
OPT 218	Basic Ocular Diseases	1-1
OPT 304	Physiological Visual Optics	1-1
OPT 220	Ophthalmic Nursing	1-1
SR325	General Surgery	2-1
OPT222	Supervised Clinical Practice - II	3-0

Summer Semester

Course Code	Course Title	Cr. Hrs.03
SI 450	Supervised Internship	0-3

Bachelor of Science in Optometry Technology

7th Semester

Course Code	Course Title	Cr. Hrs.17
OPT 313	Dispensing Optics	3-0
OPT 414	Contact Lens & Advanced Contact Lens	2-0
OPT 317	Low Vision	2-0
OPT 308	Orthoptics	2-0
OPT 302	Advanced Ocular Diseases	2-0
RES 312	Scientific Writing & Research Methods	3-0
OPT 416	Supervised Clinical Practice – III	3-0

8th Semester

Course Code	Course Title	Cr. Hrs. 15
OPT 418	Vision Sciences & Clinical Optics	2-0
OPT 405	Pediatric Optometry	2-0
OPT 412	Neuro Ophthalmology	2-0
AI 323	Artificial Intelligence in Health Care	3-0
OPT 421	Supervised Clinical Practice - IV	3-0
RES 485	Capstone Project	0-3



Bachelor of Science in Medical Imaging Technology

Recognized by Allied Health Professionals Council (AHPC)

Program Details	(4 Years)	(2.5 Years)	(2 Years)
Program Code	298	315	299
Number of Courses	51 + 4 SCP + SI + Capstone Project	30 + 4 SCP + SI + Capstone Project	22 + 4 SCP + SI + Capstone Project
Credit Hours	138	86	67
Minimum Duration	8 Semesters, 4 Years	5 Semesters, 2.5 Years	4 Semesters, 2 Years
Maximum Duration	12 Semesters, 6 Years	9 Semesters, 4.5 Years	8 Semesters, 4 Years
Minimum CGPA To Earn Degree	2.00	2.00	2.00

Eligibility Criteria:

- ◆ **4 Years:** Candidates with HSSC (Pre-Medical / Relevant Technology) or A-Levels with equivalency certificate from IBCC Islamabad with at least 50% marks are eligible to apply.
Candidate with Diploma from any Medical Faculty in relevant field with at least 50% marks in annual system or 2.00 CGPA on the scale of 4.00 in semester system with equivalency certificate from IBCC Islamabad are eligible to apply.
- ◆ **2.5 Years:** The candidates holding Associate Degree in non-relevant Allied Health disciplines with at least 50% marks in annual system or at least 2.00 CGPA on the scale of 4.00 from any recognized university/DAI, he will be allowed to take admission in 2.5 years track subject to departmental approval. In such cases he or she will attend the Bridge Semester of the same discipline and will follow the scheme of study from 5th till 8th semester.
- ◆ **2 Years:** Candidates holding Associate Degree in Relevant Technology with at least 2.00 CGPA on the scale of 4.00 from any recognized university/DAI will join from the 5th semester of their degree program. The candidate will study more credit hour's than he has studied in his previous university/DAI. Candidates will have to appear in an entry test / interview to be conducted by any registered Testing Agency or University.

Program Learning Objectives:

- ◆ To develop a strong foundational knowledge in the anatomy of human body, with basic knowledge of its physiology, biochemistry and pathology.
- ◆ To equip the students with practical skills in the use, radiation protection and maintenance of equipment specific to radiology and imaging e.g. ultra-sonography, MRI/CT, Mammography & Fluoroscopy etc.
- ◆ To promote critical thinking and problem-solving abilities through case studies, simulations and clinical rotations in healthcare outlets.
- ◆ To enhance students' understanding of professional and ethical standards in radiology and imaging technology emphasizing patient safety, quality assurance and effective communication.
- ◆ To focus and participate in research and analysis in the field of radiology and imaging.

Program Learning Outcomes:

- ◆ Graduates will demonstrate a comprehensive understanding of radiology and imaging including the anatomy of human body, physiology and pathology.
- ◆ Graduates will demonstrate proficiency in practical skills in the use, radiation protection, troubleshooting and maintenance of equipment specific to radiology and imaging ensuring optimal patient care.
- ◆ Graduates will apply evidence-based practices and critical thinking skills to effectively manage and respond to the clinical challenges in the field of radiology and imaging.
- ◆ Graduates will adhere to the highest ethical standards demonstrating professionalism, effective communication, and a commitment to patient safety and quality care.
- ◆ Graduates will demonstrate skills in research and analysis in the field of radiology and imaging.

Scheme of Studies

Bridge Semester (for BS 2.5 years program)

Course Code	Course Title	Cr. Hrs. 19
MIT 100	Introduction to Medical Imaging Technology	2-0
AHS 107	First Aid & Emergency Care	1-1
AHS 109	Introduction to Medical Equipment & Technology	2-1
AHS 113	Patient Safety & Infection Control	1-1
AHS 221	Introduction to Public Health and Epidemiology	3-0
MB 200	Basic Medical Microbiology	2-1
AHS 219	Introduction to Nursing Practice	2-1
QT 101	Understanding of Holy Quran - I (for Muslims)	0-1
MR 101	Minority Rights in the Constitution of Pakistan - I (for Non-Muslims)	1-0

1st Semester

Course Code	Course Title	Cr. Hrs. 18
AHS 101	Human Anatomy	2-1
AHS 103	Human Physiology	2-1
AHS 105	Introduction to Medical Biochemistry	1-1
GE 116	Quantitative Reasoning - I (Pre-Calculus)	3-0
ENG 100	Functional English	3-0
GH101/102	Islamic Studies/ Value, Ethics and Society (For Non-Muslims)	2-0
GE 115	Introduction to Sociology	2-0

2nd Semester

Course Code	Course Title	Cr. Hrs. 17
MIT 100	Introduction to Medical Imaging Technology	2-0
AHS 107	First Aid & Emergency Care	1-1
AHS 109	Introduction to Medical Equipment & Technology	2-1
AHS 111	Introduction to Allied Health Sciences - I	2-0
AHS 113	Patient Safety & Infection Control	1-1
GE 119	Quantitative Reasoning - II (Introduction to Statistics)	3-0
IT 107	Applications of ICT	2-1

3rd Semester

Course Code	Course Title	Cr. Hrs. 18
AHS 209	Introduction to Allied Health Sciences - II	2-0
AHS 200	General Pathology	2-1
AHS 221	Introduction to Public Health and Epidemiology	3-0
GE 110	Introduction to Philosophy	2-0
GE 205	Civics and Community Engagement	2-0
MB 200	Basic Medical Microbiology	2-1
GE 109	Ideology and Constitution of Pakistan	2-0
QT 101	Understanding of Holy Quran - I (for Muslims)	0-1
MR 101	Minority Rights in the Constitution of Pakistan - I (for Non-Muslims)	1-0

4th Semester

Course Code	Course Title	Cr. Hrs. 18
AHS 214	General Pharmacology	2-1
ENG 116	Expository Writing	3-0
AHS 217	Healthcare Systems & Policies	2-0
AHS 213	Healthcare Marketing & Management	2-0
AHS 219	Introduction to Nursing Practice	2-1
GE 307	Entrepreneurship	2-0
GH 103	Pakistan Studies	2-0
QT 300	Understanding of Holy Quran - II (for Muslims)	0-1
MR 300	Minority Rights in the Constitution of Pakistan - II (for Non-Muslims)	1-0

5th Semester

Course Code	Course Title	Cr. Hrs. 18
RD 205	Radiation Sciences & Technology	1-1
MI 310	General Radiology & Positioning Techniques	1-1
MI 308	Fluoroscopy & Radiological Procedures	2-1
RD 307	Mammography & Special Radiological Techniques	2-1
RD 303	Radiobiology & Radiation Protection	2-0
MI 302	Applied Medicine	3-0
MI 316	Supervised Clinical Practice - I	0-3

6th Semester

Course Code	Course Title	Cr. Hrs. 18
MI 300	Anatomy for Diagnostic Imaging	2-1
MI 304	Computed & Digital Radiography	2-0
MI 306	Computed Tomography - I	1-1
MI 314	Magnetic Resonance Imaging - I	1-1
MI 312	General Surgery	3-0
AI 323	Artificial Intelligence in Health Care	3-0
MI 318	Supervised Clinical Practice - II	0-3

Summer Semester

Course Code	Course Title	Cr. Hrs. 03
SI 450	Supervised Internship	0-3

7th Semester

Course Code	Course Title	Cr. Hrs. 13
MI 400	Computed Tomography - II	1-1
MI 402	Magnetic Resonance Imaging - II	1-1
RD 404	Introduction to Diagnostic Clinical Sonography	1-2
RES 477	Scientific Writing & Research Methods	3-0
MI 416	Supervised Clinical Practice – III	0-3

8th Semester

Course Code	Course Title	Cr. Hrs. 15
RD 415	Clinical Pathology and Radiological Presentation	2-1
RD 402	Therapeutic Radiology	1-1
MD 401	Nuclear Medicine	1-1
RD 312	Interventional Radiology	1-1
MI 422	Supervised Clinical Practice IV	0-3
RES 485	Capstone Project	0-3



Bachelor of Science in Renal Dialysis Technology

Recognized by Allied Health Professionals Council (AHPC)

Program Details:

Program Code	296
Number of Courses	50 + 4 SCP + Internship + Capstone Project
Credit Hours	140
Minimum Duration	8 Semesters, 4 Years
Maximum Duration	12 Semesters, 6 Years
Minimum CGPA Required To Earn Degree	2.00

Program Learning Objectives:

- ◆ The Bachelor of Science in Renal Dialysis Technology is a four-year undergraduate degree program designed to prepare competent, knowledgeable, and skilled dialysis technologists to support the diagnosis, treatment, and long-term management of patients with acute and chronic kidney diseases.
- ◆ The program provides students with a strong foundation in basic medical sciences along with specialized training in renal physiology, dialysis technology, and clinical practice.
- ◆ The program aims to produce highly qualified dialysis professionals through a structured curriculum, experienced faculty, modern teaching methods including video-based demonstrations, and extensive supervised clinical training in advanced dialysis setups.
- ◆ Graduates will be equipped with the technical, clinical, and professional skills required to contribute effectively to patient care, technical services, and healthcare education at both national and international levels.

Eligibility Criteria:

- ◆ Candidates with HSSC (Pre-Medical / Relevant Technology) or A-Levels with equivalency certificate from IBCC Islamabad with at least 50% marks are eligible to apply.
- ◆ Candidate with Diploma in relevant field with at least 50% marks in annual system or 2.00 CGPA on the scale of 4.00 in semester system with equivalency certificate from IBCC Islamabad are eligible to apply.
- ◆ Candidates will have to appear in an entry test to be conducted by any registered Testing Agency or University.
- ◆ Candidates will appear in an interview to be conducted by the University.

Program Outcomes:

The completion of the Bachelor of Science in Renal Dialysis Technology program, the graduates will be able to:

- ◆ Demonstrate in-depth knowledge of renal and dialysis sciences, both in their fundamental concepts and in their application in healthcare institutions.
- ◆ Apply relevant professional knowledge, technical skills, and ethical values in clinical practice.
- ◆ Perform dialysis procedures in different dialysis setups in tertiary care hospitals.
- ◆ Demonstrate positive attitudes and professional behavior toward all personnel and patients.
- ◆ Apply basic research skills to understand and conduct research.
- ◆ Use English language, computer, and communication skills effectively in professional settings.

Scheme of Studies

1st Semester		
Course Code	Course Title	Cr. Hrs. 18
AHS 101	Human Anatomy	2-1
AHS 103	Human Physiology	2-1
AHS 105	Introduction to Medical Biochemistry	1-1
GE 116	Quantitative Reasoning - I (Pre-Calculus)	3-0
ENG 100	Functional English	3-0
GH101/102	Islamic Studies/ Value, Ethics and Society (For Non-Muslims)	2-0
GE 115	Introduction to Sociology	2-0

2nd Semester		
Course Code	Course Title	Cr. Hrs. 17
RDT 100	Introduction to Renal Dialysis Technology	2-0
AHS 107	First Aid & Emergency Care	1-1
AHS 109	Introduction to Medical Equipment & Technology	2-1
AHS 111	Introduction to Allied Health Sciences - I	2-0
AHS 113	Patient Safety & Infection Control	1-1
GE 119	Quantitative Reasoning - II (Introduction to Statistics)	3-0
IT 107	Applications of ICT	2-1

3rd Semester		
Course Code	Course Title	Cr. Hrs.18
AHS 209	Introduction to Allied Health Sciences - II	2-0
AHS 200	General Pathology	2-1
AHS 221	Introduction to Public Health and Epidemiology	3-0
GE 110	Introduction to Philosophy	2-0
GE 205	Civics and Community Engagement	2-0
MB 200	Basic Medical Microbiology	2-1
GE 109	Ideology and Constitution of Pakistan	2-0
QT 101	Understanding of Holy Quran - I (for Muslims)	0-1
MR 101	Minority Rights in the Constitution of Pakistan - I (for Non-Muslims)	1-0

4th Semester		
Course Code	Course Title	Cr. Hrs.18
AHS 214	General Pharmacology	2-1
ENG 116	Expository Writing	3-0
AHS 217	Healthcare Systems & Policies	2-0
AHS 213	Healthcare Marketing & Management	2-0
AHS 219	Introduction to Nursing Practice	2-1
GE 307	Entrepreneurship	2-0
GH 103	Pakistan Studies	2-0
QT 300	Understanding of Holy Quran - II (for Muslims)	0-1
MR 300	Minority Rights in the Constitution of Pakistan - II (for Non-Muslims)	1-0

5th Semester		
Course Code	Course Title	Cr. Hrs. 16
RDT 303	Anatomy and Physiology of Kidney	1-1
RDT 315	Special Pathology of Kidney	2-1
RDT 313	Principle and Procedure of Dialysis	1-1
RDT 301	Acute Complication of Dialysis	2-1
RDT 317	Specialized Dialysis	2-1
RDT 319	Supervised Clinical Practice - I	0-3

6th Semester		
Course Code	Course Title	Cr. Hrs. 18
RDT 309	Pediatric Dialysis	1-1
RDT 305	Chronic Complication of Dialysis - I	1-1
RDT 311	Peritoneal Dialysis	2-1
RES 312	Scientific Writing and Research Methodology	1-2
RDT 307	Computational Biology	1-1
AI 323	Artificial Intelligence in Health Care	3-0
RDT 321	Supervised Clinical Practice - II	2-1

Summer Semester		
Course Code	Course Title	Cr. Hrs. 03
SI 450	Supervised Internship	0-3

7th Semester		
Course Code	Course Title	Cr. Hrs. 16
RDT 402	Complications of Peritoneal Dialysis	2-1
RDT 418	Urological Procedures	2-1
RDT 400	Chronic Complication of Dialysis - II	1-1
RDT 406	Infection Control in Dialysis Unit	1-1
RDT 404	Dialysis Adequacy	2-1
RDT 416	Supervised Clinical Practice - III	0-3

8th Semester		
Course Code	Course Title	Cr. Hrs. 16
RDT 412	Renal Emergency	1-1
RDT 414	Renal Pharmacology	2-1
RDT 410	Nutrition and Diet Therapy	2-1
RDT 408	Leadership and Management	2-0
RDT 422	Supervised Clinical Practice - IV	0-3
RES 485	Capstone Project	0-3



Bachelor of Science in Surgical Technology

Recognized by Allied Health Professionals Council (AHPC)

Program Details	(4 Years)	(2.5 Years)	(2 Years)
Program Code	195	314	313
Number of Courses	47 + 4 SCP + SI + Capstone Project	25 + 4 SCP + SI + Capstone Project	17 + 4 SCP + SI + Capstone Project
Credit Hours	139	87	68
Minimum Duration	8 Semesters, 4 Years	5 Semesters, 2.5 Years	4 Semesters, 2 Years
Maximum Duration	12 Semesters, 6 Years	9 Semesters, 4.5 Years	8 Semesters, 4 Years
Minimum CGPA To Earn Degree	2.00	2.00	2.00

Eligibility Criteria:

- ◆ **4 Years:** Candidates with HSSC (Pre-Medical / Relevant Technology) or A-Levels with equivalency certificate from IBCC Islamabad with at least 50% marks are eligible to apply.
Candidate with Diploma from any Medical Faculty in relevant field with at least 50% marks in annual system or 2.00 CGPA on the scale of 4.00 in semester system with equivalency certificate from IBCC Islamabad are eligible to apply.
- ◆ **2.5 Years:** The candidates holding Associate Degree in non-relevant Allied Health disciplines with at least 50% marks in annual system or at least 2.00 CGPA on the scale of 4.00 from any recognized university/DAI, he will be allowed to take admission in 2.5 years track subject to departmental approval. In such cases he or she will attend the Bridge Semester of the same discipline and will follow the scheme of study from 5th till 8th semester.
- ◆ **2 Years:** Candidates holding Associate Degree in Relevant Technology with at least 2.00 CGPA on the scale of 4.00 from any recognized university/DAI will join from the 5th semester of their degree program. The candidate will study more credit hour's than he has studied in his previous university/DAI. Candidates will have to appear in an entry test / interview to be conducted by any registered Testing Agency or University.

Program Learning Objectives:

- ◆ To have in-depth knowledge of Anatomy, Physiology, Biochemistry and Pathology of human body.
- ◆ To enable the students to have necessary technical skills to manage & maintain the OT cleanliness & sterilization of surgical instruments.
To enable the students to look after the sucker machines etc. They are also trained to prepare surgical trolley according to the due surgical procedure for optimal patient care.
- ◆ To inculcate ethical principles and professional standards in students making them useful members of the surgical team.
- ◆ To keep abreast with academic research to have new knowledge undergoing in the field.

Program Learning Outcomes:

- ◆ Graduates will demonstrate in-depth knowledge of Anatomy, Physiology, Biochemistry and Pathology of human body.
- ◆ Graduates will exhibit proficiency to manage & maintain the OT cleanliness & sterilization of surgical instruments and maintenance of the sucker machines etc. They are also able to prepare surgical trolley according to the due surgical procedure.
- ◆ Graduates will adhere to the highest ethical standards demonstrating professionalism, effective communication and commitment to patient safety and quality care.
- ◆ Graduates will be able to work as an effective member of surgical team.
- ◆ Graduates will engage in continuous professional development in the field of surgery to improve patient care.

Scheme of Studies

Bridge Semester (for BS 2.5 years program)

Course Code	Course Title	Cr. Hrs. 19
SR 100	Introduction to Surgical Technology	2-0
AHS 107	First Aid & Emergency Care	1-1
AHS 109	Introduction to Medical Equipment & Technology	2-1
AHS 113	Patient Safety & Infection Control	1-1
AHS 221	Introduction to Public Health and Epidemiology	3-0
MB 200	Basic Medical Microbiology	2-1
AHS 219	Introduction to Nursing Practice	2-1
QT 101	Understanding of Holy Quran - I (for Muslims)	0-1
MR 101	Minority Rights in the Constitution of Pakistan - I (for Non-Muslims)	1-0

1st Semester

Course Code	Course Title	Cr. Hrs. 18
AHS 101	Human Anatomy	2-1
AHS 103	Human Physiology	2-1
AHS 105	Introduction to Medical Biochemistry	1-1
GE 116	Quantitative Reasoning - I (Pre-Calculus)	3-0
ENG 100	Functional English	3-0
GH101/102	Islamic Studies/ Value, Ethics and Society (For Non-Muslims)	2-0
GE 115	Introduction to Sociology	2-0

2nd Semester

Course Code	Course Title	Cr. Hrs. 17
SR 100	Introduction to Surgical Technology	2-0
AHS 107	First Aid & Emergency Care	1-1
AHS 109	Introduction to Medical Equipment & Technology	2-1
AHS 111	Introduction to Allied Health Sciences - I	2-0
AHS 113	Patient Safety & Infection Control	1-1
GE 119	Quantitative Reasoning - II (Introduction to Statistics)	3-0
IT 107	Applications of ICT	2-1

3rd Semester

Course Code	Course Title	Cr. Hrs. 18
AHS 209	Introduction to Allied Health Sciences - II	2-0
AHS 200	General Pathology	2-1
AHS 221	Introduction to Public Health and Epidemiology	3-0
GE 110	Introduction to Philosophy	2-0
GE 205	Civics and Community Engagement	2-0
MB 200	Basic Medical Microbiology	2-1
GE 109	Ideology and Constitution of Pakistan	2-0
QT 101	Understanding of Holy Quran - I (for Muslims)	0-1
MR 101	Minority Rights in the Constitution of Pakistan - I (for Non-Muslims)	1-0

4th Semester

Course Code	Course Title	Cr. Hrs. 18
AHS 214	General Pharmacology	2-1
ENG 116	Expository Writing	3-0
AHS 217	Healthcare Systems & Policies	2-0
AHS 213	Healthcare Marketing & Management	2-0
AHS 219	Introduction to Nursing Practice	2-1
GE 307	Entrepreneurship	2-0
GH 103	Pakistan Studies	2-0
QT 300	Understanding of Holy Quran - II (for Muslims)	0-1
MR 300	Minority Rights in the Constitution of Pakistan - II (for Non-Muslims)	1-0

5th Semester

Course Code	Course Title	Cr. Hrs. 18
SR 317	Regional & Surgical Anatomy	2-1
SR 311	Fundamentals of Sterilization & Disinfection	2-1
SR 201	Surgical Instruments & Equipment	2-1
SR 210	Anesthesia Techniques & Equipment	2-1
SR 323	Surgical Setup & Positioning	2-1
SR 319	Supervised Clinical Practice I: Gynecology & Obstetrics	0-3

6th Semester

Course Code	Course Title	Cr. Hrs. 18
SR 314	Peri Operative Care	2-1
SR 313	General Surgery & Urology	2-1
SR 315	Operative Gynecology & Obstetrics Surgery	2-1
RES 312	Scientific Writing & Research Methods	3-0
SR 321	Supervised Clinical Practice- II: Surgery & Allied	2-1
MA 219	Biostatistics	3-0

Summer Semester

Course Code	Course Title	Cr. Hrs. 03
SI 450	Supervised Internship	0-3

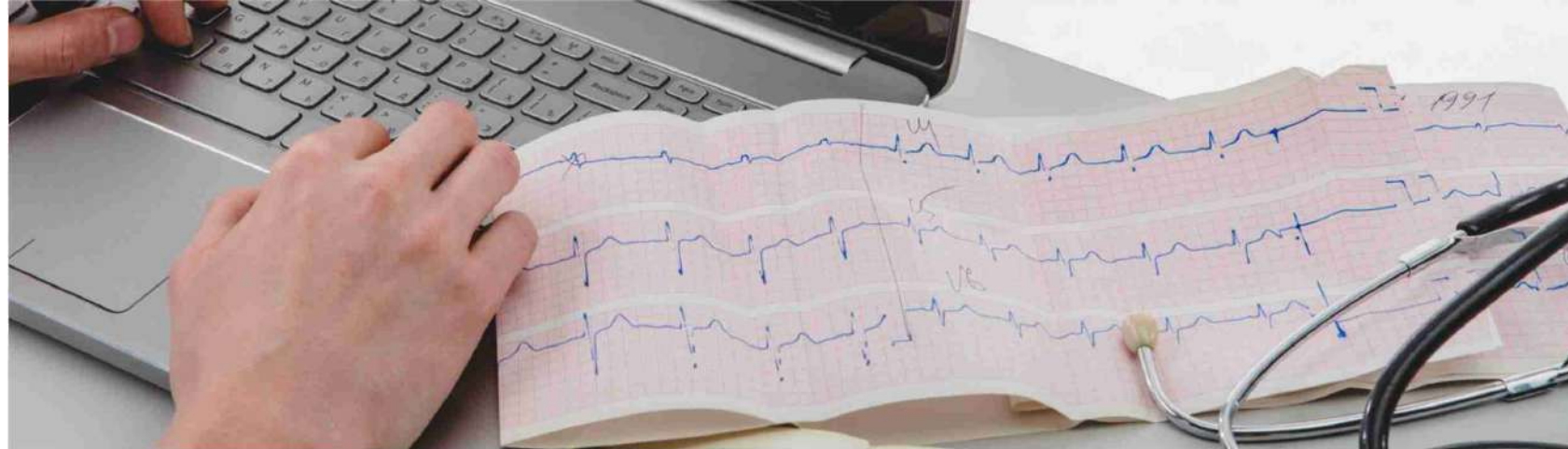
Bachelor of Science in Surgical Technology

7th Semester

Course Code	Course Title	Cr. Hrs. 15
SR 422	Operative Neuro & Orthopedic Surgery	2-1
SR 420	Operative Cardiothoracic Surgery	2-1
SR 419	Operation Theatre Management	2-1
AI 323	Artificial Intelligence in Health Care	3-0
SR 424	Supervised Clinical Practice III: Neuro & Orthopedic	0-3

8th Semester

Course Code	Course Title	Cr. Hrs. 14
SR 412	CSSD Operation and Management	1-1
SR 414	Fundamental of Infection Control	2-1
SR 410	Advanced Operating Theatre Technology	2-1
SR 426	Supervised Clinical Practice IV: Cardiothoracic Surgery	0-3
RES 485	Capstone Project	0-3



Bachelor of Science in Cardiac Perfusion Technology

Recognized by Allied Health Professionals Council (AHPC)

Program Details:

Program Code	256
Number of Courses	52 + 4 SCP + SI + Capstone Project
Credit Hours	142
Minimum Duration	8 Semesters, 4 Years
Maximum Duration	12 Semesters, 6 Years
Minimum CGPA Required To Earn Degree	2.00

Eligibility Criteria:

- ◆ Candidates with HSSC (Pre-Medical / Relevant Technology) or A-Levels with equivalency certificate from IBCC Islamabad with at least 50% marks are eligible to apply.
- ◆ Candidate with Diploma in relevant field with at least 50% marks in annual system or 2.00 CGPA on the scale of 4.00 in semester system with equivalency certificate from IBCC Islamabad are eligible to apply.
- ◆ Candidates will have to appear in an entry test to be conducted by any registered Testing Agency or University.
- ◆ Candidates will appear in an interview to be conducted by the University.

Program Objectives:

- ◆ To provide students with a solid understanding of cardiovascular anatomy, physiology, and pathology relevant to cardiac surgery and perfusion technology.
- ◆ To equip students with the technical skills necessary to operate and manage cardiopulmonary bypass equipment effectively during cardiac surgeries.
- ◆ To train students in clinical settings to develop competency in monitoring and adjusting physiological parameters during cardiopulmonary bypass procedures.
- ◆ To instill ethical principles and professional standards in students, preparing them for responsible practice in cardiac care teams.
- ◆ To encourage research activities that contribute to advancements in perfusion technology, improving patient outcomes and quality of care.

Program Outcomes:

- ◆ Graduates will demonstrate proficiency in operating cardiopulmonary bypass equipment and managing perfusion during cardiac surgeries.
- ◆ Graduates will be capable of monitoring and managing patients on cardiopulmonary bypass, ensuring optimal physiological conditions during surgery.
- ◆ Graduates will apply critical thinking skills to assess and respond to changes in patient condition during cardiac surgeries, ensuring safe and effective perfusion.
- ◆ Graduates will effectively communicate with members of the cardiac surgical team, fostering collaborative and patient-centered care.
- ◆ Graduates will adhere to ethical principles and professional standards in their practice, contributing positively to the healthcare system and maintaining patient safety.

Bachelor of Science in Cardiac Perfusion Technology

Scheme of Studies

1st Semester		
Course Code	Course Title	Cr. Hrs. 18
AHS 101	Human Anatomy	2-1
AHS 103	Human Physiology	2-1
AHS 105	Introduction to Medical Biochemistry	1-1
GE 116	Quantitative Reasoning - I (Pre-Calculus)	3-0
ENG 100	Functional English	3-0
GH101/102	Islamic Studies/ Value, Ethics and Society (For Non-Muslims)	2-0
GE 115	Introduction to Sociology	2-0

2nd Semester		
Course Code	Course Title	Cr. Hrs. 17
CPT 100	Introduction to Cardiac Perfusion Technology	2-0
AHS 107	First Aid & Emergency Care	1-1
AHS 109	Introduction to Medical Equipment & Technology	2-1
AHS 111	Introduction to Allied Health Sciences - I	2-0
AHS 113	Patient Safety & Infection Control	1-1
GE 119	Quantitative Reasoning - II (Introduction to Statistics)	3-0
IT 107	Applications of ICT	2-1

3rd Semester		
Course Code	Course Title	Cr. Hrs. 18
AHS 209	Introduction to Allied Health Sciences - II	2-0
AHS 200	General Pathology	2-1
AHS 221	Introduction to Public Health and Epidemiology	3-0
GE 110	Introduction to Philosophy	2-0
GE 205	Civics and Community Engagement	2-0
MB 200	Basic Medical Microbiology	2-1
GE 109	Ideology and Constitution of Pakistan	2-0
QT 101	Understanding of Holy Quran - I (for Muslims)	0-1
MR 101	Minority Rights in the Constitution of Pakistan - I (for Non-Muslims)	1-0

4th Semester		
Course Code	Course Title	Cr. Hrs. 18
AHS 214	General Pharmacology	2-1
ENG 116	Expository Writing	3-0
AHS 217	Healthcare Systems & Policies	2-0
AHS 213	Healthcare Marketing & Management	2-0
AHS 219	Introduction to Nursing Practice	2-1
GE 307	Entrepreneurship	2-0
GH 103	Pakistan Studies	2-0
QT 300	Understanding of Holy Quran - II (for Muslims)	0-1
MR 300	Minority Rights in the Constitution of Pakistan - II (for Non-Muslims)	1-0

5th Semester		
Course Code	Course Title	Cr. Hrs. 18
CPT 300	Cardiopulmonary Anatomy & Physiology	2-1
CPT 302	Perfusion Technology	2-1
CPT 304	Echocardiography	1-1
CPT 306	Perfusion Safety & Quality Assurance	2-0
CPT 308	Ventricular Assistant Devices	1-1
CPT 310	Principles of Perfusion	3-0
CPT 312	Supervised Clinical Practice-I	3-0

6th Semester		
Course Code	Course Title	Cr. Hrs. 16
CPT 320	Extra Corporeal Membrane Oxygenation (ECMO)	1-1
CPT 322	Pharmacology Related to Perfusion	2-1
CPT 324	Perfusion Equipments	1-1
CPT 326	Electrocardiography	1-1
CPT 328	Critical Care	1-1
CPT 330	Pulmonary Diseases	2-0
CPT 333	Supervised Clinical Practice-II	3-0

Summer Semester		
Course Code	Course Title	Cr. Hrs. 03
SI 450	Supervised Internship	0-3

7th Semester		
Course Code	Course Title	Cr. Hrs. 16
AI 323	Artificial Intelligence in Health Care	3-0
CPT 401	Diseases of Heart	2-0
CPT 403	Cardiac Surgery	1-1
RES 312	Scientific Writing & Research Methods	3-0
SR 325	General Surgery	2-1
CPT 405	Supervised Clinical Practice-III	3-0

8th Semester		
Course Code	Course Title	Cr. Hrs. 18
CPT 410	Perfusion Pathophysiology	3-0
CPT 412	Advanced Perfusion Techniques	1-1
CPT 414	Pediatric & Neonatal Perfusion	1-1
CPT 416	Preventive Cardiology	1-1
HT 322	Blood Disorder	2-1
CPT 419	Supervised Clinical Practice-IV	3-0
RES 485	Capstone Project	0-3



Bachelor of Science in Aesthetics & Skin Care Technology

Recognized by Allied Health Professionals Council (AHPC)

Program Details:

Program Code	303
Number of Courses	49 + 4 SCP + SI + Capstone Project
Credit Hours	138
Minimum Duration	8 Semesters, 4 Years
Maximum Duration	12 Semesters, 6 Years
Minimum CGPA Required To Earn Degree	2.00

Eligibility Criteria:

- ◆ Candidates with HSSC (Pre-Medical / Relevant Technology) or A-Levels with equivalency certificate from IBCC Islamabad with at least 50% marks are eligible to apply.
- ◆ Candidate with Diploma in relevant field with at least 50% marks in annual system or 2.00 CGPA on the scale of 4.00 in semester system with equivalency certificate from IBCC Islamabad are eligible to apply.
- ◆ Candidates will have to appear in an entry test to be conducted by any registered Testing Agency or University.
- ◆ Candidates will appear in an interview to be conducted by the University.

Program Learning Objectives:

The Bachelor of Science in Aesthetic and Skin Care Technology (Allied Health Sciences) program is designed in accordance with the provisions of the HEC Undergraduate Education Policy V 1.1. to provide students with a comprehensive understanding of skin care science and clinical techniques. The program integrates knowledge across key areas such as skin anatomy, cosmetic procedures, product management, and client consultation, equipping students with the skills necessary for clinical practice, research, and further academic pursuits in aesthetic and skin care technology and related fields. Spanning eight semesters, the curriculum offers a balanced and progressive learning experience. Throughout the course of this degree program, students will gain hands-on experience with skin care equipment, treatment techniques, and safety measures essential for professional practice. This program prepares students to effectively manage aesthetic treatments and provide client care in clinical settings, positioning them for careers in spas, clinics, wellness centers, and the cosmetics industry, both within Pakistan and internationally.

Program Outcomes:

By the completion of Bachelor of Science in Aesthetic and Skin Care Technology (Allied Health Sciences) program, the graduates will be able to:

- ◆ Apply scientific principles and techniques to provide safe and effective skin care treatments.
- ◆ Assess client needs, develop treatment plans, and provide personalized aesthetic services in a professional and ethical manner.
- ◆ Utilize latest technologies and products in the field of aesthetic and skin care to enhance treatment outcomes and promote client satisfaction.

Bachelor of Science in Aesthetics & Skin Care Technology

Scheme of Studies

1st Semester		
Course Code	Course Title	Cr. Hrs. 18
AHS 101	Human Anatomy	2-1
AHS 103	Human Physiology	2-1
AHS 105	Introduction to Medical Biochemistry	1-1
GE 116	Quantitative Reasoning - I (Pre-Calculus)	3-0
ENG 100	Functional English	3-0
GH101/102	Islamic Studies/ Value, Ethics and Society (For Non-Muslims)	2-0
GE 115	Introduction to Sociology	2-0

2nd Semester		
Course Code	Course Title	Cr. Hrs. 17
ASC 100	Introduction to Aesthetic and Skin Care Technology	2-0
AHS 107	First Aid & Emergency Care	1-1
AHS 109	Introduction to Medical Equipment & Technology	2-1
AHS 111	Introduction to Allied Health Sciences - I	2-0
AHS 113	Patient Safety & Infection Control	1-1
GE 119	Quantitative Reasoning - II (Introduction to Statistics)	3-0
IT 107	Applications of ICT	2-1

3rd Semester		
Course Code	Course Title	Cr. Hrs. 18
AHS 209	Introduction to Allied Health Sciences - II	2-0
AHS 200	General Pathology	2-1
AHS 221	Introduction to Public Health and Epidemiology	3-0
GE 110	Introduction to Philosophy	2-0
GE 205	Civics and Community Engagement	2-0
MB 200	Basic Medical Microbiology	2-1
GE 109	Ideology and Constitution of Pakistan	2-0
QT 101	Understanding of Holy Quran - I (for Muslims)	0-1
MR 101	Minority Rights in the Constitution of Pakistan - I (for Non-Muslims)	1-0

4th Semester		
Course Code	Course Title	Cr. Hrs. 18
AHS 214	General Pharmacology	2-1
ENG 116	Expository Writing	3-0
AHS 217	Healthcare Systems & Policies	2-0
AHS 213	Healthcare Marketing & Management	2-0
AHS 219	Introduction to Nursing Practice	2-1
GE 307	Entrepreneurship	2-0
GH 103	Pakistan Studies	2-0
QT 300	Understanding of Holy Quran - II (for Muslims)	0-1
MR 300	Minority Rights in the Constitution of Pakistan - II (for Non-Muslims)	1-0

5th Semester		
Course Code	Course Title	Cr. Hrs. 18
ASC 300	Perfumery and Aromatherapy	2-1
ASC 302	Cosmetic Sciences - I (Manufacturing of Cosmetic Products)	2-1
ASC 304	Inflammatory Skin Disorders	3-0
ASC 306	Psychosocial Impact of Skin Diseases	3-0
ASC 308	Cutaneous Manifestation related to Internal Medicine	3-0
ASC 310	Supervised Clinical Practice - I (Dermatological Care)	0-3

6th Semester		
Course Code	Course Title	Cr. Hrs. 15
ASC 312	Cosmetic Sciences - II (Chemical Analysis, Stability, and Dispensing of Cosmetic Products)	2-1
ASC 314	Infections and Infestations of Skin, and Pigmentation Disorders	2-1
RES 312	Scientific Writing and Research Methods	2-1
MA 219	Biostatistics	3-0
ASC 330	Supervised Clinical Practice - II (Aesthetic Procedures)	0-3

Summer Semester		
Course Code	Course Title	Cr. Hrs. 03
SI 450	Supervised Internship	0-3

7th Semester		
Course Code	Course Title	Cr. Hrs. 16
AI 323	Artificial Intelligence in Health Care	3-0
ASC 411	Adverse Effects of Cosmetics and Drugs	1-1
ASC 413	Cosmetic Procedures	1-1
ASC 415	Advanced Cosmetic Chemistry	1-1
ASC 417	Skin Care across the Life Span	2-0
ASC 419	Pharmacology Related to Dermatology	1-1
ASC 421	Supervised Clinical Practice - III	0-3

8th Semester		
Course Code	Course Title	Cr. Hrs. 15
ASC 422	Appendageal Disorders of Skin	1-1
ASC 424	Laser and Light Therapies in Aesthetics	1-1
ASC 426	Regulation and Legislation of Cosmeceuticals	3-0
ASC 428	Emergency Management in Aesthetic Procedures	1-1
ASC 430	Supervised Clinical Practice - IV	0-3
RES 485	Capstone Project	0-3