



جامعة الكويت  
KUWAIT UNIVERSITY

**HEALTH SCIENCES CENTRE**

**FACULTY  
OF  
ALLIED HEALTH SCIENCES**

**HANDBOOK  
2023-2024**



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KUWAIT UNIVERSITY

**HEALTH SCIENCES CENTRE**

**FACULTY  
OF  
ALLIED HEALTH SCIENCES**

**Established: 1982**

**HANDBOOK  
2023-2024**

Official Address: Faculty of Allied Health Sciences  
Kuwait University  
P.O. Box 31470  
90805 Sulaibekhat  
Kuwait.

Telephone: +965 246 34879  
246 38020

The official website of the Faculty of Allied Health Sciences provides access to information, services and resources to help you get the most out of your university experiences.

Website: <http://www.hsc.edu.kw/FAHS/>

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## **INTRODUCTION**

This Faculty Handbook is for the academic year 2023-2024. It guides you with the formal explanation of the Faculty's codes, regulations, policies and procedures. This handbook also gives you details regarding relevant contacts and web links where you can find other additional information.

The Handbook applies to the Faculty of Allied Health Sciences, Health Sciences Centre, Kuwait University and is revised annually. As senior administrators, we oversee student matters and ensure that the Faculty's statutes and policies are followed with particular interest in examinations, conduct & welfare, and other aspects of the academic experience. If you have any concerns or suggestions for improvement, please do not hesitate to bring to the attention of the administration.

We hope that your time at the Faculty is enjoyable and successful.

**OFFICERS OF THE UNIVERSITY  
AND  
THE HEALTH SCIENCES CENTRE**

H.E. Dr. Adel Al Mane  
*Minister of Education, Higher Education & Scientific Research*

Prof. Fayiz Mensher AlDhafeeri  
*Acting President of Kuwait University  
Secretary-General of Kuwait University*

Prof. Osama AlSaeed (Acting)  
*Vice-President for the Health Sciences Centre*

Dr. Mohammed Shabaan Nadar  
*Acting Dean, Faculty of Allied Health Sciences*

Dr. Rashed Al Azemi  
*Acting Dean, Faculty of Dentistry*

Dr. Mona Al Ahmad  
*Acting Dean, Faculty of Medicine*

Prof. Maitham Abbas Khajah  
*Acting Dean, Faculty of Pharmacy*

Dr. Mohammed Shabaan Nadar  
*Acting Dean, Faculty of Public Health*

**OFFICERS OF THE  
FACULTY OF ALLIED HEALTH SCIENCES**

**Administration**

Dr. Mohammed Nadar  
*Dean (Acting)*

Dr. Fahad Manee  
*Vice-Dean for Academic and Student Affairs*

Dr. Rana Al Awadhi  
*Vice-Dean for Research and Postgraduate Studies*

Dr. Mohammed Nadar  
*Vice-Dean for Clinical Consultation and Training*

**Chairpersons of Academic Departments**

Dr. Elham Al Dosari (Acting)  
Health Informatics and Information Management (HIIM)

Prof. Akram Asbeutah (Acting)  
Hearing & Speech Sciences (HSS)

Prof. Thazhumpal Mathew (Acting)  
Medical Laboratory Sciences (MLS)

Dr. Naser Alotaibi (Acting)  
Occupational Therapy (OT)

Dr. Hesham Alrowayeh, (Acting)  
Physical Therapy (PT)

Dr. Layla Ghadhanfer (Acting)  
Radiologic Sciences (RS)



## TELEPHONE LISTING

	<b>Telephone</b>
<b>DEAN</b>	
Dr. Mohammed Nadar, Dean (Acting)	246-34880
Mr. Mostafa Salah, Executive Secretary	246-34879
Ms. Aida Fleifel, Legal Specialist	246-33838
<b>VICE DEAN (ACADEMIC &amp; STUDENT AFFAIRS)</b>	
Dr. Fahad Manee, Vice Dean	
Ms. Marina D'Souza, Executive Secretary	
<b>VICE DEAN (RESEARCH &amp; POSTGRADUATE STUDIES)</b>	
Dr. Rana Al Awadhi, Vice-Dean	246-34872
Ms. Hanan Douki, Secretary	246-34398
<b>VICE DEAN (CLINICAL CONSULTATION &amp; TRAINING)</b>	
Dr. Mohammed Nadar (Vice-Dean)	
Secretary	
<b>OFFICE OF CLINICAL CONSULTATION AND TRAINING</b>	
Ms. Kholood Al Yaseen, Head, Accounting Unit	246-33596
Ms. Sarah Al Saleem, Senior Accountant Clerk	
Ms. Fatma Al Quod	
Ms. Yasmine Al Hadad	
Ms. Abrar Al Mutawa	
Mr. Bader Al Mutawa	
<b>ADMINISTRATION DIRECTOR</b>	
Mr. Abdullah Al Mutairi, Administration Director	246-38040
Mr. Galal Essa, Secretary	246-38020
Ms. Hessa Al Mesbah, Administrative Coordinator	
<b>CONTROLLER OFFICE</b>	
Ms. Nouf Al Hammad, Head, Controller Office	246-34882
Secretary	246-33838
<b>ACADEMIC AFFAIRS OFFICE</b>	
Dr. Noura Al Mujeem, Head, Academic Affairs Office	
Ms. Fatemah Sanaseeri, Assistant Coordinator	246-36854
Ms. Hebah Al Salman, Administration Coordinator	246-33524
Ms. Badryah Al Refaee, Senior Admin Coordinator	

**FACULTY SECRETARY'S OFFICE**

Eng. (Ms.) Jeny Mathew, Electronics Engineer 246-33479  
Mr. Joao de Melo, Senior Secretary

**CHAIRPERSONS**

Dr. Elham Al Dosari, Acting Chairperson (HIIM) 246-34874  
Mr. Faisal Habib, Admin Transactions Chief Specialist 246-34873

Prof. Thazhumpal Mathew, Acting Chairman (MLS) 246-34876  
Secretary 246-34875

Dr. Naser Alotaibi, Chairman (OT) 246-34880  
Ms. Fatma Al Busri, Executive Secretary 246-33823

Dr. Hesham Alrowayeh, Acting Chairman (PT) 246-34866  
Mr. Ossama NorEldin, Senior Secretary 246-34865

Dr. Layla Ghadhanfer, Acting Chairperson (RS) 246-34867  
Ms. Laly Samuel, Senior Secretary 246-34868

Prof. Akram Asbeutah, Acting Chairman (HSS)  
Secretary

**ENGLISH LANGUAGE UNIT (HSC)**

Ms. Debra Hoffer, Director – ELU, HSC 246-34870  
Secretary 246-34869

**PUBLIC RELATIONS OFFICE**

Ms. Elham Al Enezi, Head, Public Relations 246-33850  
Mr. Yahya Dashti  
Ms. Fatma Al Attar, Administration Coordinator  
Ms. Fawzia Abdullah

**STUDENT COUNSELLING AND GUIDANCE OFFICE**

Ms. Makia Mohammed, Head (Acting) 246-33482  
Ms. Fatma Al Musaed, Administration Coordinator  
Ms. Hussa Kalander, Accounts Clerk  
Ms. Sara Al Hajji, Administration Coordinator

**PERSONNEL RELATIONS AFFAIRS**

Ms. Fatma Karam, Head, Personnel Relations Affairs	246-34861
Ms. Shaima Al Abdul Rahim, Assistant Admin. Coordinator	246-34861
Ms. Eman Al Makemi, Assistant Admin. Coordinator	246-33528
Ms. Nour Al Jaser, Assistant Admin. Coordinator	246-36854
Ms. Shaika Al Asfour, Senior Secretary	246-33527
Ms. Samayel Al Fadhly, Assistant Admin. Coordinator	
Ms. Anood Al Nahedh, Senior Translator	
Ms. Shumookh Al Khaldi, Administration Coordinator	

**FINANCE**

Mr. Rashed Al Marshoud, Head, Finance Department	246-34882
Ms. Hanan Hamada, Senior Accounts Clerk	246-33532
Ms. Nadra Al Munayees, Senior Accounts Clerk	2463-3526
Ms. Haya Al Saleh, Administration Coordinator	249-83526
Ms. Asma Tayfouni, Assistant Supervisor Accounts Clerk	249-83526
Mr. Fawaz Al Hasawi, Accountant	
Ms. Fatma Al Yaseen, Assistant Accountant	
Ms. Noura Al Mahana, Accountant	
Ms. Amina AlRefaee, Senior Accountant	
Ms. Fatma Khalifa Al Majed	

**PURCHASING**

Mr. Musaed Al Sana'a, Administration Coordinator	246-33524
Ms. Sara Naqi, Accounts Clerk	
Ms. Alaa Salem Naqi, Beginner Accountant	

**SERVICES AND FOLLOW UP OFFICE**

Mr. Emad Alkhawaled, Head, Services & Follow Up	246-33553
Mr. Ali Belel, Accountant	246-33478
Mr. Shoeb Gazge, Assistant Service Executive	246-33525
Ms. Sara Al Foderi, Administrative Coordinator	
Ms. Sarah Safar, Computer Engineer	246-36824
Ms. Dar'a Al Yatama, Engineer	

**OTHERS**

Mr. Mohammed Qutub, Senior Executive Services	
Mr. Hani Samar Shenouda, Executive Services	
Mr. Mahmoud Ezzat, Senior Technician	

## KUWAIT UNIVERSITY

Kuwait University was established in October 1966. It provides both undergraduate and postgraduate education and follows the course unit system, with two semesters a year and a short summer semester. The first semester starts in September, and the second semester in February. The summer semester runs from June to August.

The Central University Administration is situated in Khaldiya Campus. Kuwait University now has seven campuses namely:

- **Shadadiya Campus:** The newly constructed campus named as, ‘Sabah Al Salem University City’ will consolidate five campuses.
- **Khaldiya Campus:** University Administration, Faculty of Engineering & Petroleum, Faculty of Graduate Studies, Faculty of Computer Science & Engineering and the Faculty of Science
- **Keifan Campus:** Faculty of Life Sciences, Faculty of Education, Faculty of Arts and the Faculty of Shari'a and Islamic Studies
- **Jabriya Campus:** Faculty of Medicine, Faculty of Allied Health Sciences, Faculty of Pharmacy, Faculty of Dentistry and the Faculty of Public Health
- **Shuwaikh Campus:** Faculty of Social Sciences, Faculty of Business Administration, Faculty of Architecture and the Faculty of Law.
- **Adailiya Campus:** College of Computing Sciences and Engineering
- **Fintas Campus:** The Marine Sciences Centre

### FACULTIES/COLLEGES OF KUWAIT UNIVERSITY:

Faculty/College name	Faculty/College name
Allied Health Sciences	Law
Architecture	Life Sciences
Arts	Medicine
Business Administration	Pharmacy
Computer Science & Engineering	Public Health
Dentistry	Science
Education	Sharia and Islamic Studies
Engineering and Petroleum	Social Sciences
Graduate Studies	

The language of instruction in the Faculties of Science, Engineering & Petroleum, Medicine, Allied Health Sciences, Pharmacy and Dentistry is English. The other Faculties in the University teach in Arabic.

## **THE FACULTY OF ALLIED HEALTH SCIENCES**

Kuwait University established a Health Sciences Centre (HSC) headed by a Vice-Rector in February 1982. At present the HSC has five faculties namely: Medicine, Allied Health Sciences, Public Health, Pharmacy and Dentistry. Each faculty is headed by a Dean, who works under the aegis of the Vice-Rector, Health Sciences Centre.

The Faculty of Allied Health Sciences and Nursing (renamed Faculty of Allied Health Sciences in 2004) was established as an independent faculty on 22<sup>nd</sup> June 1982. Prior to that, the School of Allied Health and Nursing was part of the Faculty of Medicine. The Faculty of Medicine, which admitted its first undergraduate medical students in 1976, was given the responsibility for training allied health staff by the Ministry of Public Health's Governing Board for Nursing and Para-Medical Education, which recognised that Kuwait's shortage in allied health personnel was at least as great as that in physicians. The Ministry adopted a policy of training staff locally wherever possible because they would have better knowledge of local circumstances, they could be trained to meet local needs and would provide a more stable population than expatriate staff.

The Governing Board for Nursing and Para-Medical Education recognised the urgent need for training in Medical Laboratory Technology (renamed Medical Laboratory Sciences in June 1996), Medical Record Science (renamed Health Information Administration in 1985 and renamed Health Informatics and Information Management in 2017), Physical Therapy and Radiologic Sciences. Programmes in the Faculty of Medicine in the first four of these fields were approved by the University Council in June 1978 and received their first undergraduates in September 1978. The first Nursing intake was in 1982.

In June 1985 the University Council approved the transformation of the five programmes into fully-fledged academic departments. In June 2001, the University Council issued a decree to transfer the Nursing programme to the College of Health Sciences, Public Authority for Applied Education and Training. Students already in the programme continued their studies in Kuwait University.

The last cohort of Nursing students graduated from the university in 2004. In the same year, the University Council decreed a name change for the Faculty to Faculty of Allied Health Sciences. With the appointment of staff in 2006, a new department of Occupational Therapy was established. A new department of Hearing and Speech Sciences was recently established and will, it is hoped, have its first intake of students in the near future. The Faculty was initially based in the former premises of the Nursing Institute in the grounds of Sabah

Hospital, and later at the University Campus in Shuwaikh.

The Faculty initially admitted at an average of 280 students annually. To cater for increasing numbers of students and staff, the Faculty moved in 2006 to new premises on the Mubarak Al Kabeer Hospital site in Jabriya, where the faculties of Medicine, Pharmacy and Dentistry were already sited.

The Faculty of Allied Health Sciences presently admits around 350 students annually into the following six academic departments:

- Health Informatics and Information Management
- Hearing and Speech Sciences
- Medical Laboratory Sciences
- Occupational Therapy
- Physical Therapy
- Radiologic Sciences   Track I: Diagnostic Radiography  
                                  Track II: Nuclear Medicine Technology

Kuwait University comprises of six campuses that are in Adailiya, Jabriya, Khaldiya, Keifan, Shuwaikh and Fintas. They are minutes away from downtown Kuwait City.

In 2019, a new 490-hectare (1,211-acre) Al Shadadiyah Campus for Kuwait University was launched. In a gesture that carried all meanings of gratitude and loyalty, H.H. Sheikh Sabah Al Ahmad Al Jaber Al Sabah took the initiative to name the new university city by the name of the Late Sheikh Sabah Al Salem Al Sabah to be **“Sabah Al Salem University City”**

The new campus consolidates five different campuses currently dispersed throughout Kuwait. Due to unforeseen circumstances, plans about moving to the new campus have been delayed. The Faculty, it is hoped will move to Sabah Al Salem University City, Al Shadadiya Campus in the very near future.

## **STUDENT UNION**

Location: Ground floor (near PT labs) Tel: 246-38045 (contact through Student Counselling and Guidance Office).

## **STUDENT WELFARE**

A range of services are available to support you during your time at the Faculty. You can get advice and details from your department, your academic advisor (for students), fellow students and administrative staff members. There are a number of specialist services available to students:

### **1. Counselling service**

Counselling service provides free and confidential support to students.  
Location: Counselling and Guidance Office (1<sup>st</sup> floor)  
Tel: 24638045, 24633482.

### **2. Health service**

HSC provides health care for basic health issues.  
Location: Ground floor, Tel: 24636816

- 2.1 Suspending student's study on health or personal grounds  
Contact the Student Counselling and Guidance Office for the procedures for suspending study for health or personal grounds

### **3 Equality and diversity**

The Faculty is committed to promotion an inclusive culture which promotes equality, values diversity and maintains a working, learning and social environment in which the rights and dignity of all its staff and students are respected. No discrimination of gender, nationality or culture.

<https://alziadiq8.com/310797.html> - Web link of a video of Professor Suad AlFadhli, Dean, Faculty of Allied Health Sciences discussing equal opportunities for all students and staff.

### **4. Financial hardship**

If you have any form of financial hardship or develop unforeseen financial hardship, Kuwait University has policies regarding this issue. Contact: Social Worker, Ground floor (Faculty of Medicine), Room 0-36.

## **5. Safety and security**

The HSC and the Faculty campus is generally a safe place to study and socialize in; nevertheless, it is important to take precautions to minimize any risks by staying safe and protecting yourself and your personal possessions. Never leave your personal belongings in classrooms, lecture theatres or laboratories. Park your cars only in designated areas and adhere to official University hours.

- 5.1 The University security services operate 24 hours and should be contacted if needed. The telephone contact number for Health Sciences Centre Security Services is: 246-36127

## **6. Staff-student relationship**

Staff members are advised to refrain from entering into a relationship with a student for whom they have every responsibility as it may lead to the staff member to compromise the integrity of their professional relationship and duties.

## **7. Harassment**

The Faculty will not tolerate any form of harassment and expects all students and staff members to treat each other with respect, courtesy and consideration. The Faculty will take appropriate action under its policies and procedures to protect its students and staff from harassment. Kuwait University Code of Ethics: <[vpa.ku.edu.kw/en/documents](http://vpa.ku.edu.kw/en/documents)>

## **8. Ethics**

### **Code of Ethics for the Faculty of Allied Health Sciences Students**

Your first and closest associates during these months will be your fellow students in your group. As a member of the group, you will need to learn cooperation. The attitudes and ideals of some group members may differ from yours. Each of you will need to be tolerant of others so that the goals may be reached successfully. Listen to others, ask questions, express opinions, correct mistakes and make use of your abilities. Discuss and solve problems together and take pride in the progress the group makes. A competitive atmosphere is desirable; don't envy someone who does better than you - study harder.



In this context students are required to sign the following declaration:

I, as a student of the Faculty of Allied Health Sciences, will apply the following code of ethics to my actions toward patients, physicians and hospital personnel in my clinical training and in my future work. This code will apply both to my personal and professional attitude and conduct.

**As a professional, I will:**

1. Assume a professional manner in attire and conduct
2. Establish a rapport with hospital staff, supervisors and physicians
3. Hold in confidence information relating to patients
4. Strive for increased efficiency and quality through organization
5. Be willing to accept responsibility for my own work and results
6. Strive to learn the theories of laboratory determinations
7. Establish the confidence of the patient through kindness and empathy

**In personal conduct, I will:**

1. Achieve the highest degree of honesty and integrity
2. Maintain adaptability in action and attitude
3. Establish a sense of fraternity among fellow students
4. Strive to have a pleasant manner in the laboratory and with the patients
5. Remember that I am a colleague as well as a Faculty of Allied Health Sciences student, therefore, I should strive to be an educated individual outside my technical field

## **9. DRESS CODE**

Students and staff should be mindful that the Faculty is a working professional environment and are requested not to wear clothes or items of clothing that are a distraction to others, that may cause offence, or which may give rise to concerns about safety. Students should dress in a professional manner to promote the confidence and comfort of the patients with whom they come in contact. The following dress code has been adopted to aid in reaching this goal.

The dress code for the clinical, laboratory and practical settings will be strictly adhered to at all times with no exception. Students who do not follow this dress code will be sent home.

A student who fails to comply with the following regulations will be:

- (1) Personally advised.
- (2) Given a written warning concerning the consequences of their action and a specified time in which to comply.
- (3) Asked to leave the Faculty, a decision which would require approval by the Vice-Rector's Executive Committee.

### **UNIFORM REGULATIONS in Clinical Laboratory and Practical Settings**

1. Suitable length garments (not dragging on the floor) with a white buttoned lab coat on top must be worn at all times.
2. A Kuwait University picture identification card will be worn.
3. Shoes must be clean, close-toed, low-heeled and soft-soled. They cannot be canvas or cloth. Sports type shoes may be worn.
4. Hair must be clean and neatly groomed. Hair longer than shoulder length must be worn up or secured so as not to fall forward. A head cover (Hijab) worn by ladies must be tightly worn.
5. For ladies wearing a veil (face cover) the lower end of the veil should be tucked into the laboratory coat.
6. Men may wear a neatly trimmed beard and/or moustache. The rest of the face must be clean shaven.
7. The following suggestions are made in order to maintain appropriate body hygiene before going to clinical.
  - a. Take daily showers.
  - b. Wash hair often (daily if necessary).
  - c. Brush teeth.
  - d. Trim fingernails to an appropriate length (**no nail polish**).
  - e. Use unscented deodorant (**no colognes, perfumes, or aftershave**) – Scents sometimes make patients ill.
8. A wristwatch with a second hand should be worn.
9. Jewellery should be limited to a wedding ring(s) and no more than one pair of earrings. For safety purposes, **it is preferable that no jewellery be worn**.
10. Students must comply with additional dress code policies which may exist at any given clinical site.

## **10. ACADEMIC EXPECTATIONS**

### **Each student is required to:**

- Adhere to the rules and regulations of the FAHS and Kuwait University.
- Devote adequate time and preparation to class and clinical activities to meet the stated objectives.
- Demonstrate academic integrity in each element of their performance.
- Apply ethical behaviour appropriate to the standards of a developing professional at all times and particularly in relation to maintaining the confidentiality of information regarding patients and clients.
- Maintain personal health.
- Participate in evaluating faculty, courses and programme of study.

### **Learning Environment Behaviour**

- Faculty have a commitment to the professions and the next generation of healthcare professionals and expect professional demeanour and accountability in student behaviour. Thus, we believe that classroom behaviour is as important as clinical behaviour, and we have expectations that students will demonstrate professional behaviour in interactions with faculty, staff and peers.
- Classroom dress is expected to project an image of professionalism.
- Students are responsible for familiarising themselves with all content presented in lectures, labs and required readings, whether in attendance or not. It is expected that students will utilise textbooks and other reference materials to fulfil course objectives.
- Taping or recording is not allowed unless permission has been obtained from the instructor.
- Programmable devices (e.g., calculators and smart watches) are not allowed during assessments, except when approved by the instructor.

**Inappropriate behaviours during course-related activities which could result in course or clinical failure, include but is not limited, to:**

- Administering medications without a licensed nurse present
- Falling asleep in clinical
- Chewing gum
- Arriving late and/or leaving early
- Bullying behaviour
- Cell phones/electronic devices ringing/vibrating for personal reasons in class, during exams, or in patient care areas
- Cheating, plagiarism and academic dishonesty
- Coming unprepared for class, lab or clinical
- Conducting side conversations
- Inappropriate e-mails to professor, staff or other students
- Recording or taking photos of course related activities without permission
- Using a computer in class unrelated to course
- Using profanity in course related activities

**Student identification (KU ID)**

The Kuwait University identity card (KU ID) is to be worn above the waist and in clear view when in uniform. It must be worn in all clinical, testing sites and laboratory settings. The KU ID must not be worn in settings other than clinical, testing site or lab. The official name tag should be worn above the KU ID.

## **FACULTY MISSION AND OBJECTIVES**

### **Mission**

The mission of the Faculty of Allied Health Sciences is to educate and train knowledgeable, skilful and committed allied health professionals who shall assume responsibilities as members of the health care team in the Kuwaiti health care delivery system. In particular, the Faculty aims to graduate allied health professionals who have the requisite entry level competencies, meet the professional standards and who shall adhere to professional ethics in their professions. The Faculty also aims to contribute to the development of the profession and allied health services in Kuwait, both in the Kuwait health care delivery system and in private hospitals, by providing consultancy and other services.

### **Objectives**

The key objectives, therefore, are:

1. To develop, monitor, evaluate, review and maintain a curriculum for the Bachelor's degree programmes that reflects the state-of-the-art in the professions and prepares students for work as a member of the health care delivery team.
2. To liaise with staff in the Ministry of Health in order to provide the optimal environment in the Ministry hospitals and clinics for baccalaureate students to achieve the entry level competencies, through hospital rotations, in their respective profession.
3. To develop, monitor, evaluate, review and maintain postgraduate programmes (Diploma and Masters) that impart and enhance allied health professionals' knowledge and capabilities in their professional area.
4. To develop and provide continuing education/continuing professional development (postgraduate programmes, short courses, lectures, workshops and seminars) for Ministry of Health staff that meet the changing health care needs of Kuwait, and that keep them abreast of the state-of-the-art in their professions.
5. To recruit well qualified and experienced teaching and support staff who will act as role models for students and who keep themselves abreast with scientific advances in the field and apply the state-of-the-art in all

endeavours: teaching, curriculum development and assessment, research, clinical supervision and community service.

6. To provide baccalaureate students with the necessary support and guidance in terms of counselling, and feedback on academic and clinical performance.
7. To provide an optimal learning environment in terms of classrooms, laboratories, learning resources and modalities of teaching and learning.
8. To provide consultancy services to hospitals and clinics in the public sector health care delivery system and in the private sector.

## **FACULTY COMMITTEES**

### **FACULTY COUNCIL**

#### **1 Membership**

Dean (Chairperson)

Chairpersons of Departments

One Full Professor representative to be elected by the Full Professors for a period of two years.

One Associate Professor representative to be elected by the Associate Professors for a period of two years.

One Assistant Professor representative to be elected by the Assistant Professors for a period of two years.

Any other person with special knowledge or expertise may be invited to attend a meeting of the Council as appropriate.

#### **2 Terms of reference**

- a) It shall be the policy-making body in the Faculty.
- b) It shall approve and recommend to the University Council the educational, research and service programmes of the Faculty.
- c) It shall approve and recommend to the University Council all examination results which contribute towards the award of degrees.
- d) It shall set up from among its members or others from the academic staff in the faculty (Professor, Associate Professor and Assistant Professor who have spent at least two years in the Faculty) permanent or temporary committees to study subjects within the Council's competence, such as Student Affairs Committee, Scholarship Committee, Higher Studies and Research Committee, Library and Laboratories Committee.
- e) It shall make recommendations to the University Council for the promotion of academic staff.

- f) It shall approve new developments within the Faculty and where necessary recommend these to the University Council.
- g) It shall recommend to the University Council the regulations of the Faculty.
- h) It shall make recommendations to the University Council for the award of honorary degrees.
- i) It shall deal with any other matters referred or delegated to it by the Dean or University Council.

3 **Meetings**

- a) The Council shall be scheduled as and when needed.
- b) The Secretary of the Council shall be elected from the members and shall undertake to record the minutes which shall be signed by the Dean.
- c) The agenda and any related agenda papers shall be circulated to members of the Council at least two weeks before a meeting is to be held. The agenda shall be circulated to all full-time teaching staff members in the Faculty.
- d) The decisions of the Council shall be circulated to all full-time teaching staff members in the Faculty



## **DEAN'S EXECUTIVE COMMITTEE**

### **1. Membership**

Dean (Chairperson)

Vice-Dean (Academic and Student Affairs)

Vice-Dean (Research and Postgraduate Studies)

Vice-Dean (Clinical Consultation and Training)

Faculty Secretary (Secretary)

Administration Director

Any other person with special knowledge or expertise may be invited to attend a meeting of the Committee as appropriate.

### **2. Terms of reference**

- a) The Dean's Executive Committee will be the executive body of the Faculty.
- b) The Committee shall consider all recommendations from its subordinate committees which are submitted to it.
- c) The Committee shall consider any other matters referred to it by the Dean.
- d) The Dean's Executive Committee may delegate authority to execute decisions.
- e) The Dean's Executive Committee will monitor progress on all activities in the Faculty by its administrative officers.

## **DEAN'S ADVISORY COMMITTEE**

### **1. Membership**

Dean (Chairperson)

Vice-Dean (Academic and Student Affairs)

Vice-Dean (Research and Postgraduate Studies)

Vice-Dean (Clinical Consultation and Training)

Chairpersons of Departments

Director, English Language Unit - HSC

Faculty Secretary (Secretary)

Any other person with special knowledge or expertise may be invited to attend the meeting.

### **2. Terms of reference**

The Dean shall convene meetings of the Committee to gain advice on major matters relating to the operation of the Faculty of Allied Health Sciences.

## **CURRICULUM DEVELOPMENT AND ASSESSMENT COMMITTEE**

### **1. Membership**

The Dean

Vice-Dean (Academic and Student Affairs)

Vice-Dean (Research and Postgraduate Studies)

Vice-Dean (Clinical Consultation and Training)

Director of the English Language Unit - HSC

One representative of each Department

Three representatives of the basic science departments of the Faculties of Medicine, Pharmacy and Dentistry

One representative of the clinical disciplines of the Faculty of Medicine

Any other person with special knowledge or expertise may be invited to attend meetings of the committee as appropriate.

### **2. Terms of reference**

- a) The Committee shall be responsible for planning, timetabling, implementing, reviewing and amending the undergraduate curricula leading to the degrees of B.Sc.
- b) The committee shall be responsible for devising, implementing, reviewing and amending a scheme for the assessment of students pursuing the undergraduate curricula leading to the degree of B.Sc.
- c) The Committee shall also consider any other matters referred to it by the Dean's Executive Committee or its associated committees.

## **LEARNING RESOURCES ADVISORY COMMITTEE**

### **1. Membership**

Vice-Dean (Academic and Student Affairs)  
Vice-Dean (Research and Postgraduate Studies)  
Vice-Dean (Clinical Consultation and Training)  
Director, Allied Health Sciences Library  
One representative of each Department  
Director, Computer Unit  
Chief Technician (Audiovisual)  
Director, English Language Unit - HSC

### **2. Terms of reference**

- a) Advising on the organisation of the Library, Audiovisual Unit and Computer Unit
- b) Recommending regulations to improve the functioning of the Library, Audiovisual Unit and Computer Unit
- c) Recommending policies concerning the acquisition of materials for the Library, Audiovisual Unit and Computer Unit
- d) Making recommendations for the annual budgets
- e) Preparing an annual report
- f) Considering any other matters referred to it by the Dean's Executive Committee or the Health Science Centre Library Committee

### **3. Meetings**

The Committee should normally meet twice per academic year.

## **RESEARCH COMMITTEE**

### **1. Membership**

Vice-Dean (Research and Postgraduate Studies) (Chairperson)  
Dean (ex officio)  
Chairperson nominated by the Dean (ex officio)  
Vice-Dean (Academic Affairs and Student Affairs) (ex officio)  
Vice-Dean (Clinical Consultation and Training)  
The Research Coordinator for each department  
Any other person with special knowledge or expertise may be invited to attend meetings of the committee as appropriate.

The rank of the research coordinator should be at least Associate Professor. The appointment of the department Research Coordinator is made for a period of one year, nominated by the Department Chairperson and confirmation by the Dean and Vice-Dean for Research and Postgraduate Studies (if applicable).

### **2. Functions**

The committee is the principal research body of the Faculty of Allied Health Sciences. It shall be responsible for:

- a) review and assessment of all research proposals in the Faculty.
- b) determining which research proposals shall be reviewed locally and which shall be reviewed externally, in keeping with the university regulations.
- c) determining additional inputs for funding decisions, e.g., ethical review, radiation protection, etc.
- d) making funding decisions on research projects submitted to it, subject to endorsement by the Vice-Rector for Research.
- e) review proposals referred to it by the Dean for scientific meetings, conferences, symposia and workshops to be organized by the Faculty or its departments.

### **3. Procedures**

The committee's deliberations shall be confidential, and the minutes shall be distributed only to members of the committee. Decisions taken shall be communicated to the individual concerned and the Dean's Executive Committee which shall also be informed on all matters of policy.

## **SAFETY AND SECURITY COMMITTEE**

1. **Membership**

Administration Director

One representative from each department and the English Language Unit -HSC

Chief Technicians of the Faculty

Faculty Secretary (Secretary)

2. **Terms of reference**

The Committee shall:

- a) The Committee shall advise the Faculty on policies relating to the safety and security of students and staff.
- b) The Committee shall recommend regulations to improve safety and security within the Faculty.
- c) The Committee shall prepare an annual report to the Dean on safety and security.
- d) The Committee shall consider any other matter referred to it by the Dean's Executive Committee.

## **FACULTY ASSEMBLY**

- a) The Faculty Assembly is a consultative body with no executive powers.
- b) Membership shall be Dean; Vice-Deans and all Faculty teaching staff.
- c) Chaired by the Dean.
- d) The Faculty Assembly will act as a forum for the discussion of major policies before they are submitted to the Faculty Council.

## **EXAMINATION BOARDS**

### **1. Membership**

The Membership of each Examination Board is:

Dean (Chairperson)  
Vice-Dean (Academic and Student Affairs)  
Vice-Dean (Research and Postgraduate Studies)  
Vice-Dean (Clinical Consultation and Training)  
Chairpersons of departments  
Representative of the English Language Unit - HSC  
All staff responsible for courses taught during the semester  
External Examiner (if present in Kuwait)

### **2. Terms of reference**

The terms of reference of each Examination Board are:

- a) to review overall student performance in each course taught in the department during the semester
- b) to review progress of individual students in the department
- c) in accordance with the Faculty Examination Regulations, to determine position of students in the department whose performance is marginal.

### **3. Meetings**

At the end of each semester (except the Summer Semester), after the computation of student's overall marks for each course, the Faculty Secretary convenes an Examination Board for each department.



## **REGULATIONS OF THE COMMITTEES**

1. Meetings shall be held as and when required. The Chairperson shall solicit the agenda and decide on the order/inclusion of the agenda items.
2. Representatives shall be recommended to the Dean annually by the Department Councils through a system of nomination, seconding, and a secret ballot. Representatives may be recommended for one consecutive re-nomination as representative of the department on a committee.
3. The Committee may invite guests to attend meetings as appropriate.
4. By vote of a simple majority of the members present, by secret ballot, the Committee may declare itself in "closed session". Decisions made in a closed session shall be reported in the minutes but not the discussion which occurred during such a session.
5. A quorum shall be formed with a simple majority of members present.
6. The Chairperson may only vote at a committee meeting to break a tie vote.
7. The Committee may form any permanent or temporary sub-committees pertinent to its specified responsibilities.
8. Any amendments proposed to the Terms of Reference of the Committee shall require prior notification to the Chairperson. A two-thirds majority of the Committee shall be required to adopt such amendments and recommend them to the Dean's Executive Committee.

## CENTRE FOR EXCELLENCE

The Centre for Excellence was established in the Faculty of Allied Health Sciences in January 2019, to develop and support the faculty in delivering high-quality, innovative teaching and learning experiences. In doing so, the faculty will globally be recognised for excellence in the education of students and community services. The Centre offers workshops, seminars, discussion groups, mentoring opportunities to support professional development, facilitate relationships and connections among faculty and students, and strive to make activities interactive, inclusive, authentic, holistic, and supportive.

Supported by Centre for Excellence till date, the Faculty has three functional units namely:

### **1. Artificial Intelligence Unit and Quick Response Coding Unit**

Artificial intelligence (AI) driven by machine learning (ML) algorithms is a branch in computer science that is rapidly gaining popularity within the healthcare sector. Educating the next generation of medical professionals with the right ML techniques will enable them to become part of this emerging data science revolution. The AI technology will go hand in hand with our education system through the virtual content creating adaptive learning techniques with customized tools for improving the learning experiences. This technology might even help the students know how their career paths look like depending on their goals thus assisting them beyond academics.

Quick Response (QR) codes are basically an upgraded version of barcodes that can hold more information and be used in various cases. QR codes can be scanned by smartphones to reveal the information that they encode precisely and with ease. The Faculty has implemented the usage of QR effectively, as events and conference invites, lecture podcast accessibility, student attendance and even on-course notes, thus minimizing considerable amount of paperwork and time. The initial achievements are:

- Staff Profile consolidated in QR Code in Business cards enabling a boost in QS ranking
- built a network in research activities and collaboration
- display of daily schedule of classrooms

## **2. Alumni Unit and Research & Development Unit**

Alumni Unit works on opening channels of communication and networking opportunities between the Faculty and graduates, academics and current students. The Unit works to establish a database that records all FAHS graduates and their majors, to use social media as a means to connect with our alumni, to provide data on our alumni's, to the different departments when and if needed and to invite leaders from our graduate programmes to share their experiences.

## **3. Research & Development Unit**

The Research and Development Unit is a dedicated team that operates within the mandate and accountability of the strategic vision of the Faculty of Allied Health Sciences; to expedite new technological and scientific innovations in the field of medical care. This Unit will trigger a significant increase in the applications of the collaborative and sponsored research done both, nationally and internationally. The unit's roadmap will help facilitate the development of high-value standards with quality characteristics; in both Allied Health Professions and in Academics, thereby ensuring they are directly beneficial to the Kuwaiti community.

## DEGREE PROGRAMMES IN THE FACULTY

### **Bachelor's degree programmes**

- a) Health Informatics and Information Management (B.Sc.)
- b) Medical Laboratory Sciences (B.Sc.)
- c) Occupational Therapy (B.Sc.)
- d) Physical Therapy (B.Sc.)
- e) Radiologic Sciences (B.Sc.)
  - (i) Diagnostic Radiography (DR)
  - (ii) Nuclear Medicine Technology (NMT)

The programmes extend through four years, with the exception of Occupational Therapy which is four and a half years. The first two years are devoted to study of the English language and basic sciences, and an introduction to medical sciences and the Faculty's professions. The third and fourth years (and fifth year in the case of Occupational Therapy) are devoted to the professional training programmes both, theoretical and practical, and include substantial clinical experience in the hospitals of the Ministry of Health.

### **Master's degree programme**

- a) Medical Laboratory Sciences (M.Sc.)



Department of  
**HEALTH INFORMATICS**  
&  
**INFORMATION MANAGEMENT**  
**[HIIM]**



## **DEPARTMENT OF HEALTH INFORMATICS AND INFORMATION MANAGEMENT**

The Bachelor of Science degree programme in Health Informatics and Information Management is built on a rich knowledgebase, encompassing three domains: clinical practice, information management principles and informatics concepts. The curriculum includes distinct knowledge clusters categorized into content areas such as: Biomedical Sciences, Health Data, Healthcare Statistics and Research, Quality Management and Performance Improvement, Health Services Organisation and Delivery, Applied Health Informatics, Organisation and Management, Healthcare Privacy, Confidentiality, Legal and Ethical Aspects, Information Technology and Systems, and others.

The curriculum is distinctive in two ways: First, the specialisation to healthcare throughout the curriculum. Second, the combination of studies in the biomedical sciences, management, and information fields. Curriculum delivery incorporates diversified teaching/learning strategies such as didactic lectures, lab simulations and professional practice experience at affiliated clinical sites off-campus. The department strives to reflect best practices in teaching, and latest developments in the field through continuously reviewing and revising curriculum content, delivery methods and evaluation techniques. The program aims at fostering the development of graduates who are academically and professionally prepared to assume the responsibilities of leadership in their chosen organisations and communities. They are unique as they are equipped with transformational skills set that may be utilised in different fields, including health care organisations, government agencies, information technology vendors, insurance companies and pharmaceutical companies. With the current and emerging trend and push for electronic health care related records and information exchange networks, Health Informatics and Information Management is one of the most relevant fields in health care today.

### **MISSION AND OBJECTIVES**

#### **Mission**

The Department of Health Informatics and Information Management is devoted to serve the people of Kuwait and its healthcare system by imparting knowledge through excellent teaching, creating new knowledge through research, supporting the community by providing consultancy services, and fostering creativity and its expression.



The Department shall be a premier provider of graduates who are academically and professionally prepared to assume the responsibilities of leadership in their chosen organizations. It is committed to promote research and creative activities by nurturing the development of globally committed faculty, engaged in transformational and applied research, education and service. The Department also aims to facilitate community partnerships through fostering the advancement of a vibrant and actively engaged alumni body.

## **Objectives**

The key objectives are:

1. To provide innovative and progressive education that meets high standards and reflects recent developments, as well as emerging trends in the profession in particular, health care field in general.
2. To nurture and instil the requisite professional attitudes and values in students who shall adhere to professional ethics and demonstrate concern, responsibility and the ability to interact appropriately with other members of the healthcare team, administrators, patients and the public.
3. To equip students with the necessary intellectual and emotional resources by furnishing a strong support system in terms of guidance, counselling and regular feedback on academic and clinical performance.
4. To diversify curriculum delivery methods in order to accommodate for a variety of learning styles by using alternative learning modes, such as, but not limited to:
  - Computer-assisted learning
  - Problem-based learning
  - Self-instructional units
  - Simulated patient information system
  - Student presentations
  - Audio-video controlled decision-making and problem analysis sessions
  - Fieldtrips
  - Guest speakers
  - Simulated reality activities
5. To complement didactic teaching/learning experiences with quality laboratories experiences, including:

- A Health Informatics and Information Management laboratory to simulate a virtual department of a hospital.
  - A Computer laboratory to demonstrate an operational, computerized health information applications.
  - An Audio-Visual laboratory for leadership/managerial learning activities.
6. To develop and provide postgraduate programmes, short courses, lectures, workshops and seminars for Ministry of Health staff that meet the changing health care needs of Kuwait and keep them up-to-date in terms of best practices and evolving professional trends.
  7. To recruit and retain well qualified and experienced teaching and support staff who sustain and add value to the mission of the department.
  8. To serve the community by cultivating strategically selected collaborations with community partners in the public sector health care delivery system and in the private sector.

## **TEACHING STAFF**

Dr. Elham Al Dosari, Associate Professor and Acting Chairperson (2022)  
 B.Sc., 1997, Kuwait University, Kuwait; Postgraduate Diploma in Integrated Research Studies, 2007, Loughborough University, England, U.K.; M.Sc., Kuwait University, Kuwait; Ph.D., 2009, Loughborough University, England, U.K.

Dr. Naser Al Enezi, Associate Professor (1998; rejoined 2007)  
 B.Sc., 1992, Kuwait University; M.H.A., 1994, Medical University of South Carolina, U.S.A.; Ph.D., 1998, University of Wales, U.K.

Dr. Maha Al Nashmi, Assistant Professor (2003)  
 B.Sc., 1984, Kuwait University; M.Sc., 1999, University of Pittsburgh, U.S.A.; Ph.D., 2003, University of Pittsburgh, U.S.A.

Dr. Abdul Majed Al Hashem, Assistant Professor (2003)  
 B.S., 1990, Kuwait University; M.S., University of Pittsburgh, U.S.A.; Ph.D., 2003, University of Pittsburgh, U.S.A.

Dr. Habib Alquraini, Assistant Professor (2003)  
 B.Sc., 1992, Kuwait University; M.Sc., 1999, University of Pittsburgh, Pennsylvania, U.S.A.; Ph.D., 2003, University of Pittsburgh, Pennsylvania, U.S.A.

Dr. Fawzi Al Khawari, Assistant Professor (2004)  
B.Sc. 1995, Kuwait University; M.Sc., 1998, University of Wales, College of  
Medicine, U.K; Ph.D., 2003, Imperial College, University of London, U.K.

Dr. Maha Al Hajeri, Assistant Professor (2006)  
B.Sc., 1994, Kuwait University; M.Sc., 1999, Simmons College, Boston,  
U.S.A.; Ph.D., 2006, University of London, U.K.

Ms. Maha Yunis, Senior Lecturer (Clinical) (2003)  
B.Sc., 1984, Kuwait University; M.Sc., 1985, University of Central Florida,  
U.S.A.; Registered Health Information Administrator (R.H.I.A.), 1991, U.S.A.

Mr. Hamza Al Shawaf, Senior Lecturer (Clinical) (1998)  
B.S., 1985, University of NC, Charlotte, NC, U.S.A.; M.S., 1991, Syracuse  
University, New York, U.S.A.

Ms. Tahani Al Qurba, Senior Lecturer (Clinical) (1997)  
B.Sc., 1994, Kuwait University. M.Sc., 2004, Arabian Gulf University,  
Kingdom of Bahrain.

## **CLINICAL INSTRUCTORS**

Mr. Nabeel Akhtar, Clinical Instructor (A) (1995)  
B.Com., 1991, University of Karachi, Pakistan; MBA, 2005, Sheffield Hallam  
University, U.K.

Ms. Nora Alshammari, Clinical Instructor (A) (2004)  
B.Sc., 1989, Kuwait University.

Ms. Hanadi Alhumaidi, Clinical Instructor (A) (2018)  
B.Sc., 2002, Kuwait University; M.Sc., 2012, Kuwait University.

## **TECHNICAL STAFF**

Mr. Faisal Habib, Administrative Transactions Chief Specialist (1994)  
B. Com., 1981, University of Peshawar, Pakistan; M.Sc., 1992, University of  
Peshawar, Pakistan.

## **SECRETARIAL STAFF**

Department Secretary

## PROGRAMME REQUIREMENTS

The total number of credit hours required for graduation is 127. The programme for the B.Sc. Degree in Health Informatics and Information Management is as follows:

	<b>Credit Hours</b>
<b>1 UNIVERSITY REQUIREMENTS (19 credits)</b>	
0410-115 Finite Mathematics	3
0788-181 English Language	5
0788-182 English Language	5
0788-250 English Language	3
Elective	3
<b>2 FACULTY REQUIREMENTS (23 credits)</b>	
0490-101 Biology	3
0711-105 Introduction to Health Informatics	3
0700-106 First Aid and Emergency Care	3
0480-107 Statistics for Medical Sciences	3
0420-110 Chemistry	3
0420-111 Chemistry Lab.	1
0430-121 Physics	3
0430-125 Physics Lab.	1
0700-220 Psychology of Medical Care (A.H.)	3

### **3            PROFESSIONAL REQUIREMENTS (85 credits)**

0700-152 Physiology I	3
0700-155 Anatomy I	3
0700-316 Clinical Medicine and Pathology	3
0712-345 Introduction to Pharmacology	2
0700-451 Clinical Medicine	2
0711-232 Application of Computer Technology to AHS	4
0711-253 Methods of Problem Solving	3
0711-254 Financial Management in Health Care Admin.	3
0711-255 Introduction to Health Care Management	3
0711-340 Health Information Administration I	4
0711-341 Health Information Admin. Directed Practice I	2
0711-342 Health Information Administration II	2
0711-343 Health Information Admin. Directed Practice II	4
0711-351 Medical Terminology I	3
0711-352 Medical Terminology II	2
0711-353 Organization and Management I	3
0711-354 Hospital Data: Collection, Interpret. & Present.	3
0711-366 Application of Information Tech. (IT) to AHS	3
0711-440 Health Information Administration III	2
0711-441 Health Information Admin. Directed Practice III	5
0711-442 Health Information Administration IV	2
0711-443 Health Information Admin. Directed Practice IV	5
0711-450 Seminar	2
0711-455 Organization and Management II	3
0711-462 In-service Education	3
0711-463 Health Information System	3
0711-466 Organization and Management III	2
0711-471 Quality Assurance and Analysis	3
0711-472 Research and Evaluation of Health Care	3

## PROGRAMME TIMETABLE

### FIRST YEAR

Semester One		Semester Two	
Course	CH	Course	CH
110/111 Chem. & Chem. Lab. or 121/125 Phys. & Phys. Lab.	4	101 Biology	3
115 Finite Mathematics	3	106 First Aid & Emergency Care	3
181 English Language	5	110/111 Chem. & Chem. Lab. or 121/125 Phys. & Phys. Lab.	4
Elective	3	182 English Language	5
<b>Total</b>		<b>Total</b>	
<b>15</b>		<b>15</b>	

### SECOND YEAR

Semester One		Semester Two	
Course	CH	Course	CH
105 Intro. to Health Informatics	3	152 Physiology I	3
107 Stats for Medical Sciences	3	220 Psych. of Med. Care (AH)	3
155 Anatomy I	3	232 Appli. of Comp. Tech. to Allied Health Sciences	4
250 English Language	3	253 Methods of Problem Solving	3
254 Financial Management in Health Care Admin.	3	255 Introduction to Health Care Management	3
<b>Total</b>		<b>Total</b>	
<b>15</b>		<b>16</b>	

### THIRD YEAR

Semester One		Semester Two	
Course	CH	Course	CH
316 Clinical Medicine & Patho.	3	342 Health Info. Admin. II	2
340 Health Info. Admin. I	4	343 Health Information Admin. Directed Practice II	4
341 Health Info. Admin. Directed Practice I	2	345 Introduction to Pharmacology	2
351 Medical Terminology I	3	352 Medical Terminology II	2
354 Hospital Data: Collection, Interpret. & Presentation	3	353 Organization & Manage. I	3
366 Application of Info. Technology (IT) to AHS Technology (IT) to AHS	3	451 Clinical Medicine	2
	<b>Total 18</b>		<b>Total 15</b>

### FOURTH YEAR

Semester One		Semester Two	
Course	CH	Course	CH
440 Health Info. Admin. III	2	442 Health Info. Admin. IV	2
441 Health Information Admin. Directed Practice III	5	443 Health Info. Admin. Directed Practice IV	5
455 Organization & Manage. II	3	450 Seminar	2
462 In-service Education	3	466 Organization & Manage. III	2
463 Health Information System	3	471 Quality Assurance & Analysis	3
		472 Research and Evaluation of Health Care	3
	<b>Total 16</b>		<b>Total 17</b>

## HEALTH INFORMATICS AND INFORMATION MANAGEMENT

### COURSE DESCRIPTIONS

#### YEAR ONE, SEMESTER ONE

##### **0420-110 CHEMISTRY (3-0-3)** (*Faculty of Science*)

Stoichiometry; electronic structure of atoms, periodic table; chemical bonds, introduction to chemistry of elements; chemical thermodynamics, chemical kinetics; chemical equilibria, acids and bases in aqueous solutions.

##### **0420-111 CHEMISTRY LAB (0-3-1)** (*Faculty of Science*)

Fundamental concepts in chemistry, to introduce basic concepts of laboratory work, write report and demonstrate some of topics covered in 110 Chemistry. Students are encouraged to use computer tools for writing lab report, plotting graph and data analysis.

**Corequisite: 110 Chemistry**

##### **0410-115 FINITE MATHEMATICS (3-0-3)** (*Faculty of Science*)

Finite Mathematics develops the logical structure, provides an essential algebraic and statistical background, and emphasises the comprehension of problem-solving techniques for real life problems associated with business, life and social sciences thus, giving insight into the importance of mathematical skills in almost all aspects of human society. This includes solving systems of linear equations, linear programming and the simplex method, rudiments of discrete probability, probability distribution and expected value of a random variable, and elements of statistics.

##### **0788-181 ENGLISH LANGUAGE (10-0-5)**

181 English is the first of three required English Language courses offered in the Faculty. It is a reading-based, multi-skills course intended to advance students' abilities to study content area courses in English. The macro-skills of reading, writing, listening, speaking and grammar are broken down into their component parts to give the students the opportunity to acquire fluency and accuracy in the language of the health sciences.

**Prerequisite: 180 English Language**



## **YEAR ONE, SEMESTER TWO**

### **0490-101 BIOLOGY (2-3-3) (*Faculty of Science*)**

Cellular basis of life: differences in size and complexity of cells as illustrated by viruses, bacteria, protozoa and various types of metazoan cells. Structure and metabolic activities of a generalized eukaryotic cell. Chemical composition and functions of the cell membrane; role of mitochondria, structure of GER and SER and their relation to the Golgi apparatus; structure of the nuclear membrane. Central role of enzymes in cells. Structure of DNA and RNA. Genetic code and protein synthesis. Mitosis and meiosis. Mendelian genetics and inherited diseases. Interactions between eukaryotic cells and bacteria and viruses. Cell mediated immunity. Organization of cells into tissues.

### **0700-106 FIRST AID AND EMERGENCY CARE (2-2-3)**

This course is designed to provide students with basic knowledge of first aid and the skills needed to provide early interventions and care in the event of a health emergency. It enables students to plan an assessment for each casualty, using a methodological two-stage system, first to check and treat life-threatening conditions (primary survey), then to call for help. An overall view of the basic fundamentals of first aid is presented with an emphasis on decision making in emergency situations.

**Prerequisite:** 180 English Language

### **0430-121 PHYSICS (3-0-3) (*Faculty of Science*)**

Methods of physics, elementary mathematics, motion and particle dynamics, mechanics of extended objects, conservation of energy, kinetic theory of gases. Liquids, vibrations and waves, ear and hearing, electricity and conduction in solids, ions and ionic conduction.

### **0430-125 PHYSICS LAB (0-3-1) (*Faculty of Science*)**

The student will learn to enhance the understanding level of concepts in mechanics. Also, to enhance ability in experimental design, data and error analysis and report writing. Student will learn to be acquainted with related instrumentations and experimental techniques as well as to develop skills in communication and ability to work in groups.

**Corequisite:** 121 Physics

### **0788-182 ENGLISH LANGUAGE (10-0-5)**

182 English expands on the content of the five basic language learning skills introduced in 181 English. Students read and listen to materials of a scientific/medical nature, discuss the topics with their classmates to broaden their comprehension, and then write about the topics they have discussed to show they are able to communicate comprehensibly. Grammar instruction is explicit and includes the grammar of science and medicine.

**Prerequisite: 181 English Language**

## **YEAR TWO, SEMESTER ONE**

### **0711-105 INTRODUCTION TO HEALTH INFORMATICS (2-2-3)**

This course is designed to introduce the students to the fundamentals of information technology and systems from the perspective of health informatics. It provides the students with a wide spectrum of computer-related concepts and skills to ensure that they are capable of employing appropriate technologies and tools to manage health information as it relates to their respective discipline. The course covers a variety of topics including computer concepts, computer technology and information systems, statistical software, communication technology, database design and management, and clinical, business, and specialty clinical systems applications. Delivery methods employed for this course combine didactic theory supplemented by lab sessions that will provide hands-on applications of learned theory.

**Prerequisite: Year 1 courses**

### **0480-107 STATISTICS FOR MEDICAL SCIENCES (3-1-3)**

*(Faculty of Science)*

Relevance and principles of Biostatistics with application in Medicine and Biology Descriptive statistics, sampling and sampling distributions. Estimation of parameters, probability and probability distribution, with emphasis on the normal Tests of hypotheses for one or two means and one or two proportions. Measures of association between two continuous variables (correlation and regression) and two discrete variables (chi-square), non-parametric tests commonly used in medicine.

**Prerequisite: Year 1 courses**

### **0700-155 ANATOMY I (2-3-3)**

This course provides an introduction to human morphology at the cell, tissue, and organ system levels of organization. The course is taught through theoretical lectures and practical demonstrations.

**Prerequisite: Year 1 courses**

### **0711-254 FINANCIAL MANAGEMENT IN HEALTH CARE ADMINISTRATION (3-0-3)**

An introductory level course to the principles, concepts and issues of financial management in the health care organization. Focus is upon financial management from the perspective of the department/unit manager and supervisor. Institution-wide accounting and budgeting systems will be discussed primarily as a framework for understanding (i) how financial reporting, planning and control are linked to organisational effectiveness, and (ii) how financial management responsibilities of the departmental manager relate to organisation level financial goals.

**Prerequisite: Year One, Semester Two courses**

### **0788-250 ENGLISH LANGUAGE (6-0-3)**

Language and study skills are perfected using authentic health sciences journal articles relevant to the students' majors. Report writing style, abstract writing, bibliography and referencing techniques are taught.

**Prerequisite: 182 English Language**

## **YEAR TWO, SEMESTER TWO**

### **0700-152 PHYSIOLOGY I (2-2-3)**

This course provides a basic understanding of the physiology of the cell, body fluids, nerves, muscles, blood, functions of the cardiovascular system, respiratory system, renal system, gastrointestinal system, endocrine system and reproductive system. Emphasis is placed on the interactions of the systems.

**Prerequisite: 155 Anatomy I**

### **0700-220 PSYCHOLOGY OF MEDICAL CARE (AHS) (2-2-3)**

The first part of the course provides an overview of Psychology as the basic science concerned with individual human behaviour and mental processes. Empirical studies and theoretical models of basic processes such as learning, memory and perception are introduced. Factors that motivate behaviour are considered, as well as contemporary models that describe and seek to explain the major dimensions of temperament and personality variation.

The second part of the course draws on the material taught in the first part to clarify issues relating to patients' compliance and satisfaction with the medical care they receive. Psychological factors which influence the behaviour and expectations of health professionals and the efficacy of the care they provide are also considered. The special needs of certain patients are highlighted. This includes reference to children, the aged, the dying, the physically handicapped and mentally retarded. Current theories linking stress and illness, methods for reducing stress, and research into pain and pain management are presented. The relationship between sociodemographic variables and health will also be considered.

**Prerequisite: 182 English Language**

### **0711-232 APPLICATION OF COMPUTER TECHNOLOGY TO ALLIED HEALTH SCIENCES (2-4-4)**

Overview of manipulating, organizing, integrating and presenting data using contemporary software packages is the core of this course. Hands-on training is provided in computer applications, document processing and management, spreadsheets and Database Management Systems (DBMS). The course covers various aspects of distributed data processing, networks and the emerging client-server models that could be used in a functional health care delivery system.

**Prerequisite: 105 Introduction to Health Informatics**

### **0711-253 METHODS OF PROBLEM SOLVING (3-0-3)**

The purpose of this course will be to explore theoretically and practically the world of creative thinking. Through the use of creative thinking techniques, the intent of the course is to train each individual to think more creatively.

**Prerequisite: 181 English Language**

### **0711-255 INTRODUCTION TO HEALTH CARE MANAGEMENT (3-0-3)**

A study of basic organizational functions/structure in management of Kuwait's health care system, including coverage of job discrepancies and procedure manuals, workflow and process improvement, with the use of computers in these organizational functions.

**Prerequisite: 106 First Aid and Emergency Care**

## **YEAR THREE, SEMESTER ONE**

### **0700-316 CLINICAL MEDICINE & PATHOLOGY (3-0-3)**

The study of disease processes affecting the human body in relation to etiology, organ system involvement, pathological changes in the structure and function of tissues and organs, specific physical signs and symptoms, diagnostic procedures, common complications, preferred treatment, forecast of outcome of specific disease processes and pertinent public health aspects of specific disease processes.

**Prerequisite: 152 Physiology I**

### **0711-340 HEALTH INFORMATION ADMINISTRATION I (3-2-4)**

The study of the Medical Record field as a profession and as a department. Detailed study of the value and uses of records (the ambulatory inpatient), development retention, content, filing methods and basic indexes. The correlated laboratory is for the application and mastery of concepts learned in the course.

**Prerequisite: Year 2 courses**

### **0711-341 HEALTH INFORMATION ADMINISTRATION DIRECTED PRACTICE I (0-6-2)**

Assignment to various hospitals for practical application of theories learned in health information administration lectures and laboratory. The students work in contact with patients, hospital staff and physicians.

**Prerequisite: Year 2 courses**

**Corequisite: 340 Health Information Administration I**

### **0711-351 MEDICAL TERMINOLOGY I (2-2-3)**

The knowledge of terminology necessary to understand and interpret the information contained in the Medical Record. This knowledge is used to guide and supervise staff responsible for medical correspondence, classification of diseases and operations and research. The practical laboratory experience introduces the student to medical transcription.

**Prerequisite: Year 2 courses**

### **0711-354 HOSPITAL DATA: COLLECTION, INTERPRETATION AND PRESENTATION (3-0-3)**

Introduces the student to the importance of hospital statistics in management, research and epidemiology. Students learn the definition, purpose and relationship of statistics to the patient and general hospital statistical reporting. Methods of collecting, interpreting and presenting the data in an accurate, useful and intelligible manner.

**Prerequisite: Year 2 courses**

### **0711-366 APPLICATION OF INFORMATION TECHNOLOGY (IT) TO ALLIED HEALTH SCIENCES (2-3-3)**

This course is designed to introduce Health Informatics and Information Management students to the use of computers in the medical records department. In this context the course covers the goals, methods, and expectations of using computer technology as a primary tool in the hospital and especially in the medical records department. The course includes data base management, MPI encoding, abstraction, statistics, chart tracking, deficiencies, management, training of personnel for computer usage, medical-legal issues and confidentiality. The practical laboratory is used for the mastery of learned concepts.

**Prerequisite: Year 2 courses**

## **YEAR THREE, SEMESTER TWO**

### **0711-342 HEALTH INFORMATION ADMINISTRATION II (1-2-2)**

A continuation of course 340 Health Information Administration I with emphasis on coding, indexing, abstracting, management of content, and cancer registry. The correlated laboratory is for the application and mastery of concepts learned in the course.

**Prerequisite: Year 3, Semester 1 courses**

**Corequisite: 343 Health Information Administration Directed Practice II**

### **0711-343 HEALTH INFORMATION ADMINISTRATION DIRECTED PRACTICE II (0-12-4)**

Assignment to various hospitals for practical application of theories learned in Health Information Administration lectures and laboratory. The students work in contact with patients, hospital staff and physicians.

**Prerequisite:** Year 3, Semester 1 courses

**Corequisite:** 342 Health Information Administration II

### **0712-345 INTRODUCTION TO PHARMACOLOGY (2-0-2)**

Introduces the basic concepts of tissue reactions to drugs (absorption, metabolism and excretion). Drug formulations and administration. Major drug classifications with emphasis on the aspects of drug actions relating to the nursing profession. Drug administration in paediatrics, pregnancy and the elderly.

### **0711-352 MEDICAL TERMINOLOGY II (1-2-2)**

A continuation of Medical Terminology I. Designed to enable the student to apply the medical terms necessary in his/her daily role as a Medical Records Administrator. The practical laboratory experience introduces students to the application of medical terminology in dicta-typing medical reports.

**Prerequisite:** Year 3, Semester 1 courses

### **0711-353 ORGANIZATION AND MANAGEMENT I (3-0-3)**

A study of management in a Health Information Department, with special emphasis on productivity monitoring, workflow analysis and process improvement (manual and computer). The role of planning in relation to productivity, standards, decision-making, staffing and office layout.

**Prerequisite:** Year 3, Semester 1 courses

### **0700-451 CLINICAL MEDICINE (2-0-2)**

This course is a continuation of 316 Clinical Medicine and Pathology. The study of disease processes, etiology, pathological changes, signs and symptoms, diagnostic procedures, complications, preferred treatment, outcome of diseases.

**Prerequisites:** Year 3, Semester 1 courses; 316 Clinical Medicine & Pathology

## **YEAR FOUR, SEMESTER ONE**

### **0711-440 HEALTH INFORMATION ADMINISTRATION III (1-2-2)**

Lectures on record procedures for mental health facilities, long-term facilities, hospice and home care. An introduction to the medical-legal aspects of records in Kuwait. The laboratory time is for controlled application of theories learned in Medical Records and other related courses.

**Prerequisite:** Year 3, Semester 2 courses

**Corequisite:** 441 Health Information Administration III

### **0711-441 HEALTH INFORMATION ADMINISTRATION DIRECTED PRACTICE III (0-15-5)**

Directed clinical assignment in supervisory practice at assigned hospitals, with emphasis on management using the techniques learned in Health Information System, in-service education and research. The student shall visit specialty hospitals to gain further insight into other health care facilities.

**Prerequisite:** Year 3, Semester 2 courses

**Corequisite:** 440 Health Information Administration III

### **0711-455 ORGANIZATION AND MANAGEMENT II (3-0-3)**

Emphasis is on budgeting principles, concepts and issues of financial management in health care settings. Financial management as viewed from the perspective of the department manager. The use of the budget in financial reporting, planning and control, and health insurance in Kuwait and its relationship to the Health Information Department. The role of the computer in budget and financial management.

**Prerequisite:** Year 3, Semester 2 courses

### **0711-462 IN-SERVICE EDUCATION (3-0-3)**

This course is designed to provide the essential elements of teaching used in both formal and informal education within the medical records profession. The salient topics covered are: principles of learning, conducting in-service sessions, deficiency analysis and development of an in-service programme, design of training curriculum, evaluation, and documentation.

**Prerequisite:** Year 3, Semester 2 courses



### **0711-463 HEALTH INFORMATION SYSTEM (2-2-3)**

The course is designed to impart an understanding of Health Information System and its application to medical records in contemporary settings. Through a combination of lectures and practical the process and tools and techniques of the following are covered: need assessment, feasibility testing, development, implementation and evaluation.

**Prerequisite:** Year 3, Semester 2 courses

## **YEAR FOUR, SEMESTER TWO**

### **0711-442 HEALTH INFORMATION ADMINISTRATION IV (1-2-2)**

This course is designed to ensure that the students keep abreast of the latest trends that affect Kuwait, locally and internationally. The course reflects the changes that are taking place within the Ministry of Health, legislature and the community. The laboratory practice shall involve putting the new trends into practice and shall demand self-management projects and extensive use of a compatible computer with the health care setting.

**Prerequisite:** Year 4, Semester 1 courses

**Corequisite:** 443 Health Information Administration Directed Practice IV

### **0711-443 HEALTH INFORMATION ADMINISTRATION DIRECTED PRACTICE IV (0-15-5)**

Directed clinical experience as an acting director, with emphasis on applying practices learned in: Organisation and Management, In-Service Education, Quality Assurance, Medical Record Science, Health Information System, Data Collection, Research and Evaluation, Clinical Medicine and Computer Courses.

**Prerequisite:** Year 4, Semester 1 courses

**Corequisite:** 442 Health Information Administration IV

### **0711-450 SEMINAR (2-0-2)**

This is the first course in the Faculty which provides an opportunity for computer assisted learning. The course covers several case studies related to administration and health care delivery in general. Emphasis is upon student participation. The course covers principles of problem solving, problems in human relations, ethical-legal problems, problems in organisation and

management, hospital standards, medical record science problems, professional adjustment.

**Prerequisite:** Year 4, Semester 1 courses

### **0711-466 ORGANISATION AND MANAGEMENT III (2-0-2)**

This course relates specifically to the directing and controlling aspects of management, with special emphasis on authority (what is meant by influence), leadership, delegation, motivation, change management, team building, employee performance and selection review, communication and meetings.

**Prerequisite:** Year 4, Semester 1 courses

### **0711-471 QUALITY ASSURANCE AND ANALYSIS (1-4-3)**

The course covers different aspects of Continuous Quality Improvement/Total Quality Management (CQI/TQM) as they relate hospital-wide. The basic functions of CQI/TQM. Quality assessment, utilization and risk management are highlighted. The role of the Health Information Administrator in the Continuous Quality Improvement/Quality Assurance programme is also covered.

The laboratory practice consists of assigned laboratory projects in preparation for hospital application.

**Prerequisite:** Year 4, Semester 1 courses

### **0711-472 RESEARCH AND EVALUATION OF HEALTH CARE (3-0-3)**

The course is designed to introduce the student to the process of undertaking research, and to analyse and understand the research of others. The major focus is on appreciating the relationship of research vis-a-vis the overall health care delivery system, and the role of medical records in it.

**Prerequisite:** Year 4, Semester 1 courses

**Corequisite:** 442 Health Information Administration IV



Department of  
**MEDICAL**  
**LABORATORY SCIENCES**  
**[MLS]**



## **DEPARTMENT OF MEDICAL LABORATORY SCIENCES**

Medical Laboratory Sciences offers opportunities for those interested in biological and chemical sciences, leading to a career in the health service or in research. Medical laboratory scientists are professionals who perform laboratory tests and analyses that assist physicians in the diagnosis and treatment of patients. They also assist in research and the development of new laboratory tests. The various studies include chemical and physical analysis of body fluids (Clinical Chemistry and Urinalysis); examination of blood and its component cells (Haematology); isolation and identification of bacteria, fungi, viruses and parasites (Clinical Microbiology and Parasitology); testing of blood serum for antibodies indicative of specific diseases (Immunology and Serology) and collection, storage of blood, pretransfusion testing and other immuno-haematological procedures (Blood Banking). In addition, medical laboratory scientists prepare tissues for histopathological, cytological and cytogenetic examination. They must know the theory and scientific fundamentals as well as the procedures for testing. Medical laboratory scientists work in hospital clinical laboratories, medical schools, research institutions, public health agencies and other related organisations.

Institute of Biomedical Science (IBMS) was founded in 1912 in the United Kingdom and is considered one of the world's oldest leading membership and accreditation body in the field of Biomedical Science. Institute is also licensed to award the designations Registered Scientist and Registered Science Technician. The Institute of Biomedical Science (IBMS), U.K., granted accreditation to the MLS Programme in the Department of Medical Laboratory Sciences in the year 2011. Ever since it has been renewed in 2015 for every 5 years. Due to the Covid-19 period there was a delay in the renewal. The accreditation is again renewed in 2021 up to 2025.

### **MISSION AND OBJECTIVES**

#### **Mission**

The mission of the Department of Medical Laboratory Sciences is to educate and train skilful, knowledgeable and committed Medical Laboratory Scientists who have breadth of knowledge and competence in various aspects of Medical Laboratory Sciences, who shall adhere to professional ethics, and who can contribute successfully as Medical Laboratory Scientists in the health care teams. The Department also aims to contribute to the development of Medical Laboratory Sciences profession and allied health services in Kuwait both, in the Kuwait health care delivery system and in private hospitals by providing

consultancy and other related services.

## **Objectives**

The key objectives, therefore, are:

1. To develop, monitor, evaluate review and maintain an undergraduate curriculum that provides:
  - An essential core of knowledge and skills
  - Opportunities to develop clinical competence through laboratory practice in the Faculty and hands-on experience in Ministry of Health hospitals and clinics
  - A grounding in Laboratory Management and Quality Assurance
  - A thorough grounding in professional ethics in Medical Laboratory Sciences
2. To foster the requisite professional attitudes and values in students, who shall adhere to professional ethics and demonstrate concern, responsibility and the ability to interact appropriately with other care providers, administrators, patients and their families.
3. To provide students with the necessary support and guidance in terms of counselling, and feedback on academic and clinical performance.
4. To use alternative learning modes, including:
  - Computer-assisted learning
  - Problem-based learning
  - Research projects
  - Student presentations
5. To have well-functioning laboratories in the following areas:
  - Haematology
  - Clinical Chemistry
  - Biochemistry
  - Histology and Cytology
  - Microbiology
  - Diagnostic Molecular Biology and Immunology
6. To develop and provide postgraduate programmes, short courses, lectures, workshops and seminars for Ministry of Health staff that meet the changing health care needs of Kuwait and keep them abreast of the state-of-the-art.
7. To recruit well qualified and experienced teaching and support staff who will act as role models for students and keep themselves abreast

with scientific advances in the field and apply the state-of-the-art in all endeavours: teaching, curriculum development and assessment, research, clinical supervision and community service.

8. To provide consultancy services to hospitals and clinics in the public sector health care delivery system and in the private sector.

## **TEACHING STAFF**

Prof. Thazhumpal Mathew, Professor & Acting Chairman (1993)  
B.Sc., 1974, University of Kerala, India; M.Sc., 1976, University of Kerala, India; Ph.D., 1992, University of Alberta, Canada, FRCPPath. (UK), 2003.

Prof. Suad AlFadhli CLS (NCA), Professor (1999)  
B.Sc., 1990, Kuwait University, Kuwait; M.A., 1994, Boston University, U.S.A.; Ph.D., 1998, The Catholic University of America, U.S.A.

Prof. Ali Dashti, Professor (2002)  
B.Sc., 1994, Kuwait University, M.Sc., 1997, Kuwait University, Ph.D., 2002, University of Edinburgh, Medical School, U.K.

Dr. Anwar Al Awadhi, Associate Professor (2003)  
B.Sc., 1997, Kuwait University; M.Sc., 1999, University of the West of England, Bristol, U.K.; Ph.D., 2003, University of Wales, College of Medicine, U.K.

Dr. Rana Al Awadhi, Associate Professor and Vice-Dean, Research & Postgraduate Studies (2004) B.Sc., 1994, Kuwait University; M.Sc., 1996, Imperial College, U.K.; Ph.D., 2004, University of London, U.K.

Dr. Mashael Al Mutairi, Associate Professor (2008)  
B.Sc., 1996, Kuwait University; M.Sc., 1999, Kuwait University; Ph.D., 2007, Strathclyde University, Glasgow, U.K.

Dr. Hamad Yaseen, Associate Professor (2013)  
B.Sc., 2005, The Ohio State University, U.S.A.; M.Sc., 2007, University of Newcastle, U.K.; Ph.D., 2011, University of Newcastle, U.K.

Dr. Maisaa Alwohhaib, Assistant Professor (2001)  
B.Sc., 1990, Kuwait University; M.Sc., 1997, Kuwait University; Ph.D., 2001, University of Swansea, Wales, U.K.

Dr. Fatima Al Yatama, Assistant Professor (2002)  
B.Sc., 1982 Kuwait University; M.Sc. 1987 University of London; Ph.D., 1995, University of London, U.K.



- Dr. Reem Ameen, BB (ASCP) Assistant Professor (2003)  
B.Sc., 1990, Kuwait University; M.Sc., 1994, University of Central Florida,  
Orlando, U.S.A.; Ph.D., 2001, University of London, U.K.
- Dr. Anwar Al Banaw, Assistant Professor (2004)  
B.Sc., 1996, Kuwait University; M.Sc., 1999, University of Wales, U.K.; Ph.D.,  
2004, University of Wales, U.K.
- Dr. Ghadir Jamal, Assistant Professor (2008)  
B.Sc., 1999, Kuwait University; M.Sc., 2003, University of Aberdeen, U.K.;  
Ph.D., 2008, University of Nottingham, U.K.
- Dr. Norya Al Maraghi, Assistant Professor (2013)  
B.Sc., 2006, Kuwait University; M.Sc., 2009, University of Edinburgh, U.K.;  
Ph.D., 2012, University of Edinburgh, U.K.
- Dr. Ahmad Al Hasan, Assistant Professor (2013)  
B.Sc., 2005, Kuwait University; M.Sc., 2008, University of Edinburgh, U.K.;  
Ph.D., 2012, University of Edinburgh, U.K.
- Dr. Nouf Al Ajmi, Assistant Professor (2014)  
B.Sc., 2005, Kuwait University; M.Sc., 2008, University of Bristol, U.K.;  
Ph.D., 2014, Newcastle University, U.K.
- Dr. Mariam Albahrani, Assistant Professor (2018)  
B.Sc., 2006, Kuwait University, Kuwait; M.Sc., 2012, Drexel University,  
Philadelphia, U.S.A.; Ph.D., 2018, Imperial College London, U.K.
- Dr. Anfal Yousef, Assistant Professor (2019)  
B.Sc., 2005, Kuwait University, Kuwait; M.Sc., 2011, University of  
Nottingham, Faculty of Medicine and Health Sciences, Nottingham, U.K.;  
Ph.D., 2019, Liverpool School of Tropical Medicine, Liverpool, U.K.
- Dr. Danah AlQallaf, Assistant Professor (2019)  
B.Sc., 2005, Kuwait University, Kuwait; M.Sc., 2012, Kuwait University,  
Kuwait; Ph.D., 2019, University of Leeds, U.K.
- Dr. Fatma Al Marji, Assistant Professor (2019)  
B.Sc., 2008, Kuwait University, Kuwait; M.Sc., 2012, Kuwait University,  
Kuwait; Ph.D., 2018, University of Bristol, U.K.
- Dr. Faten Al Wathiqi, Assistant Professor (2019)  
B.Sc., 2009, Kuwait University, Kuwait; M.Sc., 2012, Kuwait University,  
Kuwait; Ph.D., 2019, University of Manchester, U.K.

Dr. Monera Al Rukhayes, Assistant Professor (2019)  
B.Sc., 2007, Anglia Ruskin University, Cambridge, U.K.; M.Sc., 2008,  
University College of London, London, U.K.; Ph.D., 2018, Kings College of  
London, London, U.K.

Dr. Dalal Almuaili, Assistant Professor (2020)  
B.Sc., 2012, RMIT University, Australia; M.Sc., 2014, Bristol University,  
U.K.; Ph.D., 2020, Trinity College Dublin, Ireland.

Dr. Yasmine Alshammari, Assistant Professor (2021)  
B.Sc., 2014, Kuwait University, Kuwait; M.Sc., 2017, University of  
Manchester, U.K.; Ph.D., 2021, University of Manchester, U.K.

Dr. Noor Dashti, Assistant Professor (2022)  
B.Sc., 2012, The University of Queensland, Australia; M.Sc., 2014, The  
University of Queensland, Australia; Ph.D., 2022, The University of  
Queensland, Australia

Dr. Khadijah Dashti, Assistant Professor (2023)  
B.Sc., 2011, Kuwait University, Kuwait; M.Sc., 2015, University of  
Westminster, U.K.; Ph.D., 2023, University College London, U.K.

## **LECTURER/SENIOR LECTURER**

Dr. Fawzeyah Alnajjar, Senior Lecturer (Clinical) (2000)  
B.B.M.Sc., 1982, Kuwait University; M.Sc., 1998, Kuwait University; Ph.D.,  
2022, College of Medicine & Dental Sciences, The University of  
Birmingham, U.K.

Ms. Seham Al Sharrah, Lecturer (Clinical) (2000)  
B.Sc., 1996, Kuwait University; M.Sc., 1999, Kuwait University.

## **CLINICAL INSTRUCTORS**

Dr. Matra Al Waheeda, Clinical Instructor (B) (2016)  
B.Sc., 1999, Kuwait University; M.Sc., 2008, Arabian Gulf University,  
Bahrain; Ph.D., 2020, Arabian Gulf University, Bahrain

Dr. Amani Haddad Eid, Clinical Instructor (A) (2022)  
B.Sc., 2004, Faculty of Medicine, Kuwait University, Kuwait; M.Sc., 2010,  
FOM, Kuwait University, Kuwait; Ph.D., 2021, Faculty of Science, Kuwait  
University

## **TECHNICAL STAFF**

Ms. Basma Al Musa'ad, Junior Lab Analyst, Chief Technician (Acting)  
Bachelor of Science in Biological Sciences, 2016, Queen Mary, University of  
London, London, U.K.

Dr. Meshal Daalah, Biology Researcher (2021)  
B.Sc., 2005, Creighton University, U.S.A.; M.Sc., 2015, University of  
Aberdeen, U.K.; Ph.D., 2021, University of the West of Scotland, Glasgow;  
U.K.

Ms. Mays Abdul Hadi, Senior Technician (Haematology Lab)  
B.Sc., 1990, Jordan University of Science and Technology, Jordan

Ms. Anood Al Mukaimi, Biology Specialist (Histology Lab)  
B.Sc., 2007, Kuwait University, Kuwait

Ms. Mary Oommen, Second Lab Technician (Clinical Chemistry Lab)  
B.Sc., 2005, Bangalore University, India; M.Sc., 2007, Biotechnology,  
Bangalore University, India

Ms. Monera Al Saho, Junior Biology Researcher (Microbiology Lab)  
B.Sc., 2008, Kuwait University

Ms. Ravija Nair, Lab Technician  
M.Sc. Microbiology, 2010, Mahatma Gandhi University of Kerala, India

Ms. Bindu Raj, Specialist Lab Analyst  
B.Sc Medical lab Tech, 1999, Mahatma Gandhi University of Kerala, India

Ms. Entesar Al Shammari, Junior Lab Technician  
B.Sc., 2015, Kuwait University

## PROGRAMME REQUIREMENTS

The total number of credit hours required for graduation is 124. The programme for the B.Sc. Degree in Medical Laboratory Sciences is as follows:

### 1 UNIVERSITY REQUIREMENTS (19 Credits)

	<b>Credit Hours</b>
0410-115 Finite Maths	3
0788-181 English Language	5
0788-182 English Language	5
0788-250 English Language	3
Elective	3

### 2 FACULTY REQUIREMENTS (23 Credits)

0490-101 Biology	3
0711-105 Introduction to Health Informatics	3
0700-106 First Aid and Emergency Care	3
0480-107 Statistics for Medical Sciences	3
0420-110 Chemistry	3
0420-111 Chemistry Lab.	1
0430-121 Physics	3
0430-125 Physics Lab.	1
0700-220 Psychology of Medical Care (AH)	3

### 3 PROFESSIONAL REQUIREMENTS (82 Credits)

	<b>Credit Hours</b>
0700-155 Anatomy I	3
0700-152 Physiology I	3
0712-210 Introduction to Biochemistry	3
0712-211 Introduction to Histology and Cytology	2
0712-212 Introduction to Cell Biology	2
0712-213 Introduction to Haematology	2
0712-297 Introduction to Microbiology	3
0712-340 Histology	3
0712-342 Medical Biochemistry	4
0712-343 Molecular Biology and Genetics	2
0712-344 Immunology	2
0712-351 Medical Microbiology	4
0712-353 Medical Parasitology	3
0712-358 Histopathology & Cytology Methods I	3
0712-364 Clinical Microbiology & Serology	2
0712-365 Haematology I	4
0712-366 Clinical Chemistry I	3
0712-367 Clinical Chemistry II	3
0712-441 Haematology II & Practicum	3
0712-442 Immunohaematology & Practicum I	2
0712-449 Clinical Correlations I	1
0712-450 Clinical Microbiology I & Practicum	3
0712-457 Clinical Parasitology & Practicum	2
0712-458 Histopathology & Cyto. Methods II & Prac.	3
0712-462 Clinical Haematology Practicum	2
0712-463 Clinical Microbiology Practicum	3
0712-464 Immunohaematology & Practicum II	1
0712-465 Histopathology & Cyto. Methods III & Prac.	2
0712-466 Clinical Correlations II	2
0712-467 Clinical Chemistry III	3
0712-468 Clinical Chemistry IV	2
0712-470 Student Project	2

## PROGRAMME TIMETABLE

### FIRST YEAR

Semester One		Semester Two	
Course	CH	Course	CH
110/111 Chem. & Chem. Lab. or 121/125 Phys. & Phys. Lab.	4	101 Biology	3
115 Finite Mathematics	3	106 First Aid & Emergency Care	3
181 English Language Elective	5 3	110/111 Chem. & Chem. Lab. or 121/125 Phys. & Phys. Lab.	4
		182 English Language	5
	<b>Total</b>		<b>Total</b>
	<b>15</b>		<b>15</b>

### SECOND YEAR

Semester One		Semester Two	
Course	CH	Course	CH
105 Intro. to Health Informatics	3	107 Stats for Medical Sciences	3
155 Anatomy	3	152 Physiology I	3
210 Intro. to Biochemistry	3	212 Intro. to Cell Biology	2
211 Introduction to Histology and Cytology	2	213 Intro. to Haematology	2
250 English Language	3	220 Psych. of Med. Care (AH)	3
		297 Intro. to Microbiology	3
	<b>Total</b>		<b>Total</b>
	<b>14</b>		<b>16</b>

### THIRD YEAR

Semester One		Semester Two	
Course	CH	Course	CH
340 Histology	3	343 Molecular Bio. & Genetics	2
342 Medical Biochemistry	4	353 Medical Parasitology	3
344 Immunology	2	358 Histopath. & Cyto. Methods I	3
351 Medical Microbiology	4	364 Clinical Microbiology & Serology	2
366 Clinical Chemistry I	3	365 Haematology I	3
		367 Clinical Chemistry II	3
	<b>Total</b>	<b>Total</b>	<b>16</b>

### FOURTH YEAR

Semester One		Semester Two	
Course	CH	Course	CH
441 Haematology II & Prac.	3	462 Clinical Haematology & Prac.	2
442 Immunohaem. & Prac. I	3	463 Clinical Microbiology Prac.	3
449 Clinical Correlations I	1	464 Immunohaem. & Prac. II	1
450 Clinical Micro. & Prac.	3	465 Histopathology and Cytology	2
457 Clin. Parasitology & Prac.	2	Methods III and Practicum	
458 Histopathology & Cyto. Methods II & Practicum	3	466 Clinical Correlations II	2
467 Clinical Chemistry III	3	468 Clinical Chemistry IV	2
		470 Student Project Practicum	2
	<b>Total</b>	<b>Total</b>	<b>14</b>

## MEDICAL LABORATORY SCIENCES

### COURSE DESCRIPTIONS

#### YEAR ONE, SEMESTER ONE

##### **0420-110 CHEMISTRY (3-0-3)** (*Faculty of Science*)

Stoichiometry; electronic structure of atoms, periodic table; chemical bonds, introduction to chemistry of elements; chemical thermodynamics, chemical kinetics; chemical equilibria, acids and bases in aqueous solutions.

##### **0420-111 CHEMISTRY LAB (0-3-1)** (*Faculty of Science*)

Fundamental concepts in chemistry, to introduce basic concepts of laboratory work, write report and demonstrate some of topics covered in 110 Chemistry. Students are encouraged to use computer tools for writing lab report, plotting graph and data analysis.

**Corequisite: 110 Chemistry**

##### **0410-115 FINITE MATHEMATICS (3-0-3)** (*Faculty of Science*)

Finite Mathematics develops the logical structure, provides an essential algebraic and statistical background, and emphasises the comprehension of problem-solving techniques for real life problems associated with business, life and social sciences thus, giving insight into the importance of mathematical skills in almost all aspects of human society. This includes solving systems of linear equations, linear programming and the simplex method, rudiments of discrete probability, probability distribution and expected value of a random variable, and elements of statistics.

##### **0788-181 ENGLISH LANGUAGE (10-0-5)**

181 English is the first of three required English Language courses offered in the Faculty. It is a reading-based, multi-skills course intended to advance students' abilities to study content area courses in English. The macro-skills of reading, writing, listening, speaking and grammar are broken down into their component parts to give the students the opportunity to acquire fluency and accuracy in the language of the health sciences.

**Prerequisite: 180 English Language**



## **YEAR ONE, SEMESTER TWO**

### **0490-101 BIOLOGY (2-3-3) (*Faculty of Science*)**

Cellular basis of life: differences in size and complexity of cells as illustrated by viruses, bacteria, protozoa and various types of metazoan cells. Structure and metabolic activities of a generalized eukaryotic cell. Chemical composition and functions of the cell membrane; role of mitochondria, structure of GER and SER and their relation to the Golgi apparatus; structure of the nuclear membrane. Central role of enzymes in cells. Structure of DNA and RNA. Genetic code and protein synthesis. Mitosis and meiosis. Mendelian genetics and inherited diseases. Interactions between eukaryotic cells and bacteria and viruses. Cell mediated immunity. Organization of cells into tissues.

### **0700-106 FIRST AID AND EMERGENCY CARE (2-2-3)**

This course is designed to provide students with basic knowledge of first aid and the skills needed to provide early interventions and care in the event of a health emergency. It enables students to plan an assessment for each casualty, using a methodological two-stage system, first to check and treat life-threatening conditions (primary survey), then to call for help. An overall view of the basic fundamentals of first aid is presented with an emphasis on decision making in emergency situations.

**Prerequisite:** 180 English Language

### **0430-121 PHYSICS (3-0-3) (*Faculty of Science*)**

Methods of physics, elementary mathematics, motion and particle dynamics, mechanics of extended objects, conservation of energy, kinetic theory of gases. Liquids, vibrations and waves, ear and hearing, electricity and conduction in solids, ions and ionic conduction.

### **0430-125 PHYSICS LAB (0-3-1) (*Faculty of Science*)**

The student will learn to enhance the understanding level of concepts in mechanics. Also, to enhance ability in experimental design, data and error analysis and report writing. Student will learn to be acquainted with related instrumentations and experimental techniques as well as to develop skills in communication and ability to work in groups.

**Corequisite:** 121 Physics

### **0788-182 ENGLISH LANGUAGE (10-0-5)**

182 English expands on the content of the five basic language learning skills introduced in 181 English. Students read and listen to materials of a scientific/medical nature, discuss the topics with their classmates to broaden their comprehension, and then write about the topics they have discussed to show they are able to communicate comprehensibly. Grammar instruction is explicit and includes the grammar of science and medicine.

**Prerequisite: 181 English Language**

## **YEAR TWO, SEMESTER ONE**

### **0711-105 INTRODUCTION TO HEALTH INFORMATICS (2-2-3)**

This course is designed to introduce the students to the fundamentals of information technology and systems from the perspective of health informatics. It provides the students with a wide spectrum of computer-related concepts and skills to ensure that they are capable of employing appropriate technologies and tools to manage health information as it relates to their respective discipline. The course covers a variety of topics including computer concepts, computer technology and information systems, statistical software, communication technology, database design and management, and clinical, business, and specialty clinical systems applications. Delivery methods employed for this course combine didactic theory supplemented by lab sessions that will provide hands-on applications of learned theory.

**Prerequisites: Year 1 courses**

### **0700-155 ANATOMY (2-3-3)**

This course provides an introduction to human morphology at the cell, tissue, and organ system levels of organisation. The course is taught through theoretical lectures and practical demonstrations.

**Prerequisite: Year 1 courses**

### **0712-210 INTRODUCTION TO BIOCHEMISTRY (2-3-3)**

This course provides the student with the foundations of biochemistry. The absorption, metabolism, and utilisation of essential body nutrients at the cellular level are covered.

**Prerequisites: 110/111 Chemistry / Chemistry Lab**

### **0712-211 INTRODUCTION TO HISTOLOGY AND CYTOLOGY (1-3-2)**

The course provides a basic understanding of the organisation of cell tissue, organs and organ systems of the body. Emphasis is given on the development, structure and function of different tissues. In addition, it includes topics that provide the fundamental principles of tissue processing and staining.

**Prerequisites: Year 1, Semester 2 courses**

### **0788-250 ENGLISH (6-0-3)**

Language and study skills are perfected using authentic health sciences journal articles relevant to the students' majors. Report writing style, abstract writing, bibliography and referencing techniques are taught.

**Prerequisite: 182 English Language**

## **YEAR TWO, SEMESTER TWO**

### **0480-107 STATISTICS for Medical Sciences (3-1-3) (*Faculty of Science*)**

Relevance and principles of Biostatistics with application in Medicine and Biology. Descriptive statistics, sampling and sampling distributions. Estimation of parameters, probability and probability distribution, with emphasis on the normal. Tests of hypotheses for one or two means and one or two proportions. Measures of association between two continuous variables (correlation and regression) and two discrete variables (chi-square). Non-parametric tests commonly used in medicine.

**Prerequisite: 115 Finite Mathematics**

### **0700-152 PHYSIOLOGY I (2-2-3)**

The course provides a basic understanding of the physiology of the cell, body fluids, nerves, muscles, blood, functions of the cardiovascular system, respiratory system, renal system, gastrointestinal system, endocrine system and reproductive system. Emphasis is placed on the interactions of the systems.

**Prerequisite: 155 Anatomy I**

### **0712-212 INTRODUCTION TO CELL BIOLOGY (2-0-2)**

The course deals with cell structure and function at the molecular level. Emphasis is given to the basic principles of the major techniques used in clinical diagnosis and medical research.

**Prerequisites:** Year 2, Semester 1 courses

### **0712-213 INTRODUCTION TO HAEMATOLOGY (1-3-2)**

The course introduces the student to the fundamentals in haematopoiesis, the principles of blood collection and processing and basic haematology. Emphasis is given to laboratory techniques and quality assurance, blood and bone marrow smears, staining methods, blood cell morphology and cytochemistry, and screening tests for bleeding abnormalities.

**Prerequisite:** Year 2, Semester 1 courses

**Corequisites:** 152 Physiology, 212 Introduction to Cell Biology

### **0700-220 PSYCHOLOGY OF MEDICAL CARE (AHS) (2-2-3)**

The first part of the course provides an overview of Psychology as the basic science concerned with individual human behaviour and mental processes. Empirical studies and theoretical models of basic processes such as learning, memory and perception are introduced. Factors that motivate behaviour are considered, as well as contemporary models that describe and seek to explain the major dimensions of temperament and personality variation.

The second part of the course draws on the material taught in the first part to clarify issues relating to patients' compliance and satisfaction with the medical care they receive. Psychological factors which influence the behaviour and expectations of health professionals and the efficacy of the care they provide are also considered. The special needs of certain patients are highlighted. This includes reference to children, the aged, the dying, the physically handicapped and mentally retarded. Current theories linking stress and illness, methods for reducing stress, and research into pain and pain management are presented. The relationship between sociodemographic variables and health will also be considered.

**Prerequisite:** 182 English Language

### **0712-297 INTRODUCTION TO MICROBIOLOGY (2-3-3)**

History of microbiology. Classification of micro-organisms. Structure and ultrastructure of bacteria, fungi, protozoa and viruses. Growth of bacteria and fungi, replication of viruses. Requirements for the laboratory cultivation of

bacteria, fungi and viruses. Bacterial metabolism and genetics. Microorganisms in the environment and their public health significance. Introduction to host/parasite relationships. Host responses to infection.

**Prerequisite: Year 2, Semester 1 courses**

**Corequisite: 212 Introduction to Cell Biology**

## **YEAR THREE, SEMESTER ONE**

### **0712-340 HISTOLOGY (2-3-3)**

General principles for preparing tissues for histological examination including fixation, tissue processing and microtomy. Theory and application of routine staining techniques. Microscopic anatomy of organs and tissue systems.

**Prerequisites: Year 2 courses**

### **0712-342 MEDICAL BIOCHEMISTRY (3-3-4)**

The course is designed to provide the students with an understanding of biochemical structure and function at the molecular level, and to show how metabolic dysfunction contributes to disease.

**Prerequisite: Year 2 courses**

### **0712-344 IMMUNOLOGY (1-3-2)**

The course is designed to introduce the principles of immunology and the functioning of the human immune system, both at the physiologic and cellular levels, and to identify the most important applications in the clinical laboratory.

**Prerequisites: Year 2 Courses**

### **0712-351 MEDICAL MICROBIOLOGY (3-3-4)**

Bacteriology: introduction to the systematic study of bacteria, medical virology: introduction to methods of demonstration and isolation of viruses, characteristics of major groups of animal viruses. Medical mycology: general features of fungi, isolation and recognition of major fungal pathogens of man.

**Prerequisite: Year 2 courses**

**Corequisite: 344 Immunology**

### **0712-366 CLINICAL CHEMISTRY I (2-3-3)**

An introductory course in clinical chemistry, structured to give the students a basic understanding of clinical chemistry and basic skills in clinical chemistry laboratory techniques.

**Prerequisite:** Year 2 courses

**Corequisite:** 342 Medical Biochemistry

## **YEAR THREE, SEMESTER TWO**

### **0712-343 MOLECULAR BIOLOGY AND GENETICS (1-3-2)**

The course provides an introduction to basic concepts of Mendelian genetics and the molecular structure of genes, and the genetic basis of hereditary disease and cancer. It also includes inheritance patterns of single gene, polygenic and chromosomal disorders in humans. It introduces the concepts and practice of recombinant molecular biology and includes practical laboratory experience of modern molecular techniques.

**Prerequisite:** Year 3, Semester 1 courses

### **0712-353 MEDICAL PARASITOLOGY (2-3-3)**

Characteristics and life cycles of parasites of medical importance: helminths-nematodes, trematodes and cestodes; protozoa. Arthropods as agents and vectors of human disease. Laboratory investigation of parasitic diseases.

**Prerequisite:** Year 3, Semester 1 courses

### **0712-358 HISTOPATHOLOGY AND CYTOLOGY METHODS I (2-3-3)**

Introduction to theoretical and practical aspects of special staining procedure for demonstration of specific structures in Histopathology. Introduction to various cytological methods of specimen collection and laboratory preparation and introduction to the concept of diagnostic cytology for various organs. Pathology topics introducing the concept of disease and the uses of demonstrating disease.

**Prerequisite:** Year 3, Semester 1 courses

### **0712-364 CLINICAL MICROBIOLOGY & SEROLOGY (1-3-2)**

Methods for the recovery of bacteria from clinical specimens and for the serological diagnosis of disease. Examination of blood, CSF, pus, other body fluids, respiratory tract specimens, urine, faeces, genital tract specimens. Serological methods for brucellosis, enteric fever, streptococcal disease, syphilis. Antibiotic susceptibility testing.

**Prerequisites: Year 3, Semester 1 courses**

### **0712-365 HAEMATOLOGY I (2-3-3)**

The focus of this course is on (a) the mechanisms in blood cell development, (b) the classification and laboratory features of anaemias, leukemias and haemostatic disorders, (c) routine and special tests in Haematology, (d) quality control, (e) blood and bone marrow cell morphology and (f) blood collection procedures. The course also contains an introduction to immunohaematology and blood banking, and an introduction to correlation of laboratory data with haematologic disorders.

**Prerequisites: Year 3, Semester 1 courses**

### **0712-367 CLINICAL CHEMISTRY II (2-3-3)**

This course complements 366 Clinical Chemistry I and equips students with theory and laboratory skills for hospital laboratory rotation in Year Four.

**Prerequisites: Year 3, Semester 1 courses**

## **YEAR FOUR, SEMESTER ONE**

### **0712-441 HAEMATOLOGY II AND PRACTICUM (1-6-3)**

The theoretical aspects of this course include investigation of anaemias: blood loss, iron deficiency, megaloblastic, aplastic, sideroblastic, thalassemias and haemoglobinopathies, and anaemias of chronic disorders and malignancies. Laboratory investigation of acute and chronic leukaemias, myeloproliferative lymphoproliferative, immunoproliferative disorders and lymphomas. Investigation of patients with haemostatic defects in a clinical laboratory. Methods for the procurement of blood specimen, for testing, by phlebotomy techniques.

**Prerequisites: Year 3, Semester 2 courses**

### **0712-442 IMMUNOHAEMATOLOGY AND PRACTICUM I (1-4-3)**

This course focuses on genetics in blood banking, and the structure of ABO and non-ABO blood group systems. Blood grouping and pre transfusion testing. Complications of blood transfusions. Blood collection, processing and storage. Blood components and their indications for transfusion.

**Prerequisites: Year 3, Semester 2 courses**

### **0712-449 CLINICAL CORRELATIONS I (1-0-1)**

Principles of test selection and use for diagnosis of disease, screening and patient management. Calculation of sensitivity, specificity pre-test and post-test probabilities. Discussion of significance of the normal range, cut-off points and the use of combinations of tests. Case studies from Microbiology, Haematology, Clinical Chemistry and Cytology to illustrate the correct use of laboratory tests.

**Prerequisites: Year 3, Semester 2 courses**

### **0712-450 CLINICAL MICROBIOLOGY I AND PRACTICUM (1-6-3)**

Laboratory investigation of clinical specimens for the detection of bacteraemia meningitis, upper and lower respiratory tract infections, wound infections, genitourinary tract infections, gastrointestinal tract infections and identification of the causative organism. Rotation in a clinical microbiology laboratory.

**Prerequisites: Year 3, Semester 2 courses**

### **0712-457 CLINICAL PARASITOLOGY AND PRACTICUM (1-3-2)**

Examination of clinical specimens for protozoan and helminth parasites. Clinical signs and pathogenesis of parasitic diseases endemic in Kuwait and the Gulf or frequently imported into the region. Host responses to parasitic infection. Rotation in a clinical parasitology laboratory.

**Prerequisites: Year 3, Semester 2 courses**

### **0712-458 HISTOPATHOLOGY & CYTOLOGY METHODS II AND PRACTICUM (1-6-3)**

Rotation through routine histopathology and cytology laboratory introducing the students to the preparation of specimens for routine diagnostic procedures. The theory aspect will concentrate on special laboratory procedures including immunohistology, plastic histology, electron microscopy and enzyme



histochemistry, cell and tissue culture and the general cytological techniques for collection and preparation of various cell samples.

**Prerequisites: Year 3, Semester 2 courses**

### **0712-467 CLINICAL CHEMISTRY III (2-3-3)**

This course involves rotation through a routine clinical chemistry laboratory, and theory classes to provide further training on understanding laboratory methods and interpretation of test results.

**Prerequisites: Year 3, Semester 2 courses**

## **YEAR FOUR, SEMESTER TWO**

### **0712-462 CLINICAL HAEMATOLOGY PRACTICUM (0-6-2)**

Laboratory haematology data interpretation. Case studies of anaemias, leukemias and bleeding disorders. Principles of methods used in the laboratory investigation of haemostatic, leukocyte and red cell disorders. Screening tests, routine laboratory tests and special diagnostic tests for haematologic investigation in a clinical laboratory. Practical experience is reinforced by seminars on related topics.

**Prerequisites: Year 4, Semester 1 courses**

### **0712-463 CLINICAL MICROBIOLOGY PRACTICUM (0-9-3)**

The students are assigned to a clinical microbiology laboratory and are completely responsible for processing of simulated specimens including microscopic evaluation, choice of culture media and techniques, identification and susceptibility testing of significant isolates and issue of the final report.

**Prerequisites: Year 4, Semester 1 courses**

### **0712-464 IMMUNOHAEMATOLOGY AND PRACTICUM II (0-3-1)**

Rotation in a clinical laboratory reinforces the theoretical and practical aspects of immunohaematology. Case studies: haemolytic diseases of the newborn, transfusion reactions, autoimmune haemolytic anaemia, resolution of single/multiple alloantibodies, cross-matching, resolving QC problems will be covered.

**Prerequisites: Year 4, Semester 1 courses**

### **0712-465 HISTOPATHOLOGY & CYTOLOGY METHODS III & PRACTICUM (0-6-2)**

The course is a progression of Histopathology & Cytology Methods II (458) and is designed to give further practice in the application of histopathology & cytology methods within the hospital laboratory. Emphasis is placed on special histological staining and cytological procedures and is supported by tutorials and case discussions.

**Prerequisites: Year 4, Semester 1 courses**

### **0712-466 CLINICAL CORRELATIONS II (2-0-2)**

The course is a progression of Clinical Correlations I (449) and presents patient case studies consisting of relevant medical history and pertinent laboratory findings. The student learns the step-wise procedure in the advanced type of problem solving through a structured learning experience.

**Prerequisites: Year 4, Semester 1 courses**

### **0712-468 CLINICAL CHEMISTRY IV (1-5-2)**

Full-time rotation with full practical involvement in the preanalytical, analytical and post analytical stages of hospital clinical chemistry work.

**Prerequisites: Year 4, Semester 1 courses**

### **0712-470 STUDENT PROJECT PRACTICUM (0-6-2)**

Students select an area of medical laboratory science and carry out a small research project under supervision. This will provide training in scientific research methodology including organising and planning the study, collection of samples, analysis, presentation and interpretation of data. Instruction will also be given on clinical laboratory administration.

**Prerequisites: Year 4, Semester 1 courses**



Department of  
**OCCUPATIONAL THERAPY**  
**[OT]**



## **DEPARTMENT OF OCCUPATIONAL THERAPY**

The Faculty of Allied Health Sciences, Kuwait University established an Occupational Therapy department in 2009. It is the first occupational therapy programme in the Gulf region and second in the Middle East. The programme is internationally accredited by the World Federation of Occupational Therapists - WFOT (<https://wfot.org/>) since 2009. The WFOT is the world's foremost authority for accreditation for occupational therapy education curriculums/ programmes.

The programme aims to cultivate, enrich, and prepare graduates in becoming occupational therapists. As occupational therapists, they are to utilize diverse treatment methods, guide rehabilitation, and care for patients of all ages whose ability to function has been impaired. The programme provides a foundation for graduates to become scholars, advocates for health and wellness and public educators in occupational therapy.

Courses, teaching, learning, and communication are delivered in the English Language. The programme duration is four and a half years (i.e., 128 credit hours). The first year consists of basic courses of sciences and the English Language. The second, third and fourth year, consist of core occupational therapy courses and related discipline modules. These courses consist of physical dysfunction, neuroscience, orthopedics, mental health, paediatrics, geriatrics, psychiatry, ergonomics, and kinesiology. Clinical education starts in the third year of the programme where students apply their academic learning in clinical settings (hospital and clinics). Collaboration with the Ministry of Health (MOH) provide students to be supervised by qualified occupational therapists. In the fifth year, the year is allotted entirely to clinical education.

### **MISSION STATEMENT**

#### **Vision**

We, the Kuwait University Occupational Therapy faculty, aspire to be leaders in Occupational Therapy education, professional and clinical training, research, and community services that meet the community health needs of the State of Kuwait. The programme offered by the Occupational Therapy department shall meet international standards and shall have international accreditation wherever possible.

## **Mission**

Our mission is to graduate skilful, knowledgeable, competent, and committed occupational therapists, who will adhere to professional ethics and standards, and who can contribute successfully as Occupational Therapists in the health care team and meet the community health needs of the State of Kuwait in a way that is compatible with the societal values and socio-cultural constraints.

In addition, the Occupational Therapy Department is committed to contribute to the development of the Occupational Therapy profession in Kuwait by providing consultation and other services and participating in local and international continuing education programmes.

## **Objectives**

The Occupational Therapy Department is committed to the following objectives:

1. To develop, monitor, evaluate, review, and maintain an undergraduate curriculum which provides:
  - (a) uniformity among the philosophy, objectives, and students' potential and future goals.
  - (b) fundamental core concepts and areas of the profession.
  - (c) students with knowledge, cognitive and practice skills, and attitudes.
  - (d) methods of treatments of relevant and applicable medical conditions of all age groups.
  - (e) practical experiences through participating in laboratory and clinical hands-on learning experiences.
  - (f) opportunities for patient's assessment, treatment planning, and outcome evaluation.
  - (g) understanding effectively working with patients of different cultures, backgrounds, and spirituality.
  - (h) thorough interpretation of the professional ethics, standards, beliefs and values.
2. To strive for the highest quality of teaching, research, and service, and to stand as an example in those regards.
3. To educate occupational therapists who serve diverse populations in varied settings and function as master practitioners, researchers and educators.
4. To develop professionals who are able to communicate, understand, and apply the science of occupational therapy.

5. To engage in scholarly work and participate in scientific inquiry.
6. To provide relevant and meaningful community service.
7. To use a variety of learning methods, including:
  - (a) Lectures
  - (b) Hands-on learning
  - (c) Problem-based learning
  - (d) Computer-assisted learning
  - (e) Research projects
  - (f) Student presentations
  - (g) Group interaction
  - (h) Fieldwork
8. To establish well-functioning laboratories in the following areas:
  - (a) Activities of daily living
  - (b) Ergonomics
  - (c) Kinesiology
  - (d) Paediatrics
  - (e) Orthopedics
  - (f) Physical dysfunction
  - (g) Neuro-rehabilitation
9. To recruit qualified and experienced teaching and support staff to advance the Occupational Therapy educational programme, to achieve the programme goals, to provide students with support and guidance, to periodically evaluate the educational programme, and to offer appropriate health care consultation services to various sectors of the Ministry of Health, Kuwait.
10. To engage in scholarly work and produce valuable research studies to contribute to the knowledge in Occupational Therapy and to benefit the consumers.
11. To make educational facilities and resources available for teaching, researching, and learning for faculty and students, including:
  - (a) Library
  - (b) Computer room and internet access
  - (c) Fully equipped laboratories
  - (d) Teaching rooms
  - (e) Offices
  - (f) Teaching equipment
  - (g) Sites for fieldwork education



## **TEACHING STAFF**

Dr. Naser Alotaibi, Associate Professor and Acting Chairman (2008)  
B.Sc., 1998, University of Hartford, Connecticut, U.S.A.; M.A., 2004, Texas Woman's University, Houston, U.S.A.; Ph.D., 2007 Texas Woman's University, Houston, U.S.A.

Dr. Mohammed Nadar, Associate Professor and Acting Dean and Vice-Dean for Clinical Consultation and Training (2006)  
B.Sc., 1997, University of Hartford, Connecticut, U.S.A.; M.Sc., 2003, University of Kansas, U.S.A.; Ph.D., 2006, University of Kansas, U.S.A.

Dr. Musaed Alnaser, Associate Professor (2006)  
B.Sc., 1999, University of Wisconsin, Milwaukee, U.S.A.; M.Sc., 2003, San Jose State University, California, U.S.A.; Ph.D., 2006, Texas Woman's University, Houston, U.S.A.

Dr. Fahad Manee, Associate Professor and Vice-Dean for Academic & Student Affairs (2008)  
B.Sc., 1997, University of Hartford, Connecticut, U.S.A.; M.Sc., 2005, University of Kansas, U.S.A.; Ph.D., 2008, Texas Woman's University, Houston, U.S.A.

Dr. Feddah M. Edrees, Assistant Professor (2020)  
B.Sc., 2004, Virginia Commonwealth University, U.S.A.; M.Sc., 2007, OT, Medical College of Virginia, V.C.U., U.S.A.; Ph.D., 2020, University of North Carolina; Chapel Hill, U.S.A.

Dr. Zainab Jasem, Assistant Professor (2020)  
B.Sc., 2012, Kuwait University, Kuwait; M.Sc., 2016, Cardiff University, United Kingdom; Ph.D., 2020, University of Southampton, United Kingdom

Dr. Hamad Alhamad, Assistant Professor (2022)  
B.Sc. (O.T.), 2012, Kuwait University; M.Sc. (O.T.), 2016, Brunel University London, U.K.; Ph.D. 2022, Glasgow Caledonian University, U.K.

Dr. Mohammad A. H. Alshehab, Assistant Professor (2023)  
BSc. 2008, Cardiff University, Wales; MSc. 2015, Cardiff University, Wales; PhD. 2023, Keele University, England

## **SECRETARIAL STAFF**

Ms. Fatma Al Busri, Executive Secretary

**OLD OT CURRICULUM**  
*(Applicable till the batch of 2022-2023 graduates)*

**PROGRAMME REQUIREMENTS**

The total number of credit hours required for graduation is 128.  
The programme for the B.Sc. Degree in Occupational Therapy is as follows:

**1. UNIVERSITY REQUIREMENTS (19 Credits)**

	<b>Credit Hours</b>
0410-115 Finite Mathematics	3
0788-181 English Language	5
0788-182 English Language	5
0788-250 English Language	3
Elective	3

**2. FACULTY REQUIREMENTS (23 Credits)**

0490-101 Biology	3
0711-105 Introduction to Health Informatics	3
0700-106 First Aid and Emergency Care	3
0480-107 Statistics for Medical Sciences	3
0420-110 Chemistry	3
0420-111 Chemistry Lab	1
0430-121 Physics	3
0430-125 Physics Lab	1
0700-220 Psychology of Medical Care	3

### **3 PROFESSIONAL REQUIREMENTS (86 Credits)**

1370-101 Introduction to Sociology	3
0700-152 Physiology I	3
0700-155 Anatomy	3
0700-310 Physiology II - Neuroscience	3
0700-316 Clinical Medicine and Pathology	3
0716-210 Introduction to Occupational Therapy	3
0716-212 Occupational Performance Analysis	3
0716-213 Communication and Group Process	2
0716-214 Human Development	2
0716-303 Frameworks of Occupational Therapy	3
0716-304 Mental Health in Occupational Therapy	3
0716-305 Human Movement and Functioning	2
0716-306 Clinical Fieldwork I	1
0716-311 Ergonomics in Occupational Therapy	3
0716-312 Phys. Disability and Occupational Performance	3
0716-313 Evaluation & Assessment	2
0716-317 Orthopaedic Rehabilitation	3
0716-318 Clinical Fieldwork II	2
0716-401 Research in Occupational Therapy	2
0716-402 Child Health in Occupational Therapy	3
0716-403 Psych. Disability & Occupational Performance	3
0716-404 Cognitive and Neuro-Rehabilitation	3
0716-405 Technology and Adaptation	2
0716-406 Clinical Fieldwork III	3
0716-407 Clinical Fieldwork IV	4
0716-408 Clinical Fieldwork V (Year 5, Semester 1)	9
0716-409 Independent Study	1
0716-411 Occupational Environment and Daily Life	3
0716-412 Evidence Based Practice	3
0716-413 Professional Development	3

## PROGRAMME TIMETABLE

### FIRST YEAR

Semester One		Semester Two	
Course	CH	Course	CH
110/111 Chem. & Chem. Lab. or 121/125 Phys. & Phys. Lab.	4	101 Biology	3
115 Finite Mathematics	3	106 First Aid & Emergency Care	3
181 English Language	5	110/111 Chem. & Chem. Lab. or 121/125 Phys. & Phys. Lab.	4
Elective	3	182 English Language	5
<b>Total</b>		<b>Total</b>	
	<b>15</b>		<b>15</b>

### SECOND YEAR

Semester One		Semester Two	
Course	CH	Course	CH
101 Introduction to Sociology	3	105 Intro to Health Informatics	3
155 Anatomy	3	152 Physiology	3
107 Stats for Medical Sciences	3	212 Occupational Performance Analysis	3
210 Introduction to Occupational Therapy	3	213 Communication & Group Process	2
250 English	3	214 Human Development	2
		220 Psychology of Med. Care	3
<b>Total</b>		<b>Total</b>	
	<b>15</b>		<b>16</b>

### THIRD YEAR

#### Semester One

Course	CH
303 Frameworks of OT	3
305 Human Movement & Functioning	2
306 Clinical Fieldwork I	1
310 Neuroscience	3
313 Evaluation & Assess.	2
316 Clinical Med. & Path.	3

**Total 14**

#### Semester Two

Course	CH
304 Mental Health in OT	3
311 Ergonomics in OT	3
312 Physical Disability and Occupational Performance	3
317 Orthopaedic Rehabilitation	3
318 Clinical Fieldwork II	2

**Total 14**

### FOURTH YEAR

#### Semester One

Course	CH
401 Research in OT	2
402 Child Health in OT	3
403 Psychosocial Disability & Occup. Performance	3
404 Cogni. & Neuro-Rehab.	3
405 Tech. & Adaptation	2
406 Clinical Fieldwork III	3

**Total 16**

#### Semester Two

Course	CH
407 Clinical Fieldwork IV	4
409 Independent Study	1
411 Occup. Environment & Daily Life	3
412 Evidence Based Practice	3
413 Professional Development	3

**Total 14**

### FIFTH YEAR

#### Semester One

408 Fieldwork V	9
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**Total 9**

# OCCUPATIONAL THERAPY

## COURSE DESCRIPTIONS

### YEAR ONE, SEMESTER ONE

#### **0420-110 CHEMISTRY (3-0-3)** (*Faculty of Science*)

Stoichiometry; electronic structure of atoms, periodic table; chemical bonds, introduction to chemistry of elements; chemical thermodynamics, chemical kinetics; chemical equilibria, acids and bases in aqueous solutions.

#### **0420-111 CHEMISTRY LAB (0-3-1)** (*Faculty of Science*)

Fundamental concepts in chemistry, to introduce basic concepts of laboratory work, write report and demonstrate some of topics covered in 110 Chemistry. Students are encouraged to use computer tools for writing lab report, plotting graph and data analysis.

**Corequisite: 110 Chemistry**

#### **0410-115 FINITE MATHEMATICS (3-0-3)** (*Faculty of Science*)

Finite Mathematics develops the logical structure, provides an essential algebraic and statistical background, and emphasises the comprehension of problem-solving techniques for real life problems associated with business, life and social sciences thus, giving insight into the importance of mathematical skills in almost all aspects of human society. This includes solving systems of linear equations, linear programming and the simplex method, rudiments of discrete probability, probability distribution and expected value of a random variable, and elements of statistics.

#### **0788-181 ENGLISH LANGUAGE (10-0-5)**

181 English is the first of three required English Language courses offered in the Faculty. It is a reading-based, multi-skills course intended to advance students' abilities to study content area courses in English. The macro-skills of reading, writing, listening, speaking and grammar are broken down into their component parts to give the students the opportunity to acquire fluency and accuracy in the language of the health sciences.

**Prerequisite: 180 English Language**

## **YEAR ONE, SEMESTER TWO**

### **0490-101 BIOLOGY (2-3-3) (*Faculty of Science*)**

Cellular basis of life: differences in size and complexity of cells as illustrated by viruses, bacteria, protozoa and various types of metazoan cells. Structure and metabolic activities of a generalized eukaryotic cell. Chemical composition and functions of the cell membrane; role of mitochondria, structure of GER and SER and their relation to the Golgi apparatus; structure of the nuclear membrane. Central role of enzymes in cells. Structure of DNA and RNA. Genetic code and protein synthesis. Mitosis and meiosis. Mendelian genetics and inherited diseases. Interactions between eukaryotic cells and bacteria and viruses. Cell mediated immunity. Organization of cells into tissues.

### **0700-106 FIRST AID AND EMERGENCY CARE (2-2-3)**

This course is designed to provide students with basic knowledge of first aid and the skills needed to provide early interventions and care in the event of a health emergency. It enables students to plan an assessment for each casualty, using a methodological two-stage system, first to check and treat life-threatening conditions (primary survey), then to call for help. An overall view of the basic fundamentals of first aid is presented with an emphasis on decision making in emergency situations.

**Prerequisite:** 180 English Language

### **0430-121 PHYSICS (3-0-3) (*Faculty of Science*)**

Methods of physics, elementary mathematics, motion and particle dynamics, mechanics of extended objects, conservation of energy, kinetic theory of gases. Liquids, vibrations and waves, ear and hearing, electricity and conduction in solids, ions and ionic conduction.

### **0430-125 PHYSICS LAB (0-3-1) (*Faculty of Science*)**

The student will learn to enhance the understanding level of concepts in mechanics. Also, to enhance ability in experimental design, data and error analysis and report writing. Student will learn to be acquainted with related instrumentations and experimental techniques as well as to develop skills in communication and ability to work in groups.

**Corequisite:** 121 Physics

## **0788-182 ENGLISH LANGUAGE (10-0-5)**

182 English expands on the content of the five basic language learning skills introduced in 181 English. Students read and listen to materials of a scientific/medical nature, discuss the topics with their classmates to broaden their comprehension, and then write about the topics they have discussed to show they are able to communicate comprehensibly. Grammar instruction is explicit and includes the grammar of science and medicine.

**Prerequisite: 181 English Language**

## **YEAR TWO, SEMESTER ONE**

### **1370-101 INTRODUCTION TO SOCIOLOGY (3-0-3)**

*(Faculty of Social Sciences)*

The course introduces the students to the establishment, development, and various approaches of sociology. Students learn the core concepts including the social fabric, levels of social relations, culture, upbringing and development, process of organization, social systems, and social adaptation and change.

### **0480-107 STATISTICS FOR MEDICAL SCIENCES (3-1-3)**

*(Faculty of Science)*

Relevance and principles of Biostatistics with application in Medicine and Biology Descriptive statistics, sampling and sampling distributions. Estimation of parameters, probability and probability distribution, with emphasis on the normal Tests of hypotheses for one or two means and one or two portions. Measures of association between two continuous variables (correlation and regression) and two discrete variables (chi-square). Non-parametric tests commonly used in medicine.

**Prerequisite: 115 Finite Maths**

### **0700-155 ANATOMY I (2-3-3)**

This course introduces human morphology at the cell, tissue, and organ system levels of organization. The course is taught through theoretical lectures and practical demonstrations.

**Prerequisite: Year 1 courses**



### **0716-210 INTRODUCTION TO OCCUPATIONAL THERAPY (3-0-3)**

The course introduces the students to the local and international health care systems and provides an overview of the history, philosophy, beliefs, and professional identity of Occupational Therapy. Students study the role and contributions of occupational therapy in Primary Health Care. The concept of interaction between person-occupation-environment as a means of influencing health and disability and affecting occupational performance is explored. Students learn essential health care terminology from the World Health Organization's classification of Function, Health and Disability (ICF), occupational therapy practice framework and generic medical terminology.

**Prerequisite: Year 1 courses**

### **0788-250 ENGLISH LANGUAGE (6-0-3)**

Language and study skills are perfected using authentic health sciences journal articles relevant to the students' majors. Report writing, abstract writing, bibliography and referencing techniques are taught.

**Prerequisite: 182 English Language**

## **YEAR TWO, SEMESTER TWO**

### **0711-105 INTRODUCTION TO HEALTH INFORMATICS (2-2-3)**

The purpose of this course is to give students a broad foundation of basic computing and information processing knowledge and skills. It introduces the students, briefly, to the history and overview of computers, computer architecture, computer hardware and software. Participants are familiarized with PC Operating Systems and Local Area Networks (LAN). Emerging technologies in the electronic data processing field such as electronic mail, CD-ROM databases, accessing the Internet, etc., are also covered. In addition to lecture sessions, there are practical laboratory sessions that help to reinforce the students' knowledge.

Delivery methods employed for this course combine didactic theory supplemented by lab sessions that will provide hands-on applications of learned theory.

**Prerequisites: Year 2, Semester 1 courses**

### **0700-152 PHYSIOLOGY I (2-2-3)**

This course provides a basic understanding of the physiology of the cell, body fluids, nerves, muscles, blood, functions of the cardiovascular system, respiratory system, renal system, gastro-intestinal system, endocrine system and reproductive system. Emphasis is placed on the interactions of the systems.

**Prerequisite:** 155 Anatomy I

### **0716-212 OCCUPATIONAL PERFORMANCE ANALYSIS (3-0-3)**

The course explores the meaning and purpose of human occupation. It examines and analyses activities, habits, roles and occupations for individuals with varying abilities. Students study the interaction of the person-occupation-environment and its influence on occupational performance. They also learn to demonstrate professional reasoning and analytical skills in analysing occupational performance.

**Prerequisite:** 210 Introduction to Occupational Therapy

### **0716-213 COMMUNICATION & GROUP PROCESS (2-0-2)**

The course prepares students for the use of therapeutic groups, emphasizing assessment techniques and intervention approaches in various areas of occupational therapy practice. It focuses on applying small group theory and group dynamics to facilitate change in individuals and groups. In addition, it introduces the students to the code of ethics, scope of practice, occupational therapy standards and regulations and patients' rights that guide practice, professional conducts and behaviours with patients and co-workers. Students develop effective professional communication skills, focusing on verbal and non-verbal communications, the use of technology as a form of communication, and written documentation of progress reports. Communication with people from different cultural backgrounds is emphasized.

**Prerequisite:** 210 Introduction to Occupational Therapy

### **0716-214 HUMAN DEVELOPMENT (2-0-2)**

An overview of theories of human development from conception to death is provided. The focus is on age-associated changes in sensory, motor, cognitive and psychosocial functions and their implication for self-care, play and leisure, school and work occupations. Emphasis is placed on occupational roles, contextual influences, and functional adaptations as they relate to individuals in different stages of life.

**Prerequisite:** 210 Introduction to Occupational Therapy

**Corequisite:** 220 Psychology of Medical Care

### **0700-220 PSYCHOLOGY OF MEDICAL CARE (2-2-3)**

The first part of the course provides an overview of Psychology as the basic science concerned with individual human behaviour and mental processes. Empirical studies and theoretical models of basic processes such as learning, memory and perception are introduced. Factors that Occupational Therapy behaviour are considered, as well as contemporary models that describe and seek to explain the major dimensions of temperament and personality variation. The second part of the course draws on the material taught in the first part to clarify issues relating to patients' compliance and satisfaction with the medical care they receive. Psychological factors which influence the behaviour and expectations of health professionals and the efficacy of the care they provide are also considered. The special needs of certain patients are highlighted. This includes reference to children, the aged, the dying, and the physically handicapped and mentally retarded. Current theories linking stress and illness, methods for reducing stress and research into pain and pain management are presented. The relationship between sociodemographic variables and health will also be considered.

**Prerequisite:** 182 English Language

## **YEAR THREE, SEMESTER ONE**

### **0716-303 FRAMEWORKS OF OCCUPATIONAL THERAPY (3-0-3)**

The course introduces students to generic and specific frameworks of practice used in occupational therapy. The students learn to apply these frameworks of practice to case studies of individuals and groups. In addition to the construct of individualism and self-actualization, the role of family and cultural norms within Muslim society is considered. The case-based discussion and critical analysis of the literature enable students to develop the clinical reasoning skills needed for the application of the theoretical frameworks in occupational therapy clinical practice. Concepts and terminology from the World Health Organization's International Classification of Function, Health and Disability are discussed in relation to Occupational Therapy.

**Prerequisites:** Year 2 courses

### **0716-305 HUMAN MOVEMENT & FUNCTIONING (1-3-2)**

The course introduces concepts in kinesiology and exercise physiology. Principles of coordination and control of movement and the development of skilled action are discussed. The course focuses on fundamental movement

activities, movement control processes, acquisition, retention, and transfer of skills. It includes biomechanics, kinematics and kinetic analysis of normal function and dysfunction. The course also covers the physiological adjustment of major body organs to different types of exercise and correlates them to various human physiological factors.

**Prerequisites:** Year 2 courses

### **0716-306 CLINICAL FIELDWORK I (0-4-1)**

Fieldwork includes observation of occupational therapy practice in various clinical settings under professional supervision. Students learn the process of medical documentation through observation of occupational therapy practitioners and review of medical charts.

**Prerequisites:** Year 2 courses

**Corequisite:** 303 Frameworks of Occupational Therapy

### **0700-310 NEUROSCIENCE (3-0-3)**

The course introduces students to the structure and function of the human nervous system. Concepts of normal sensory, Occupational Therapy, and cognitive functions as well as common neurological conditions are studied. Emphasis is placed on the fundamentals of neuroscience as they relate to occupation and occupational dysfunction.

**Prerequisites:** 152 Physiology

### **0716-313 EVALUATION AND ASSESSMENT (1-3-2)**

The course provides an overview of the evaluation and assessment process. It focuses on understanding the theoretical principles related to aspects of occupational performance. The interaction of the person-occupation-environment that influences the assessment of occupational performance is examined. Students develop professional reasoning skills in identifying, administering and documenting assessments for the evaluation of different aspects of occupational performance. They also implement appropriate interventions to remediate or to compensate for problems that interfere with occupational performance.

**Prerequisites:** Year 2 courses

**Corequisite:** 303 Frameworks of Occupational Therapy

### **0700-316 CLINICAL MEDICINE AND PATHOLOGY (3-0-3)**

The study of disease processes affecting the human body in relation to etiology, organ system involvement, pathological changes in the structure and function of the tissues and organs, specific physical signs and symptoms, diagnostic procedures, common complications, preferred treatment, forecast outcome of specific disease processes and pertinent public health aspects of specific disease processes.

**Prerequisites:** Year 2 courses

## **YEAR THREE, SEMESTER TWO**

### **0716-304 MENTAL HEALTH IN OCCUPATIONAL THERAPY (3-0-3)**

The course introduces the students to the nature of psychopathology (abnormal psychology), its causes, and its effects on occupational performance. Students learn the theoretical frame of references that guide occupational therapy evaluation and intervention of psychiatric and psychosocial issues. Through in-class case studies, students demonstrate skills in selecting appropriate mental health assessments, developing interventions and deciding on meaningful occupation.

**Prerequisites:** 214 Human Development; 220 Psychology of Medical Care; Year 3, Semester 1 courses

### **0716-311 ERGONOMICS IN OCCUPATIONAL THERAPY (2-3-3)**

The course introduces the students to the interaction between the person and environment through occupation. The students implement environmental modifications plans based on assessments and observation to improve clients' occupational performance. The course focuses on body mechanics, work-related musculoskeletal injuries, activity analysis, and work hardening and conditioning. Additional topics include universal designs, accessibility, and local disability acts and policies.

**Prerequisites:** Year 3, Semester 1 courses

### **0716-312 PHYSICAL DISABILITY AND OCCUPATIONAL PERFORMANCE (2-3-3)**

The course prepares students for occupational therapy practice for adults with physical disabilities. The students learn the skills necessary for beginning practice in occupational therapy that enable function and wellbeing. Students practice several assessment tools and treatment methods relating to physical dysfunction. The effect of physical dysfunction on the person's occupational performance and participation in occupation is addressed.

**Prerequisites:** Year 3, Semester 1 courses

### **0716-317 ORTHOPEDIC REHABILITATION (2-3-3)**

The course covers orthopaedic health problems, assessments, and interventions. Students develop skills to identify diseases, injuries, and conditions of the musculoskeletal system, select the appropriate assessments and design the correct interventions based on theoretical grounds and published evidence. Laboratory work allows students to implement assessments that are commonly utilized in orthopaedic settings including manual muscle testing, goniometry, sensory evaluations, and functional assessments. Splinting principles are introduced, and students are required to fabricate splints.

**Prerequisites:** Year 3, Semester 1 courses

### **0716-318 CLINICAL FIELDWORK II (0-8-2)**

The overall purpose of the fieldwork experience is to provide students with exposure to clinical settings through observation of the treatment process. It also gives an opportunity for students to observe clients and therapists and to examine their reactions to clients, supervisors and other health care professionals.

**Prerequisites:** Year 3, Semester 1 courses

**Corequisites:** 311 Ergonomics in Occupational Therapy; 312 Physical Disability & Occupational Performance; 317 Orthopaedic Rehabilitation

## **YEAR FOUR, SEMESTER ONE**

### **0716-401 RESEARCH IN OCCUPATIONAL THERAPY (2-0-2)**

The course addresses the parameters and criteria for research practice. Students learn different models and paradigms of research. They are presented with an opportunity to explore quantitative and qualitative approaches to research. Topics include literature review, sampling techniques, data collection, analysis strategies, research ethics and critique of research papers. Students are expected to develop a research proposal that is relevant to Occupational Therapy.

**Prerequisites:** Year 3, Semester 2 courses

### **0716-402 CHILD HEALTH IN OCCUPATIONAL THERAPY (2-3-3)**

The course focuses on occupational performance for children with disabilities. Students acquire the knowledge and skills needed to provide occupational therapy evaluation and intervention services for various paediatric disabilities and compares and contrasts typical and atypical growth. The importance of sociocultural norms and Islamic beliefs in working with children and their families is emphasized.

**Prerequisites:** Year 3, Semester 2 courses

### **0716-403 PSYCHOSOCIAL DISABILITY AND OCCUPATIONAL PERFORMANCE (2-3-3)**

The course examines the psychosocial dimensions of the person-occupation-environment relationship. It focuses on assessments and implementation of interventions for individuals with specific psychosocial disorders, in addition to counselling, adaptation and social skills training. The influence of Islamic principles and cultural beliefs on clients with psychosocial issues is discussed.

**Prerequisites:** Year 3, Semester 2 courses

### **0716-404 COGNITIVE AND NEURO-REHABILITATION (2-3-3)**

The Central Nervous System, motor control, and motor learning are examined. Frames of references that guide occupational therapy evaluation and interventions of CNS dysfunction are reviewed, including neuro-developmental treatment, proprioceptive neuromuscular facilitation, Brunnstrom, and Rood. The course also covers neurological impairments as they relate to occupational

performance and the principles that guide neurological assessments and interventions.

**Prerequisites: Year 3, Semester 2 courses**

### **0716-405 TECHNOLOGY AND ADAPTATION (1-3-2)**

The course presents an overview of the role of the occupational therapist in facilitating the use of augmentative communication and assistive technology by individuals with disabilities to enable occupational performance. Through the hands-on lab experiences, students learn about the various types of assistive technology devices as they pertain to individuals with disabilities.

**Prerequisites: Year 3, Semester 2 courses**

### **0716-406 CLINICAL FIELDWORK III (0-12-3)**

Working with clients under the supervision of an occupational therapist, students are provided a clinical learning experience in delivering occupational therapy services. The focus of the learning experience is to apply skills learned through coursework, including observation, conducting assessments, writing goals, implementing interventions and demonstrating professional behaviour.

**Prerequisites: Year 3, Semester 2 courses**

**Corequisite: 402 Child Health in OT; 404 Cognitive & Neurorehabilitation**

## **YEAR FOUR, SEMESTER TWO**

### **0716-407 CLINICAL FIELDWORK IV (0-16-4)**

Students apply didactic material learned in Occupational Therapy courses and interact with clients in a therapeutic setting. Practice of evaluation, goal setting, intervention, documentation, and application of therapeutic techniques are carried out under the supervision of an occupational therapist.

**Prerequisites: Year 4, Semester 1 courses**



### **0716-409 INDEPENDENT STUDY (1-0-1)**

Students explore an area of their interest, working one-on-one with a faculty member to gain an in-depth knowledge of that area. The course learning process includes meetings, gathering information, evaluation, and on-site observation and implementation of clinical practice.

**Prerequisites: Year 4, Semester 1 courses**

### **0716-411 OCCUPATIONAL ENVIRONMENT & DAILY LIFE (3-0-3)**

The course presents in depth analysis of an occupational environment at the personal, societal and community levels and its impact on occupational performance. Emphasis is placed on appraising and analysing the environmental factors that sustain or hinder occupational performance. Students are expected to provide recommendations to improve, modify and adapt the environment to sustain occupational performance and promote functioning.

**Prerequisites: Year 4, Semester 1 courses**

### **0716-412 EVIDENCE BASED PRACTICE (3-0-3)**

Students learn how to integrate research evidence into the professional reasoning process and how to answer important questions from qualitative and quantitative data sources. They evaluate the status, beliefs and practice of the profession, and develop skills in synthesizing and presenting evidence to service recipients. They also implement a research project in the field of occupational therapy.

**Prerequisites: Year 4, Semester 1 courses**

### **0716-413 PROFESSIONAL DEVELOPMENT (3-0-3)**

The course promotes active student-Centred learning, focusing on case studies that address realistic and relevant local and international health care issues. Drawing on their clinical experience, students analyse issues directly related to professional practice in occupational therapy. The course addresses the complexities and richness of Occupational Therapy practice with an examination of the variability between therapists' expectations and the events that unfold in real life therapy.

**Prerequisites: Year 4, Semester 1 courses**

## **YEAR FIVE, SEMESTER ONE**

### **0716-408 CLINICAL FIELDWORK V (0-36-9)**

Clinical experience in various settings, including acute hospital settings, inpatient settings, rehabilitation Centres, day treatment Centres, nursing homes, school system, developmental Centres, industrial settings, and community health initiatives. Each student performs hands-on treatment for a wide range of disabilities and age groups. Practice of evaluation, goal setting, intervention, documentation, and application of occupations, activities, and therapeutic techniques appropriate to the student's skill level are carried out under the supervision of an occupational therapist.

**Prerequisites: Year 3, Semester 2 courses and 407 Clinical Fieldwork IV**

**REVISED OT CURRICULUM**  
*(Applicable from new batch of 2023-24 onwards)*

**PROGRAMME REQUIREMENTS**

The total number of credit hours required for graduation is 125.  
The programme for the B.Sc. Degree in Occupational Therapy is as follows:

**1. UNIVERSITY REQUIREMENTS (19 Credits)**

	<b>Credit Hours</b>
0410-115 Finite Mathematics	3
0788-181 English Language	5
0788-182 English Language	5
0788-250 English Language	3
Elective	3

**2. FACULTY REQUIREMENTS (20 Credits)**

0490-101 Biology	3
0700-106 First Aid and Emergency Care	3
0480-107 Statistics for Medical Sciences	3
0420-110 Chemistry	3
0420-111 Chemistry Lab	1
0430-121 Physics	3
0430-125 Physics Lab	1
0700-220 Psychology of Medical Care	3

### 3 PROFESSIONAL REQUIREMENTS (86 Credits)

0700-152 Physiology I	3
0700-155 Anatomy	3
0700-310 Physiology II - Neuroscience	3
0700-316 Clinical Medicine and Pathology	3
0712-345 Introduction to Pharmacology	2
0716-205 Human Movement and Functioning	3
0716-206 Frameworks of Therapeutic Sciences	2
0716-207 Evaluation & Assessment	2
0716-210 Foundations of Occupational Therapy	3
0716-211 Introduction to Assistive Technology	2
0716-214 Human Development	2
0716-215 Foundations of Clinical Fieldwork	2
0716-216 Occupational Performance Analysis	2
0716-304 Mental Health in Occupational Therapy	3
0716-307 Communication and Group Process	2
0716-308 Cognitive and Neurorehabilitation	3
0716-309 Clinical Fieldwork I	3
0716-312 Physical Disability and Occupational Performance	3
0716-319 Clinical Fieldwork II	4
0716-320 Child Health	3
0716-321 Orthopedic Rehabilitation	3
0716-401 Applied and Clinical Research	2
0716-403 Psychosocial Disability & Occupational Performance	3
0716-405 Assistive Technology and Adaptation	2
0716-409 Independent Study	1
0716-411 Occupational Environment	3
0716-412 Research Thesis	3
0716-414 Emerging Areas and Occupational Therapy	2
0716-415 Clinical Fieldwork III	5
0716-416 Clinical Fieldwork IV	7
0716-417 Professional Development	2

## PROGRAMME TIMETABLE

### FIRST YEAR

Semester One		Semester Two	
Course	CH	Course	CH
110/111 Chem. & Chem. Lab. or 121/125 Phys. & Phys. Lab.	4	101 Biology	3
115 Finite Mathematics	3	106 First Aid & Emergency Care	3
181 English Language	5	110/111 Chem. & Chem. Lab. or 121/125 Phys. & Phys. Lab.	4
Elective	3	182 English Language	5
<b>Total</b>	<b>15</b>	<b>Total</b>	<b>15</b>

### SECOND YEAR

Semester One		Semester Two	
Course	CH	Course	CH
107 Stats for Medical Sciences	3	152 Physiology	3
155 Anatomy	3	206 Frameworks of Therapeutic Sciences	2
205 Human Movement & Functioning	3	207 Evaluation & Assessment	2
210 Foundations of Occupational Therapy	3	211 Introduction to Assistive Technology	2
214 Human Development	2	215 Foundations of Clinical Fieldwork	2
250 English	3	216 Occupational Performance Analysis	2
		220 Psychology of Med. Care	3
<b>Total</b>	<b>17</b>	<b>Total</b>	<b>16</b>

### THIRD YEAR

Semester One		Semester Two	
Course	CH	Course	CH
307 Communication & Group Process	2	304 Mental Health in OT	3
308 Cognitive and Neuro-Rehabilitation	3	312 Physical Disability and Occupational Performance	3
309 Clinical Fieldwork I	3	319 Clinical Fieldwork II	4
310 Neuroscience	3	320 Child Health	3
316 Clinical Med. & Path.	3	345 Pharmacology	2
321 Orthopedic Rehabilitation	3		
<b>Total</b>	<b>17</b>	<b>Total</b>	<b>15</b>

### FOURTH YEAR

Semester One		Semester Two	
Course	CH	Course	CH
401 Applied and Clinical Research	2	409 Independent Study	1
403 Psychosocial Disability & Occup. Performance	3	412 Research Thesis	3
405 Assistive Technology and Adaptation	2	414 Emerging Areas & OT	2
411 Occupational Environment	3	416 Clinical Fieldwork IV	7
415 Clinical Fieldwork III	5	417 Professional Development	2
<b>Total</b>	<b>15</b>	<b>Total</b>	<b>15</b>

# OCCUPATIONAL THERAPY

## COURSE DESCRIPTIONS

### YEAR ONE, SEMESTER ONE

#### **0420-110 CHEMISTRY (3-0-3)** (*Faculty of Science*)

Stoichiometry; electronic structure of atoms, periodic table; chemical bonds, introduction to chemistry of elements; chemical thermodynamics, chemical kinetics; chemical equilibria, acids and bases in aqueous solutions.

#### **0420-111 CHEMISTRY LAB (0-3-1)** (*Faculty of Science*)

Fundamental concepts in chemistry, to introduce basic concepts of laboratory work, write report and demonstrate some of topics covered in 110 Chemistry. Students are encouraged to use computer tools for writing lab report, plotting graph and data analysis.

**Corequisite: 110 Chemistry**

#### **0410-115 FINITE MATHEMATICS (3-0-3)** (*Faculty of Science*)

Finite Mathematics develops the logical structure, provides an essential algebraic and statistical background, and emphasises the comprehension of problem-solving techniques for real life problems associated with business, life and social sciences thus, giving insight into the importance of mathematical skills in almost all aspects of human society. This includes solving systems of linear equations, linear programming and the simplex method, rudiments of discrete probability, probability distribution and expected value of a random variable, and elements of statistics.

#### **0788-181 ENGLISH LANGUAGE (10-0-5)**

181 English is the first of three required English Language courses offered in the Faculty. It is a reading-based, multi-skills course intended to advance students' abilities to study content area courses in English. The macro-skills of reading, writing, listening, speaking and grammar are broken down into their component parts to give the students the opportunity to acquire fluency and accuracy in the language of the health sciences.

**Prerequisite: 180 English Language**

## **YEAR ONE, SEMESTER TWO**

### **0490-101 BIOLOGY (2-3-3) (*Faculty of Science*)**

Cellular basis of life: differences in size and complexity of cells as illustrated by viruses, bacteria, protozoa and various types of metazoan cells. Structure and metabolic activities of a generalized eukaryotic cell. Chemical composition and functions of the cell membrane; role of mitochondria, structure of GER and SER and their relation to the Golgi apparatus; structure of the nuclear membrane. Central role of enzymes in cells. Structure of DNA and RNA. Genetic code and protein synthesis. Mitosis and meiosis. Mendelian genetics and inherited diseases. Interactions between eukaryotic cells and bacteria and viruses. Cell mediated immunity. Organization of cells into tissues.

### **0700-106 FIRST AID AND EMERGENCY CARE (2-2-3)**

This course is designed to provide students with basic knowledge of first aid and the skills needed to provide early interventions and care in the event of a health emergency. It enables students to plan an assessment for each casualty, using a methodological two-stage system, first to check and treat life-threatening conditions (primary survey), then to call for help. An overall view of the basic fundamentals of first aid is presented with an emphasis on decision making in emergency situations.

**Prerequisite:** 180 English Language

### **0430-121 PHYSICS (3-0-3) (*Faculty of Science*)**

Methods of physics, elementary mathematics, motion and particle dynamics, mechanics of extended objects, conservation of energy, kinetic theory of gases. Liquids, vibrations and waves, ear and hearing, electricity and conduction in solids, ions and ionic conduction.

### **0430-125 PHYSICS LAB (0-3-1) (*Faculty of Science*)**

The student will learn to enhance the understanding level of concepts in mechanics. Also, to enhance ability in experimental design, data and error analysis and report writing. Student will learn to be acquainted with related instrumentations and experimental techniques as well as to develop skills in communication and ability to work in groups.

**Corequisite:** 121 Physics



### **0788-182 ENGLISH LANGUAGE (10-0-5)**

182 English expands on the content of the five basic language learning skills introduced in 181 English. Students read and listen to materials of a scientific/medical nature, discuss the topics with their classmates to broaden their comprehension, and then write about the topics they have discussed to show they are able to communicate comprehensibly. Grammar instruction is explicit and includes the grammar of science and medicine.

**Prerequisite: 181 English Language**

## **YEAR TWO, SEMESTER ONE**

### **0480-107 STATISTICS FOR MEDICAL SCIENCES (3-1-3)**

*(Faculty of Science)*

Relevance and principles of Biostatistics with application in Medicine and Biology Descriptive statistics, sampling and sampling distributions. Estimation of parameters, probability and probability distribution, with emphasis on the normal Tests of hypotheses for one or two means and one or two portions. Measures of association between two continuous variables (correlation and regression) and two discrete variables (chi-square). Non-parametric tests commonly used in medicine.

**Prerequisite: 115 Finite Maths**

### **0700-155 ANATOMY I (2-3-3)**

This course introduces human morphology at the cell, tissue, and organ system levels of organization. The course is taught through theoretical lectures and practical demonstrations.

**Prerequisite: Year 1 courses**

### **0716-205 HUMAN MOVEMENT & FUNCTIONING (2-3-3)**

The course introduces concepts in kinesiology and exercise physiology. Principles of coordination and control of movement and the development of skilled action are discussed. The course focuses on fundamental movement activities, movement control processes, acquisition, retention, and transfer of skills. It includes biomechanics, kinematics, and kinetic analysis of normal function and dysfunction. These topics have implications for understanding

skilled performance, motor development, energy expenditures in the performance of daily activities, and human performance in general. The course also covers exercise physiology content such as physiological adjustment of major body organs to different types of exercise and correlates them to different human physiological factors.

**Prerequisite: All Year Two, Semester one courses**

### **0716-210 FOUNDATIONS OF OCCUPATIONAL THERAPY (3-0-3)**

The course introduces the students to the local and international health care systems and provides an overview of occupational therapy's history, philosophy, code of ethics, beliefs, and professional identity. The students study the role and contributions of occupational therapy in Primary Health Care. The concept of interaction between person-occupation-environment influences health and disability and affects occupational performance is explored. The students learn essential health care terminology from the World Health Organization's International Classification of Function, Health, and Disability (ICF), + ICD-11 specific occupational therapy terminology such as the ones used by the latest occupational therapy practice framework (OTPF, 2020) and generic medical terminology.

**Prerequisite: Year 1 courses**

### **0716-214 HUMAN DEVELOPMENT (2-0-2)**

An overview of theories of human development from conception to death is provided. The focus is on age-associated changes in sensory, motor, cognitive and psychosocial functions, and their implication for self-care, play and leisure, school, and work occupations. Emphasis is placed on occupational roles, contextual influences, and functional adaptations as they relate to individuals in different stages of life.

**Prerequisite: All Year one courses**

### **0788-250 ENGLISH LANGUAGE (6-0-3)**

Language and study skills are perfected using authentic health sciences journal articles relevant to the students' majors. Report writing, abstract writing, bibliography and referencing techniques are taught.

**Prerequisite: 182 English Language**

## **YEAR TWO, SEMESTER TWO**

### **0700-152 PHYSIOLOGY I (2-2-3)**

This course provides a basic understanding of the physiology of the cell, body fluids, nerves, muscles, blood, functions of the cardiovascular system, respiratory system, renal system, gastro-intestinal system, endocrine system and reproductive system. Emphasis is placed on the interactions of the systems.

**Prerequisite: 155 Anatomy I**

### **0716-206 FRAMEWORKS OF THERAPEUTIC SCIENCES (2-0-2)**

The course introduces the students to the evolution of theories relevant to occupational therapy. The students will understand generic occupation-based models and specific practice frameworks used in therapeutic sciences. The students will learn to apply these models and frameworks of practice to case studies of individuals and groups. The case-based discussion and critical analysis of the literature enable students to develop the professional reasoning skills needed to apply the theoretical models and frameworks in occupational therapy clinical practice. The OT Practice Framework (OTPF-4) is integrated throughout the course. Additionally, concepts and terminology from the World Health Organization's International Classification of Function, Health, and Disability (ICF) and ICD-11 are discussed in relation to Occupational Therapy.

**Prerequisite: All Year Two, Semester one courses**

### **0716-207 EVALUATION AND ASSESSMENT (1-3-2)**

The course provides an overview of the evaluation and assessment process. It focuses on understanding the theoretical principles related to aspects of occupational performance. The interaction of the person-occupation-environment that influences the assessment of occupational performance is examined. Students develop professional reasoning skills in identifying, administering, and documenting assessments to evaluate different aspects of occupational performance. They also implement appropriate interventions to remediate or to compensate for problems that interfere with occupational performance.

**Prerequisite: All Year Two, Semester one courses**

### **0716-211 INTRODUCTION TO ASSISTIVE TECHNOLOGY (2-0-2)**

This course is designed to introduce the students to the fundamentals of assistive technology (AT). The students will develop a fluent understanding of assistive technology and the realities of technologies for people with disabilities. Students will learn about the continuum of AT devices, universal design, integration of assistive technologies, and incorporating the appropriate use of assistive technologies to address the needs of diverse patient populations. Students will have the opportunity to apply current research and best practice, have hands-on experiences with technologies of various tech levels, and incorporate Universal Design to effectively meet the needs of clients. Complementary topics will include disability and rehabilitation, legislations, research and development, design process, software integration, and interdisciplinary perspectives.

**Prerequisite: All Year Two, Semester one courses**

### **0716-215 FOUNDATIONS OF CLINICAL FIELDWORK (1-4-2)**

Fieldwork includes observing occupational therapy practice in various clinical settings under professional supervision. Students learn the process of medical documentation by observing occupational therapy practitioners and reviewing medical files.

**Prerequisite: All Year Two, Semester one courses**

### **0716-216 OCCUPATIONAL PERFORMANCE ANALYSIS (2-0-2)**

The course explores the meaning and purpose of human occupation. It examines and analyzes activities, habits, roles, and occupations for individuals with varying abilities. Students study the interaction of the person-occupation-environment and its influence on occupational performance. They also learn to express professional reasoning and analytical skills in analyzing occupational performance.

**Prerequisite: All Year Two, Semester one courses**

### **0700-220 PSYCHOLOGY OF MEDICAL CARE (2-2-3)**

The first part of the course provides an overview of Psychology as the basic science concerned with individual human behaviour and mental processes. Empirical studies and theoretical models of basic processes such as learning, memory and perception are introduced. Factors that Occupational Therapy behaviour are considered, as well as contemporary models that describe and seek to explain the major dimensions of temperament and personality variation.

The second part of the course draws on the material taught in the first part to clarify issues relating to patients' compliance and satisfaction with the medical care they receive. Psychological factors which influence the behaviour and expectations of health professionals and the efficacy of the care they provide are also considered. The special needs of certain patients are highlighted. This includes reference to children, the aged, the dying, and the physically handicapped and mentally retarded. Current theories linking stress and illness, methods for reducing stress and research into pain and pain management are presented. The relationship between sociodemographic variables and health will also be considered.

**Prerequisite: 182 English Language**

## **YEAR THREE, SEMESTER ONE**

### **0716-307 COMMUNICATION & GROUP PROCESS (2-0-2)**

The course prepares students for the use of therapeutic groups, emphasizing assessment techniques and intervention approaches in various areas of occupational therapy practice. It focuses on applying small group theory and group dynamics to facilitate change in individuals and groups. In addition, it addresses the scope of practice, occupational therapy standards and regulations and patient's rights that guide practice, professional conduct and behaviors with patients and co-workers. Students develop effective professional communication skills, focusing on verbal and non-verbal communications, using technology as a form of communication, and written documentation of progress reports. Communication with people from different cultural backgrounds is emphasized.

**Prerequisite: All year two courses**

### **0716-308 COGNITIVE AND NEURO REHABILITATION (2-3-3)**

The course provides an introduction to basic knowledge, skills, and attributes to improve skills and understanding, necessary to address individual factors for clients with neurological disorders. A theoretical occupational lens will be used while addressing various neurological disorders. The course overview will include the organization of the central nervous system (CNS), motor control and learning techniques, neural pathophysiology, evaluation and intervention. The course addresses neurological impairments in relation to areas of occupation, client factors, executive function, and performance patterns to enable the students in cultivating the necessary skills to practice occupational

therapy (OT). The student will explore the use of different frames of references (FOR) that may guide their evaluations and interventions to improve function, wellbeing, and occupational performance.

**Prerequisite: All year two courses**

### **0700-310 NEUROSCIENCE (3-0-3)**

The course introduces students to the structure and function of the human nervous system. Concepts of normal sensory, Occupational Therapy, and cognitive functions as well as common neurological conditions are studied. Emphasis is placed on the fundamentals of neuroscience as they relate to occupation and occupational dysfunction.

**Prerequisites: 152 Physiology**

### **0700-316 CLINICAL MEDICINE AND PATHOLOGY (3-0-3)**

The study of disease processes affecting the human body in relation to etiology, organ system involvement, pathological changes in the structure and function of the tissues and organs, specific physical signs and symptoms, diagnostic procedures, common complications, preferred treatment, forecast outcome of specific disease processes and pertinent public health aspects of specific disease processes.

**Prerequisites: Year 2 courses**

### **0716-321 ORTHOPEDIC REHABILITATION (2-3-3)**

The course covers orthopedic health problems, assessments, and interventions. Students develop skills to identify diseases, injuries, and conditions of the musculoskeletal system, select the appropriate assessments and design the correct interventions based on theoretical grounds and published evidence. Laboratory work allows students to implement assessments that are commonly utilized in orthopedic settings including manual muscle testing, goniometry, sensory evaluations, and functional assessments. Splinting principles are introduced, and students are required to fabricate splints.

**Prerequisite: All year two courses**

### **0716-309 CLINICAL FIELDWORK I (1-8-3)**

The overall purpose of the fieldwork experience is to provide students with exposure to clinical settings through observation of the treatment process. It

also allows students to observe clients and therapists and to examine their interaction with clients, supervisors, and other health care professionals.

**Prerequisite:** All year two courses

## **YEAR THREE, SEMESTER TWO**

### **0716-304 MENTAL HEALTH (3-0-3)**

The course introduces the students to the nature of psychopathology (abnormal psychology), its causes, and its effects on occupational performance. Students learn about DSM-5, theoretical framework(s) of references that guide occupational therapy evaluation and intervention of psychiatric and psychosocial issues. Through in-class case-studies, students demonstrate skills in selecting appropriate mental health assessments, developing interventions, and deciding on meaningful occupations.

**Prerequisite:** All year three, Semester one courses

### **0716-312 PHYSICAL DISABILITY AND OCCUPATIONAL PERFORMANCE (2-3-3)**

The course prepares students for occupational therapy practice for adults with various physical disabilities. The students learn the skills necessary for beginning practice in occupational therapy that enable function and wellbeing. Students practice several assessment tools and treatment methods relating to physical dysfunction. The effect of physical dysfunction on the person's occupational performance and participation in occupation is addressed.

**Prerequisite:** All year three, Semester one courses

### **0716-320 CHILD HEALTH (2-3-3)**

The course focuses on occupational performance for children with disabilities. Students acquire the knowledge and skills needed to provide occupational therapy evaluation and intervention services for various pediatric disabilities and compares and contrasts typical and atypical growth. The importance of sociocultural norms and Islamic beliefs in working with children and their families is emphasized.

**Prerequisite:** All year three, Semester one courses

### **0712-345 PHARMACOLOGY (2-0-2)**

The course introduces the basic concepts of tissue reactions to drugs (absorption, metabolism, and excretion). It will address drug formulations and administration. In addition, the course will discuss major drug classifications with emphasis on the aspects of drug actions and its influence on the patients' daily activities. Drug administration in cases of pediatrics, adults, and the elderly will be highlighted.

**Prerequisite: All year three, Semester one courses**

### **0716-319 CLINICAL FIELDWORK II (1-12-4)**

Working with clients under the supervision of an occupational therapist, students are provided a clinical learning experience in delivering occupational therapy services. The focus of the learning experience is to apply skills learned through coursework, including observation, conducting assessments, writing goals, implementing interventions, and demonstrating professional behavior.

**Prerequisite: All year three, Semester one courses**

## **YEAR FOUR, SEMESTER ONE**

### **0716-401 APPLIED AND CLINICAL RESEARCH (2-0-2)**

The course addresses the parameters and criteria for research practice. Students learn different models and paradigms of research. They are presented with an opportunity to explore quantitative and qualitative approaches to research. Topics include literature review, sampling techniques, research methodology, data collection, analysis strategies, research ethics and critique of research papers. Students are expected to develop a research proposal that is relevant to Occupational Therapy.

**Prerequisite: All year three courses**

### **0716-405 ASSISTIVE TECHNOLOGY AND ADAPTATION (1-3-2)**

The course presents an overview of the occupational therapist's role in facilitating the use of augmentative communication and assistive technology by individuals with disabilities to enable occupational performance. Students demonstrate the use of various types of assistive technology devices as they pertain to individuals with disabilities.

**Prerequisite: All year three courses**



### **0716-411 OCCUPATIONAL ENVIRONMENT (3-0-3)**

The course presents an in-depth analysis of an occupational environment at the personal, societal and community levels and its impact on occupational performance. This content needs to apply across all diagnostic areas, disabilities, and occupational performance domains. Emphasis is placed on appraising and analyzing the environmental factors that sustain or hinder occupational performance. Students are expected to provide recommendations for improving, modifying, and adapting the environment to sustain occupational performance and promote functioning.

**Prerequisite: All year three courses**

### **0716-403 PSYCHOSOCIAL DISABILITY AND OCCUPATIONAL PERFORMANCE (2-3-3)**

This course examines the psychosocial dimensions of the person–occupation–environment relationship. It focuses on assessments and implementation of interventions for individuals with specific psychosocial disorders, in addition to counselling, adaptation and social skills training. The influence of Islamic principles and cultural beliefs on clients with psychosocial issues are discussed.

**Prerequisite: All year three courses**

### **0716-415 CLINICAL FIELDWORK III (1-16-5)**

Students apply didactic material learned in occupational therapy courses and interact with clients in a therapeutic setting. Practice of evaluation, goal setting, intervention, documentation, and application of therapeutic techniques appropriate to the student’s skill levels are carried out under the supervision of an occupational therapist.

**Prerequisite: All year three courses**

## **YEAR FOUR, SEMESTER TWO**

### **0716-409 INDEPENDENT STUDY (1-0-1)**

Students explore an area of their interest, working one-on-one with a faculty member to gain an in-depth knowledge of that area. The course learning process includes meetings, gathering information, evaluation, and on-site observation and implementation of clinical practice.

**Prerequisite: All year four, semester one courses**

### **0716-412 RESEARCH THESIS (3-0-3)**

Students learn how to integrate research evidence into the professional reasoning process and how to answer important questions from qualitative and quantitative data sources. They evaluate the status, beliefs, and practice of the profession, and develop skills in synthesizing and presenting evidence to service recipients. The students will implement and complete a research project in occupational therapy related field.

**Prerequisite:** All year four, semester one courses

### **0716-414 EMERGING AREAS AND OCCUPATIONAL THERAPY (1-3-2)**

The course introduces the students to various emerging areas and its connection to occupational Therapy. Topics may include ergonomics, driving and community mobility, vision rehabilitation, gerontology, environmental modification, school systems, and other related area. This will integrate the application of major principles of such areas within the practice of occupational therapy and its effect on occupational performance. The emphasis of evidence-based practice utilizing the key role of occupational therapy in various emerging areas will be explored.

**Prerequisite:** All year four, semester one courses

### **0716-417 PROFESSIONAL DEVELOPMENT (2-0-2)**

The course is designed to promote active, student-centered learning, examining case studies that address realistic and relevant local and international health care issues. It will address issues relevant to mentoring, leadership skills and elements pertained to life-long learning experiences. Drawing on their clinical experiences, students analyze issues directly related to professional practice in the area of occupational therapy. The course addresses the complexities and richness of OT practice by examining the variability between the therapists' expectations and the events that unfold in real life therapy.

**Prerequisite:** All year four, semester one courses

### **0716-416 CLINICAL FIELDWORK IV (1-24-7)**

Clinical experience in various settings, including hospital settings, inpatient settings, rehabilitation centers, day treatment centers, nursing homes, schools, developmental centers, industrial settings, and community health initiatives. Each student performs hands-on treatment for a wide range of disabilities for different age groups. Emphasis is on applying knowledge through in-depth

activities, tasks, and the responsibility for delivering occupational therapy services to clients. Practice of evaluation, goal setting, intervention, documentation, and application of occupations, activities, and therapeutic techniques appropriate to the student's skill level are carried out under supervision.

**Prerequisite: All year four, semester one courses**

Department of  
**PHYSICAL THERAPY**  
**[PT]**



## **DEPARTMENT OF PHYSICAL THERAPY**

Physical Therapy is a profession which develops, coordinates and utilizes the art and science of physical therapy in planning, organising and directing programmes for the care of individuals whose ability to function is impaired or threatened by disease or injury. Physical Therapy focuses primarily on those individuals whose potential or actual impairment is related to the neuro-musculoskeletal, pulmonary and cardiovascular systems and upon methods of evaluating the function of these systems and the selection and application of appropriate therapeutic procedures to maintain, improve or restore function.

### **MISSION AND OBJECTIVES**

#### **Mission**

The mission of the Department of Physical Therapy is to educate, train and graduate skilful, knowledgeable and committed Physical Therapists who have breadth of knowledge and competence in the various aspects of Physical Therapy. Who shall adhere to professional ethics, and who can contribute successfully as Physical Therapists in the health care team. The Department also aims to contribute to the development of the Physical Therapy profession in Kuwait, both in the public and private sector systems, by providing consultancy and other services.

#### **Objectives**

The key objectives, therefore, are:

1. To develop, monitor, evaluate, review and maintain an undergraduate curriculum which provides:
  - An essential core of knowledge and skills
  - Opportunities to develop clinical competence through laboratory practice in the faculty and hands-on experience in Ministry of Health hospitals and clinics
  - Methods of patient assessment and evaluation
  - Treatment planning
  - Socio-psychological, cultural and ethical aspects of communication and rehabilitation
  - A thorough grounding in professional ethics in Physical Therapy.

2. To foster the requisite professional attitudes and values in students, who shall adhere to professional ethics and demonstrate concern, responsibility and the ability to interact appropriately with other care providers, administrators, patients and their families.
3. To provide students with the necessary support and guidance in terms of counselling, and feedback on academic and clinical performance.
4. To use alternative learning modes, including:
  - Computer-assisted learning
  - Problem-based learning
  - Research projects
  - Student presentations
5. To have well-functioning laboratories in the following areas:
  - Human Performance
  - Manual Orthopaedics
  - Paediatrics
  - Electrotherapy
6. To develop and provide postgraduate programmes, short courses, lectures, workshops and seminars for Ministry of Health staff that meet the changing health care needs of Kuwait and keep them abreast of the state-of-the-art.
7. To recruit well qualified and experienced teaching and support staff who will act as role models for students and keep themselves abreast with scientific advances in the field and apply the state-of-the-art in all endeavours: teaching, curriculum development and assessment, research, clinical supervision and community service.
8. To provide consultancy services to hospitals and clinics in the public sector health care delivery system and in the private sector.

## **TEACHING STAFF**

Dr. Hesham Alrowayeh, Associate Professor & Acting Chairman (2003)  
B.Sc., 1994, Kuwait University; M.Sc., 1998, Old Dominion University, Virginia, U.S.A.; Ph.D., 2003, Texas Woman's University, Houston, Texas, U.S.A.

Dr. Sameera Al Jadi, Associate Professor (2004)  
B.Sc. (P.T.), 1990, Kuwait University; M.Sc. 1998, Old Dominion University, Virginia, USA; Ph.D. (P.T.), 2004, University of Pittsburgh, Pennsylvania, U.S.A.

Dr. Nowall Al Sayegh, Associate Professor (2007)  
B.Sc., (P.T.), 1997, Kuwait University; M.Sc., (Musculoskeletal PT), 2002, University of Pittsburgh, U.S.A.; Ph.D. (Rehabilitation Sciences), 2007, University of Pittsburgh, Pennsylvania, U.S.A.

Dr. Talal AlShatti, Assistant Professor (2003)  
B.Sc. (P.T.) 1994, Kuwait University; M.Sc., 1999, Old Dominion University, Virginia, U.S.A.; Ph.D., 2003, Temple University, Philadelphia, U.S.A.

Dr. Sharifah Alragum, Assistant Professor (2009)  
B.Sc., (P.T.), 1997, Kuwait University, M.Sc., 2002, Dalhousie University, Canada; PhD. (P.T.), 2008, Temple University, Philadelphia, U.S.A.

Dr. Maqdad Taaqi, Assistant Professor (2009)  
BSRT., (Respiratory Therapy) 1999, University of Missouri, Columbia, USA; Board Examination (Respiratory Therapy) 2000, State of Missouri, USA; M.Res., 2005, University of Nottingham, U.K; Ph.D., 2009, University of Nottingham, U.K.

Dr. Maath Al Haddad, Assistant Professor (2015)  
B.Sc. (H.S), 2005, University of Hartford, U.S.A.; B.Sc. (R.T), 2006, University of Hartford, U.S.A.; M.Sc., 2010, University of Nottingham, U.K.; Ph.D., 2015, University of Nottingham, U.K.

Dr. Anwar Al Mutairi, Assistant Professor (2019)  
B.Sc. (P.T.), 2012, Kuwait University; M.Sc. 2015, University of Pittsburgh, Pennsylvania, U.S.A.; Ph.D. 2018, University of Alabama, Birmingham, Alabama, U.S.A.

Dr. Latifah Al Enezi, Assistant Professor (2020)  
B.Sc. (P.T.), 2007, Kuwait University; M.Sc., 2012, Sheffield Hallam University, U.K.; Ph.D., 2020, University of Sheffield, U.K.



Ms. Shokriya Farhan, Senior Lecturer (Clinical) (1999)  
B.Sc. (P.T.), 1983, Kuwait University; M.Sc., 1988, Kuwait University.

Ms. Nadia Al Shuwai, Lecturer (Clinical) (1996)  
B.Sc. (P.T.), 1987, Kuwait University; M.Sc., 2004, Arabian Gulf University,  
Bahrain.

Mr. Baker Al Zoabi, Lecturer (Clinical) (1999)  
B.Sc. (P.T.), 1994, Kuwait University, M.Sc., 1999, Kuwait University.

### **CLINICAL INSTRUCTORS**

Ms. Sarah Albahrouh (Clinical Instructor A) (2013)  
B.Sc. (P.T.), 2006, Kuwait University; M.Sc., 2013, Sheffield Hallam  
University, U.K.

Ms. Anwar Aladwani (Clinical Instructor A) (2018)  
B.Sc., 2007, Kuwait University; M.Sc., 2014, Cairo University, Egypt.

Ms. Fareeda AlMohri (Clinical Instructor A) (2018)  
B.Sc., 2012, Kuwait University; M.Sc., 2015, Kuwait University.

Ms. Aminah Sadeq (Clinical Instructor B) (2003) (2020)  
B.Sc, 2006, Kuwait University; M.Sc. 2017, University College London, U.K.

### **SECRETARIAL STAFF**

Mr. Osama Noreldin, Senior Secretary

## PROGRAMME REQUIREMENTS

The total number of credit hours required for graduation is 122.  
The programme for the B.Sc. Degree in Physical Therapy is as follows:

### 1 UNIVERSITY REQUIREMENTS (19 credits)

	<b>Credit Hours</b>
0410-115 Finite Mathematics	3
0788-181 English Language	5
0788-182 English Language	5
0788-250 English Language	3
Elective	3

### 2 FACULTY REQUIREMENTS (23 credits)

0490-101 Biology	3
0711-105 Introduction to Health Informatics	3
0700-106 First Aid and Emergency Care	3
0480-107 Statistics for Medical Sciences	3
0420-110 Chemistry	3
0420-111 Chemistry Lab	1
0430-121 Physics	3
0430-125 Physics Lab	1
0700-220 Psychology of Medical Care (A.H.)	3

### **3 PROFESSIONAL REQUIREMENTS (80 credits)**

0700-152 Physiology I	3
0700-154 Histology	1
0700-155 Anatomy I	3
0700-210 Anatomy II	2
0700-310 Physiology II - Neuroscience	3
0700-316 Clinical Medicine and Pathology	3
0700-357 Growth and Development	2
0712-420 Pharmacology	2
0713-201 Patient Care Communication	2
0713-203 Fundamental Procedures in PT	4
0713-204 Electrotherapy I	2
0713-206 Biomechanics	2
0713-301 Electrotherapy II	2
0713-311 Physical Therapy Procedures I (Ortho)	4
0713-312 Physical Therapy Procedures II (CVR)	4
0713-313 Patho-kinesiology	3
0713-352 Applied Neuroscience	3
0713-359 Clinical Education I	3
0713-360 Clinical Education II	3
0713-362 Exercise Physiology	2
0713-401 Advanced Therapeutics	3
0713-411 PT Procedures III - Neurology	4
0713-412 PT Procedures IV - Advanced Rheumatology, Rehab & Paediatrics	4
0713-414 P.T. Administration & Management	2
0713-415 Research Methods	2
0713-416 Professional Issues Relating to P.T.	2
0713-417 Directed Study	1
0713-421 Clinical Education III	4
0713-461 Clinical Education IV	5

## PROGRAMME TIMETABLE

### FIRST YEAR

Semester One		Semester Two	
Course	CH	Course	CH
110/111 Chem. & Chem. Lab. or 121/125 Phys. & Phys. Lab.	4	101 Biology	3
115 Finite Mathematics	3	106 First Aid & Emergency Care	3
181 English Language	5	110/111 Chem. & Chem. Lab. or 121/125 Phys. & Phys. Lab.	4
Elective	3	182 English Language	5
<b>Total</b>		<b>Total</b>	
	<b>15</b>		<b>15</b>

### SECOND YEAR

Semester One		Semester Two	
Course	CH	Course	CH
105 Intro to Health Informatics	3	152 Physiology I	3
107 Stats for Med. Sciences	3	203 Fundamental Procedures in Physical Therapy	4
154 Histology	1	204 Electrotherapy I	2
155 Anatomy I	3	206 Biomechanics	2
201 Patient Care Comm.	2	210 Anatomy II	2
250 English	3	220 Psych. of Med. Care	3
<b>Total</b>		<b>Total</b>	
	<b>15</b>		<b>16</b>



## **PHYSICAL THERAPY**

### **COURSE DESCRIPTIONS**

#### **YEAR ONE, SEMESTER ONE**

##### **0420-110 CHEMISTRY (3-0-3) (*Faculty of Science*)**

Stoichiometry; electronic structure of atoms, periodic table; chemical bonds, introduction to chemistry of elements; chemical thermodynamics, chemical kinetics; chemical equilibria, acids and bases in aqueous solutions.

##### **0420-111 CHEMISTRY LAB (0-3-1) (*Faculty of Science*)**

Fundamental concepts in chemistry, to introduce basic concepts of laboratory work, write report and demonstrate some of topics covered in 110 Chemistry. Students are encouraged to use computer tools for writing lab report, plotting graph and data analysis.

**Corequisite: 110 Chemistry**

##### **0410-115 FINITE MATHEMATICS (3-0-3) (*Faculty of Science*)**

Finite Mathematics develops the logical structure, provides an essential algebraic and statistical background, and emphasises the comprehension of problem-solving techniques for real life problems associated with business, life and social sciences thus, giving insight into the importance of mathematical skills in almost all aspects of human society. This includes solving systems of linear equations, linear programming and the simplex method, rudiments of discrete probability, probability distribution and expected value of a random variable, and elements of statistics.

##### **0788-181 ENGLISH LANGUAGE (10-0-5)**

181 English is the first of three required English Language courses offered in the Faculty. It is a reading-based, multi-skills course intended to advance students' abilities to study content area courses in English. The macro-skills of reading, writing, listening, speaking and grammar are broken down into their component parts to give the students the opportunity to acquire fluency and accuracy in the language of the health sciences.

**Prerequisite: 180 English Language**

## **YEAR ONE, SEMESTER TWO**

### **0490-101 BIOLOGY (2-3-3) (*Faculty of Science*)**

Cellular basis of life: differences in size and complexity of cells as illustrated by viruses, bacteria, protozoa and various types of metazoan cells. Structure and metabolic activities of a generalized eukaryotic cell. Chemical composition and functions of the cell membrane; role of mitochondria, structure of GER and SER and their relation to the Golgi apparatus; structure of the nuclear membrane. Central role of enzymes in cells. Structure of DNA and RNA. Genetic code and protein synthesis. Mitosis and meiosis. Mendelian genetics and inherited diseases. Interactions between eukaryotic cells and bacteria and viruses. Cell mediated immunity. Organization of cells into tissues.

### **0700-106 FIRST AID AND EMERGENCY CARE (2-2-3)**

This course is designed to provide students with basic knowledge of first aid and the skills needed to provide early interventions and care in the event of a health emergency. It enables students to plan an assessment for each casualty, using a methodological two-stage system, first to check and treat life-threatening conditions (primary survey), then to call for help. An overall view of the basic fundamentals of first aid is presented with an emphasis on decision making in emergency situations.

**Prerequisite:** 180 English Language

### **0430-121 PHYSICS (3-0-3) (*Faculty of Science*)**

Methods of physics, elementary mathematics, motion and particle dynamics, mechanics of extended objects, conservation of energy, kinetic theory of gases. Liquids, vibrations and waves, ear and hearing, electricity and conduction in solids, ions and ionic conduction.

### **0430-125 PHYSICS LAB (0-3-1) (*Faculty of Science*)**

The student will learn to enhance the understanding level of concepts in mechanics. Also, to enhance ability in experimental design, data and error analysis and report writing. Student will learn to be acquainted with related instrumentations and experimental techniques as well as to develop skills in communication and ability to work in groups.

**Corequisite:** 121 Physics

### **0788-182 ENGLISH LANGUAGE (10-0-5)**

182 English expands on the content of the five basic language learning skills introduced in 181 English. Students read and listen to materials of a scientific/medical nature, discuss the topics with their classmates to broaden their comprehension, and then write about the topics they have discussed to show they are able to communicate comprehensibly. Grammar instruction is explicit and includes the grammar of science and medicine.

**Prerequisite: 181 English Language**

## **YEAR TWO, SEMESTER ONE**

### **0711-105 INTRODUCTION TO HEALTH INFORMATICS (2-2-3)**

This course is designed to introduce the students to the fundamentals of information technology and systems from the perspective of health informatics. It provides the students with a wide spectrum of computer-related concepts and skills to ensure that they are capable of employing appropriate technologies and tools to manage health information as it relates to their respective discipline. The course covers a variety of topics including: computer concepts, computer technology and information systems, statistical software, communication technology, database design and management, and clinical, business, and specialty clinical systems applications.

Delivery methods employed for this course combine didactic theory supplemented by lab sessions that will provide hands-on applications of learned theory.

**Prerequisite: Year 1 courses**

### **0480-107 STATISTICS FOR MEDICAL SCIENCES (*Faculty of Science*) (3-1-3)**

Relevance and principles of Biostatistics with application in Medicine and Biology. Descriptive statistics, sampling and sampling distributions. Estimation of parameters, probability and probability distribution, with emphasis on the normal. Tests of hypotheses for one or two means and one or two proportions. Measures of association between two continuous variables (correlation and regression) and two discrete variables (chi-square). Non-parametric tests commonly used in medicine.

**Prerequisite: 115 Finite Mathematics**



### **0700-154 HISTOLOGY (1-0-1)**

The course provides physical therapy students who need to study cell biology and tissues of the body in more depth. It could be considered as complementary to course 155 Anatomy I. Thus, it is supplemented with an introductory session for histological techniques.

**Prerequisite: Year 1, Semester 2 courses**

### **0700-155 ANATOMY I (2-3-3)**

This course provides an introduction to human morphology at the cell, tissue, and organ system levels of organization. The course is taught through theoretical lectures and practical demonstrations. The course provides a foundation for 210 Anatomy.

**Prerequisite: Year 1 courses**

### **0713-201 PATIENT CARE COMMUNICATION (1-2-2)**

A weekly lecture, seminar cum practical exposure designed for the development of skills in observation of movement, good communication and interpersonal relationships and adequate record keeping. Opportunity is provided for observations only, of movements of patients, patient care and treatment in selected physical therapy departments.

**Prerequisite: Year 1, Semester 2 courses**

### **0788-250 ENGLISH LANGUAGE (6-0-3)**

Language and study skills are perfected using authentic health sciences journal articles relevant to the students' majors. Report writing style, abstract writing, bibliography and referencing techniques are taught.

**Prerequisite: 182 English Language**

## **YEAR TWO, SEMESTER TWO**

### **0700-152 PHYSIOLOGY I (2-2-3)**

The course provides a basic understanding of the physiology of the cell, body fluids, nerves, muscles, blood, functions of the cardiovascular system,

respiratory system, renal system, gastrointestinal system, endocrine system and reproductive system. Emphasis is placed on the interactions of the systems.

**Prerequisites:** 155 Anatomy I

### **0713-203 FUNDAMENTAL PROCEDURES IN PHYSICAL THERAPY (2-6-4)**

This course provides a basic understanding of the physical and physiological principles underlying the basic techniques of physical therapy procedures including manipulative and exercise therapy as well as functional activities and skills basic to patient physical management.

**Prerequisite:** 201 Patient Care Communication

**Corequisites:** 210 Anatomy II, 152 Physiology

### **0713-204 ELECTROTHERAPY I (1-3-2)**

This course provides the physical and physiological principles underlying the use of thermal and electrical modalities and their practical application for therapeutic purposes.

**Prerequisites:** 201 Patient Care Communication; 121/125 Physics and Physics Lab.

**Corequisite:** 203 Fundamental Procedures

### **0713-206 BIOMECHANICS (1-3-2)**

This course provides the study and application of biomechanical principles of motion to human movement.

**Prerequisite:** 201 Patient Care Communication

**Corequisites:** 203 Fundamental Procedures in P.T.; 204 Electrotherapy I

### **0700-210 ANATOMY II (1-3-2)**

A study in depth of the locomotor system and the peripheral nerves. The structure of the vertebral column, the respiratory system and the heart and diaphragm. General structure of the abdominal wall and abdominal viscera. The mechanics of respiration and the joints of the cranium. The blood vessels and lymphatics of the upper and lower limbs. The skull and facial muscles are also studied.

**Prerequisite:** 155 Anatomy I

**0700-220 PSYCHOLOGY OF MEDICAL CARE (ALLIED HEALTH)  
(2-2-3)**

The first part of the course provides an overview of Psychology as the basic science concerned with individual human behaviour and mental processes. Empirical studies and theoretical models of basic processes such as learning, memory and perception are introduced. Factors that motivate behaviour are considered, as well as contemporary models that describe and seek to explain the major dimensions of temperament and personality variation.

The second part of the course draws on the material taught in the first part to clarify issues relating to patients' compliance and satisfaction with the medical care they receive. Psychological factors which influence the behaviour and expectations of health professionals and the efficacy of the care they provide are also considered. The special needs of certain patients are highlighted. This includes reference to children, the aged, the dying, the physically handicapped and mentally retarded. Current theories linking stress and illness, methods for reducing stress, and research into pain and pain management are presented. The relationship between sociodemographic variables and health will also be considered.

**Prerequisite: 182 English Language**

**YEAR THREE, SEMESTER ONE**

**0713-301 ELECTROTHERAPY II (1-3-2)**

This course provides physical principles and procedures governing the use of low and high frequency modalities in physical therapy treatments.

**Prerequisite: Year 2 courses**

**Corequisites: 311 Physical Therapy Procedures I (Orthopaedic); 316 Clinical Medicine and Pathology**

**0700-310 PHYSIOLOGY II - NEUROSCIENCE (2-2-3)**

This course will provide an understanding of the structure and function of the neuron, synapses, receptors and skeletal muscle, followed by the basic organization and functioning of the nervous system. Throughout the course a correlation will be developed between the structure, function and applied aspects of the nervous system.

**Prerequisites: 152 Physiology I, 210 Anatomy II**

### **0713-311 PHYSICAL THERAPY PROCEDURES I (ORTHO) (2-6-4)**

This course provides a basic understanding of orthopaedic conditions, fractures and soft tissue injuries for which physical therapy may be indicated. Demonstration and practice on the evaluative procedures and fundamental treatment procedures used in these conditions. Also included is a study of physical evaluation and treatment of orthopaedic paediatric conditions

**Prerequisites: Year 2 courses**

### **0700-316 CLINICAL MEDICINE AND PATHOLOGY (3-0-3)**

The study of disease processes affecting the human body in relation to etiology, organ system involvement, pathological changes in the structure and function of the tissues and organs, specific physical signs and symptoms, diagnostic procedures, common complications, preferred treatment, forecast outcome of specific disease processes and pertinent public health aspects of specific disease processes.

**Prerequisite: 152 Physiology I**

### **0700-357 GROWTH AND DEVELOPMENT (2-0-2)**

This course describes spermatogenesis, oogenesis, fertilization, implantation, embryogenesis and embryonic and fetal growth; it outlines major (genetic and environmental) causes of congenital malformations. It also describes the development of major organ systems and indicates possible congenital anomalies. Special emphasis is placed on the development of muscular, skeletal and nervous systems. Changes at birth, post-natal growth (infancy, childhood and adolescent stages), physical and functional maturity, factors that regulate normal growth, and disorders of growth and age changes in the muscular, skeletal and nervous systems are also described.

**Prerequisites: Year 2, Semester 2 courses**

### **0713-359 CLINICAL EDUCATION I (0-12-3)**

Practical application of clinical procedure to the management of patients with orthopaedic conditions, under direct supervision in physical therapy departments and in orthopaedic wards.

**Prerequisites: Year 2 courses**

**Corequisite: 311 Physical Therapy Procedures I**

## **YEAR THREE, SEMESTER TWO**

### **0713-312 PHYSICAL THERAPY PROCEDURES II (CVR) (2-6-4)**

Consideration is given to the role of the physical therapist as a member of the health team in the medical and surgical assessment and the treatment and care of patients with diseases affecting the heart blood vessels, lungs and bronchial tree. The obstetric and gynaecological conditions amiable to physical therapy are included.

**Prerequisites:** Year 3, Semester 1 courses

### **0713-313 PATHO-KINESIOLOGY (1-6-3)**

Biomechanical, kinematic and kinetic aspects of normal and pathological motion. Analysis of human motion applied to the major joints of the human body, posture and gait, with special emphasis on application in therapeutic conditions.

**Prerequisites:** Year 3, Semester 1 courses

### **0713-352 APPLIED NEUROSCIENCE (2-2-3)**

Laboratory studies and clinical observations of the functions of the central, peripheral and autonomic nervous systems and the consequence of their dysfunction and their implications during pain, flaccidity, spasticity, rigidity, athetosis, in coordination and possible recovery.

**Prerequisites:** Year 3, Semester 1 courses

**Corequisite:** 313 Patho-kinesiology

### **0713-360 CLINICAL EDUCATION II (0-12-3)**

Directed experience in physical therapy evaluation and treatment with increasing responsibilities for patient care in a variety of clinical settings dealing with medical and surgical management of cardio-vascular respiratory conditions, including participation in ICU and CCU. Clinical experience in the management of obstetric and gynaecological problems is also provided.

**Prerequisites:** Year 3, Semester 1 courses

**Corequisites:** 312 P. T. Procedures II, 352 Applied Neuroscience

### **0713-362 EXERCISE PHYSIOLOGY (2-0-2)**

The exercise physiology course brings out the physiological adjustments of major body organs (cardiorespiratory, musculoskeletal, etc.) to different types of exercise and correlates them to different age groups, sexes, athletes and non-athletes.

**Prerequisite:** 310 Physiology II - Neuroscience

**Corequisites:** 312 Physical Therapy Procedures II, 313 Patho-kinesiology

## **YEAR FOUR, SEMESTER ONE**

### **0713-401 ADVANCED THERAPEUTICS (2-3-3)**

Physical, physiological and biomechanical principles underlying such specialized techniques in physical therapy as spinal joint mobilizations and proprioceptive neuro-muscular facilitation. The acquisition of practical skills in the above in laboratory and clinical settings.

**Prerequisites:** Year 3, Semester 2 courses

**Corequisite:** 411 Physical Therapy Procedures III

### **0713-411 PHYSICAL THERAPY PROCEDURES III-NEUROLOGY (2-6-4)**

A study of the common problems associated with neurological conditions amiable to physical therapy and a survey of the neurophysiological approaches to the assessment and treatment of selected neurological conditions. Included here also is the study of the management of burns patients, patients with multiple injuries, and an overview of gerontology sufficient to provide an understanding of the principles of management of geriatric patients in Kuwait in the home and in institutionalized settings.

**Prerequisites:** Year 3, Semester 2 courses

### **0713-414 PHYSICAL THERAPY ADMINISTRATION AND MANAGEMENT (2-0-2)**

A presentation of elements of the managerial process, and the analysis of problems involving planning, developing, organizing and administering physical therapy services.

**Prerequisites:** Year 3, Semester 2 courses

**Corequisites:** 411 P.T. Procedures III, 421 Clinical Education III

### **0713-415 RESEARCH METHODS (2-0-2)**

Principles of scientific method of investigations and their application to physical therapy in laboratory and clinical settings including research proposal, design, data collection, analysis and presentation.

**Prerequisites:** Year 3, Semester 2 courses

### **0713-421 CLINICAL EDUCATION III (0-16-4)**

Supervised clinical experience in evaluation, treatment and rehabilitation of common paediatric, geriatric and adult neurological conditions encountered by physical therapists.

**Prerequisites:** Year 3, Semester 2 courses

**Corequisite:** 411 P. T. Procedures III (Neurology)

## **YEAR FOUR, SEMESTER TWO**

### **0713-412 PHYSICAL THERAPY PROCEDURES IV - Advanced Rheumatology, Rehabilitation & Paediatrics) (2-6-4)**

Physical therapy applied to the care of paediatric, geriatric and rheumatic patients in the home and in institutions. The major emphasis is on the physical and psychological aspects of rehabilitation, with practical skills in their management in the home and institutional settings.

**Prerequisites:** Year 4, Semester 1 courses

**Corequisite:** 461 Clinical Education IV

### **0713-416 PROFESSIONAL ISSUES (1-2-2)**

Lectures, clinical visits and discussions on selected legal, political, social and clinical topics of current importance or concern in the practice of physical therapy and health care delivery in general. Emphasis is upon student participation culminating in an in-depth final paper and presentation by each student on his/her area of interest.

**Prerequisites:** Year 4, Semester 1 courses

### **0713-417 DIRECTED STUDY (0-2-1)**

A clinical or practical experience, initiated by the student and guided by the teacher, to develop the student's competence in their interest area. This will be more or less a contract learning process in the identified area between the teacher and the student to establish the minimum level of performance.

**Prerequisites:** Year 4, Semester 1 courses

**Corequisites:** 412 P. T. Procedures IV, 461 Clinical Education IV

### **0712-420 PHARMACOLOGY (2-0-2)**

The course focuses on pharmacokinetics and pharmacodynamics and their relation to physical performance in the process of clinical decision making in the evaluation of physical performance and the designing of a rehabilitation program. It introduces the basic concepts of tissue reactions to drugs (absorption, metabolism and excretion); drug formulations and administration; major drug classifications: drug administration in paediatrics, pregnancy and the elderly.

### **0713-461 CLINICAL EDUCATION IV (0-20-5)**

Directed clinical experience in the evaluation and treatment of common rheumatic, paediatric, geriatric and burns conditions treated by physical therapy, with greater emphasis in this placement on total integration of previously acquired assessment and therapeutic skills and knowledge.

**Prerequisites:** Year 4, Semester 1 courses





Department of  
**RADIOLOGIC SCIENCES**  
**[RS]**

## **DEPARTMENT OF RADIOLOGIC SCIENCES**

Radiologic Sciences is the profession whose members have the responsibility to provide skilled technical expertise in Diagnostic X-ray Departments (Radiologic and Special Imaging Technologist) and Nuclear Medicine Departments (Nuclear Medicine Technologist).

The Radiologic Technologist is the professional, whose role is to produce radiographs (X-Ray studies) of various body parts and systems, submitting them to the radiologist for diagnostic interpretation. The curriculum includes radiation sciences, radiologic imaging, patient care, quality assurance, management and curriculum studies. Responsibilities include the manipulation of sophisticated equipment including computer reconstructed imaging. Graduates possess the skills to assume positions as radiographers and quality assurance coordinators and, with experience, positions as managers or instructors in radiology.

Nuclear Medicine Technology involves the use of radioactive materials for diagnostic and therapeutic purposes. The responsibilities of a Nuclear Medicine Technologist include the administration of radio-pharmaceuticals for organ imaging, the radioactive analysis of biological specimens, the administration of radioactive materials for various therapeutic purposes, and the manipulation of sophisticated equipment such as gamma cameras, computers, and various other radiation detectors.

The goal of the programme is to produce competent, skilled practitioners who can assume positions in hospitals, clinics, research laboratories, industry and government agencies. To achieve this goal, students are enrolled in a course of study that includes basic biological, physical, computer and radiation sciences in addition to clinical training in the teaching hospitals and clinics.

### **MISSION AND OBJECTIVES**

#### **Mission**

The mission of the Department of Radiologic Sciences is to train and educate skilful, knowledgeable and committed Diagnostic Radiographers and Nuclear Medicine Technologists who have breadth of knowledge and competence in Diagnostic Radiography or Nuclear Medicine Technology, who shall adhere to professional ethics, and who can contribute successfully as Technologists in the health care team. The Department also aims to contribute to the

development of the Radiologic Sciences profession and allied health services in Kuwait, both in the Kuwait health care delivery system and in private hospitals, by providing consultancy and other services.

## **Objectives**

The key objectives, therefore, are:

1. To educate and train student to:
  - acquire the required scientific and technological knowledge required for current and future demands of the profession.
  - develop practical and clinical skills required to practice the profession with patient welfare in focus.
2. To develop and conduct scientific, technological and clinical research to:
  - advance clinical practice, innovate better health care and incorporate the findings in to teaching and training.
  - keep up-to-date with scientific, technological and clinical developments and use state-of-the-art teaching and training methods.
3. To develop, monitor, evaluate, review and maintain an undergraduate curriculum that provides:
  - An essential core of knowledge and skills
  - Opportunities to develop clinical competence through laboratory practice in the Faculty and hands-on experience in Ministry of Health hospitals and clinics
  - Patient Care and Management
  - A thorough grounding in professional ethics in Radiologic Sciences
4. To foster the requisite professional attitudes and values in students, who shall adhere to professional ethics and demonstrate concern, responsibility and the ability to interact appropriately with other care providers, administrators, patients and their families.
5. To provide students with the necessary support and guidance in terms of counselling, and feedback on academic and clinical performance.
6. To use alternative learning modes, including:
  - Computer-assisted learning
  - Problem-based learning
  - Research projects
  - Student presentations

7. To develop and provide post-graduate programmes, short courses, lectures, workshops and seminars for Ministry of Health staff that meet the changing health care needs of Kuwait and keep them abreast of the state-of-the-art.
8. To recruit well qualified and experienced teaching and support staff who will act as role models for students and keep themselves abreast with scientific advances in the field and apply the state-of-the-art in all endeavours as teaching, curriculum development and assessment, research, clinical supervision and community service.
9. To provide consultancy services to hospitals and clinics in the public sector health care delivery system and in the private sector.

## **TEACHING STAFF**

Dr. Layla Ghadhanfer, Associate Professor and Acting Chairperson (2005)  
B.Sc., 1989, Kuwait University; M.Sc., 2001, University of Aberdeen, U.K.;  
Ph.D., 2005, University of Exeter, U.K.

Prof. Akram Asbeutah, Professor (2002)  
B.Sc., 1986, Kuwait University; M.Sc., 1993, Kuwait University; Diploma of  
Medical Ultrasound (DMU), 1999, Melbourne, Australia; Ph.D., 2006, Monash  
University, Melbourne.

Dr. Ajit Brindhaban, Associate Professor (2001)  
B.Sc., 1987., University of Jaffna, Sri Lanka; Ph.D., 1993, University of  
Auckland, New Zealand.

Dr. Khaled Al Khalifah, Associate Professor (2001)  
B.Sc., 1988, Kuwait University; M.Sc., 1995, University of Surrey, U.K.;  
Ph.D., 2001, University of Wales, U.K.

Dr. Raed Saeed, Associate Professor (2004)  
B.Sc., 1993, Kuwait University; M.Sc., 1999, University of Portsmouth, U.K.;  
Ph.D., 2004, Oxford University, U.K.

Dr. Ghadeer Al Baloul, Assistant Professor (2003)  
B.Sc., 1996, Kuwait University; M.Sc., 1998, University of Wales, Swansea,  
U.K.; Ph.D., 2003, University of Wales, College of Medicine, Cardiff, U.K.

Dr. Kholood Baron, Assistant Professor (2004)  
B.Sc., 1997, Kuwait University; M.Sc., 1999, University of Surrey, U.K.;  
Ph.D., 2004, University of Surrey, U.K.

Dr. Amal Al Abdulsalam, Assistant Professor (2004)  
B.Sc., 1994, Kuwait University; M.Sc., 1998, University of Surrey, Guildford, U.K.; Ph.D., 2003, University of Exeter, U.K.

Dr. Mohsen Dashti, Assistant Professor (2004)  
B.Sc., 1998, University of Hartford, Connecticut, U.S.A.; M.Sc., 2001, Queensland University of Technology, Brisbane, Australia; Ph.D., 2004, Royal Melbourne Institute of Technology, Melbourne, Australia.

Dr. Nadiyah M. Hadi, Assistant Professor (2004)  
B.Sc., 1994, Kuwait University; M.Sc., 1998, University of Surrey, U.K.; Ph.D., 2004, University of Surrey, U.K.

Dr. Ebtehal Al Qattan, Assistant Professor (2004)  
B.Sc., 1996, Kuwait University; M.Sc., 1998, University of Wales, Swansea, U.K.; Ph.D., 2004, University College, Dublin, Ireland.

Dr. Khalida Aljazaf, Assistant Professor (2005)  
B.Sc., 1993, Kuwait University; M.Sc., 1999, University of South Australia; Ph.D., 2005, Curtin University of Technology, Australia.

Dr. Mahmoud Abdulhusain, Assistant Professor (2006)  
B.S., 1989, Marquette University, Milwaukee, U.S.A.; M.S.; 1991, Marquette University, Milwaukee, U.S.A.; Ph.D., 2006, University of California, U.S.A.

Dr. Asseel Khalaf, Assistant Professor (2019)  
B.Sc., 2010, Kuwait University; M.Sc., 2014, Kuwait University; Ph.D., 2018, University of Nottingham, U.K.

Dr. Eman Al Awadhi, Assistant Professor (2021)  
B.Sc., 2009, Nuclear Medicine Technology, Kuwait University; M.Sc., 2015, Medical Imaging, University of Manchester, UK.; Ph.D., 2021, University of Liverpool, UK.

Dr. Ahmad Tawfeeq Al Enezi, Assistant Professor (2022)  
B.Sc., 2014, Nuclear Medicine Technology, Kuwait University; M.Sc., 2016, Kings College, U.K.; PhD, 2022; University of Aberdeen U.K.

Dr. Aishah Alenezi, Assistant Professor (2023)  
B.Sc., 2007, Kuwait University; M.Sc., 2016, University College London, U.K.; Ph.D., 2023, Cardiff University, U.K.

Dr. Mona Al Mulla (Clinical Lecturer) (2018)  
B.Sc., University College, Dublin, Ireland; M.Sc., 2011, University College, Dublin, Ireland; Ph.D., 2014, University College, Dublin, Ireland.

## **CLINICAL INSTRUCTORS**

Ms. Taiba Al Ahmed (Clinical Instructor B) (2021)

B.Sc., 2009, Virginia Commonwealth University, Virginia, USA; M.Sc., 2018, University College London, London, U.K.

Ms. Farrah Ahmed Ali Essa (Clinical Instructor B) (2022)

B.Sc., 2012, Kuwait University; M.Sc., 2018, Cardiff University, U.K.

## **TECHNICAL STAFF**

Ms. Hanan Dashti, Junior Technician (2010)

B.Sc., 2009, Kuwait University

## **SECRETARIAL STAFF**

Mrs. Laly Samuel, Senior Secretary (1992)

B.Com., 1981, University of Kerala; M.Com., 1985, University of Kerala, India.

## PROGRAMME REQUIREMENTS

The total number of credit hours required for graduation is 121 in the Diagnostic Radiography track and 125 in the Nuclear Medicine Technology track. The programme for the B.Sc. Degree in Radiologic Sciences is as follows:

<b>1</b>	<b>UNIVERSITY REQUIREMENTS (19 credits)</b>	<b>Credit Hours</b>
	0410-115 Finite Mathematics	3
	0788-181 English Language	5
	0788-182 English Language	5
	0788-250 English Language	3
	Elective	3
<b>2</b>	<b>FACULTY REQUIREMENTS (23 credits)</b>	
	0490-101 Biology	3
	0711-105 Introduction to Health Informatics	3
	0700-106 First Aid and Emergency Care	3
	0480-107 Statistics for Medical Sciences	3
	0420-110 Chemistry	3
	0420-111 Chemistry Lab	1
	0430-121 Physics	3
	0430-125 Physics Lab	1
	0700-220 Psychology of Medical Care (AHS)	3



### 3 PROFESSIONAL REQUIREMENTS

#### Track I: Diagnostic Radiography (79 credits)

0700-152 Physiology I	3
0700-155 Anatomy I	3
0700-210 Anatomy II	2
0714-202 Patient Care and Management	2
0714-204 Introduction to Medical Physics	4
0714-205 Fundamentals of Radiologic Technology	4
0714-354 Imaging Procedures I and Lab.	3
0714-361 Clinical Practicum I	3
0714-362 Imaging Procedures II and Lab.	3
0714-365 Digital Imaging Techniques	3
0714-373 Clinical Practicum II	5
0714-374 Physics of Medical Imaging I and Lab.	4
0714-375 Physics of Medical Imaging II and Lab.	4
0714-376 Radiologic Imaging & Processing	3
0714-378 Pathology in Imaging I	3
0714-432 Radiation Protection & Radiobiology	2
0714-450 Special Imaging Procedures	3
0714-455 Imaging Procedures III and Lab.	3
0714-466 Computer Applications in Imaging	3
0714-472 Clinical Practicum III	5
0714-473 Clinical Practicum IV	6
0714-478 Pathology in Imaging II	3
0714-481 Quality Assurance (DR)	2
0714-495 Research	3

**Track II: Nuclear Medicine Technology (83 credits)**

0700-152 Physiology I	3
0700-155 Anatomy I	3
0700-210 Anatomy II	2
0714-202 Patient Care and Management	2
0714-204 Introduction to Medical Physics	4
0714-205 Fundamentals of Radiologic Technology	4
0715-332 Radiation Protection & Radiobiology	2
0715-354 Imaging Procedures I and Lab.	3
0715-356 Chemistry for Nuclear Medicine	3
0715-362 Imaging Procedures II and Lab.	3
0715-365 Digital Imaging Techniques	3
0715-370 Clinical Practicum I	4
0715-371 Clinical Practicum II	4
0715-374 Physics of Medical Imaging I and Lab.	4
0715-378 Pathology in Imaging I	3
0715-384 Physics of Medical Imaging II and Lab.	3
0715-450 Special Imaging Procedures	3
0715-452 Nuclear Pharmacy & Pharmacology	3
0715-455 Imaging Procedures III and Lab.	3
0715-457 Non-imaging Procedures	2
0715-466 Computer Applications in Imaging	3
0715-472 Clinical Practicum III	5
0715-473 Clinical Practicum IV	6
0715-478 Pathology in Imaging II	3
0715-482 Quality Assurance	2
0715-495 Research	3

## PROGRAMME TIMETABLE

### FIRST YEAR

Semester One		Semester Two	
Course	CH	Course	CH
110/111 Chem. & Chem. Lab. or 121/125 Phys. & Phys. Lab.	4	101 Biology	3
115 Finite Mathematics	3	106 First Aid & Emergency Care	3
181 English Language	5	110/111 Chem. & Chem. Lab. or 121/125 Phys. & Phys. Lab.	4
Elective	3	182 English Language	5
<b>Total</b>		<b>Total</b>	
<b>15</b>		<b>15</b>	

### SECOND YEAR

Semester One		Semester Two	
Course	CH	Course	CH
105 Intro to Health Informatics	3	107 Stats for Medical Sciences	3
155 Anatomy	3	152 Physiology I	3
202 Patient Care & Manage.	2	205 Fundamentals of Radiologic Technology	4
204 Intro to Medical Physics	4	210 Anatomy II	2
250 English Language	3	220 Psychology	3
<b>Total</b>		<b>Total</b>	
<b>15</b>		<b>15</b>	

**TRACK I: DIAGNOSTIC RADIOGRAPHY (DR)****(Total Credits: 121)****THIRD YEAR**

<b>Semester One</b>		<b>Semester Two</b>	
<b>Course</b>	<b>CH</b>	<b>Course</b>	<b>CH</b>
354 Imaging Procedures I & Lab.	3	362 Imaging Proc. II & Lab.	3
361 Clinical Practicum I	3	373 Clinical Practicum II	5
365 Digital Imaging Techniques	3	375 Physics of Medical Imaging II & Lab	4
374 Physics of Medical Imaging I	4	378 Pathology in Imaging I	3
376 Radiologic Imag & Processing	3		
	<b>Total 16</b>	<b>Total</b>	<b>15</b>

**FOURTH YEAR**

<b>Semester One</b>		<b>Semester Two</b>	
<b>Course</b>	<b>CH</b>	<b>Course</b>	<b>CH</b>
432 Rad Protection & Radiobiology	2	450 Special Imaging Proc.	3
455 Imaging Procedures III & Lab.	3	473 Clinical Practicum IV	6
466 Computer App. in Imaging	3	478 Pathology in Imaging II	3
472 Clinical Practicum III	5	495 Research	3
481 Quality Assurance (DR)	2		
	<b>Total 15</b>	<b>Total</b>	<b>15</b>

**TRACK II: NUCLEAR MEDICINE TECHNOLOGY (NM)**  
**(Total credits: 125)**

**THIRD YEAR**

<b>Semester One</b>		<b>Semester Two</b>	
<b>Course</b>	<b>CH</b>	<b>Course</b>	<b>CH</b>
354 Imaging Procedures I & Lab	3	332 Radiation Protection & Radiobiology	2
356 Chemistry for Nuc. Med.	3	362 Imaging Proc. II & Lab.	3
365 Digital Imaging Techniques	3	371 Clinical Practicum II	4
370 Clinical Practicum I	4	378 Pathology in Imaging I	3
374 Physics of Medical Imaging I	4	384 Physics of Medical Imaging II & Lab	3
	<b>Total</b>	<b>Total</b>	<b>Total</b>
	<b>17</b>		<b>15</b>

**FOURTH YEAR**

<b>Semester One</b>		<b>Semester Two</b>	
<b>Course</b>	<b>CH</b>	<b>Course</b>	<b>CH</b>
452 Nuclear Pharmacy & Pharma	3	450 Special Imaging Proc.	3
455 Imaging Procedures III & Lab.	3	457 Non-imaging Procedures	2
466 Computer App. in Imaging	3	473 Clinical Practicum IV	6
472 Clinical Practicum III	5	478 Pathology in Imaging II	3
482 Quality Assurance	2	495 Research	3
	<b>Total</b>	<b>Total</b>	<b>Total</b>
	<b>16</b>		<b>17</b>

## **RADIOLOGIC SCIENCES**

### **COURSE DESCRIPTIONS**

#### **YEAR ONE, SEMESTER ONE**

##### **0420-110 CHEMISTRY (3-0-3) (*Faculty of Science*)**

Stoichiometry; electronic structure of atoms, periodic table; chemical bonds, introduction to chemistry of elements; chemical thermodynamics, chemical kinetics; chemical equilibria, acids and bases in aqueous solutions.

##### **0420-111 CHEMISTRY LAB (0-3-1) (*Faculty of Science*)**

Fundamental concepts in chemistry, to introduce basic concepts of laboratory work, write report and demonstrate some of topics covered in 110 Chemistry. Students are encouraged to use computer tools for writing lab report, plotting graph and data analysis.

**Corequisite: 110 Chemistry**

##### **0410-115 FINITE MATHEMATICS (3-0-3) (*Faculty of Science*)**

Finite Mathematics develops the logical structure, provides an essential algebraic and statistical background, and emphasises the comprehension of problem-solving techniques for real life problems associated with business, life and social sciences thus, giving insight into the importance of mathematical skills in almost all aspects of human society. This includes solving systems of linear equations, linear programming and the simplex method, rudiments of discrete probability, probability distribution and expected value of a random variable, and elements of statistics.

##### **0788-181 ENGLISH LANGUAGE (10-0-5)**

181 English is the first of three required English Language courses offered in the Faculty. It is a reading-based, multi-skills course intended to advance students' abilities to study content area courses in English. The macro-skills of reading, writing, listening, speaking and grammar are broken down into their component parts to give the students the opportunity to acquire fluency and accuracy in the language of the health sciences.

**Prerequisite: 180 English Language**

## **YEAR ONE, SEMESTER TWO**

### **0490-101 BIOLOGY (2-3-3) (*Faculty of Science*)**

Cellular basis of life: differences in size and complexity of cells as illustrated by viruses, bacteria, protozoa and various types of metazoan cells. Structure and metabolic activities of a generalized eukaryotic cell. Chemical composition and functions of the cell membrane; role of mitochondria, structure of GER and SER and their relation to the Golgi apparatus; structure of the nuclear membrane. Central role of enzymes in cells. Structure of DNA and RNA. Genetic code and protein synthesis. Mitosis and meiosis. Mendelian genetics and inherited diseases. Interactions between eukaryotic cells and bacteria and viruses. Cell mediated immunity. Organization of cells into tissues.

### **0700-106 FIRST AID AND EMERGENCY CARE (2-2-3)**

This course is designed to provide students with basic knowledge of first aid and the skills needed to provide early interventions and care in the event of a health emergency. It enables students to plan an assessment for each casualty, using a methodological two-stage system, first to check and treat life-threatening conditions (primary survey), then to call for help. An overall view of the basic fundamentals of first aid is presented with an emphasis on decision making in emergency situations.

**Prerequisite:** 180 English Language

### **0430-121 PHYSICS (3-0-3) (*Faculty of Science*)**

Methods of physics, elementary mathematics, motion and particle dynamics, mechanics of extended objects, conservation of energy, kinetic theory of gases. Liquids, vibrations and waves, ear and hearing, electricity and conduction in solids, ions and ionic conduction.

### **0430-125 PHYSICS LAB (0-3-1) (*Faculty of Science*)**

The student will learn to enhance the understanding level of concepts in mechanics. Also, to enhance ability in experimental design, data and error analysis and report writing. Student will learn to be acquainted with related instrumentations and experimental techniques as well as to develop skills in communication and ability to work in groups.

**Corequisite:** 121 Physics

### **0788-182 ENGLISH LANGUAGE (10-0-5)**

182 English expands on the content of the five basic language learning skills introduced in 181 English. Students read and listen to materials of a scientific/medical nature, discuss the topics with their classmates to broaden their comprehension, and then write about the topics they have discussed to show they are able to communicate comprehensibly. Grammar instruction is explicit and includes the grammar of science and medicine.

**Prerequisite: 181 English Language**

## **YEAR TWO, SEMESTER ONE**

### **0711-105 INTRODUCTION TO HEALTH INFORMATICS (2-2-3)**

This course is designed to introduce the students to the fundamentals of information technology and systems from the perspective of health informatics. It provides the students with a wide spectrum of computer related concepts and skills to ensure that they are capable of employing appropriate technologies and tools to manage health information as it relates to their respective discipline. The course covers a variety of topics including computer concepts, computer technology and information systems, statistical software, communication technology, database design and management, clinical, business and specialty system applications.

Delivery methods employed for this course combine didactic theory supplemented by lab sessions that will provide hands-on applications of learned theory.

**Prerequisite: Year 1 courses**

### **0700-155 ANATOMY I (2-3-3)**

This course provides an introduction to human morphology at the cell, tissue, and organ system levels of organization. The course is taught through theoretical lectures and practical demonstrations.

**Prerequisite: Year 1 courses**

### **0714-202 PATIENT CARE AND MANAGEMENT (2-0-2)**

Care and management of the patient in the clinical setting. Attention is given to the professional ethics, interpersonal relationships and psychology of the ill



patient. Nursing procedures such as management of sterile fields, drugs (contrast agents) and patient management during allergic reactions and other common emergencies are stressed.

**Prerequisite: Year 1 courses**

### **0714-204 INTRODUCTION TO MEDICAL PHYSICS (3-3-4)**

The course provides basic knowledge in Physics relevant to medical applications. Students will be prepared to apply the principles learnt here in specialised courses in their chosen track in the subsequent years. Laboratory experiments are carried out to verify the theories learnt.

**Prerequisite: Year 1 courses**

### **0788-250 ENGLISH LANGUAGE (6-0-3)**

Language and study skills are perfected using authentic health sciences journal articles relevant to the students' majors. Report writing style, abstract writing, bibliography and referencing techniques are taught.

**Prerequisite: 182 English Language**

## **YEAR TWO, SEMESTER TWO**

### **0480-107 STATISTICS FOR MEDICAL SCIENCES (3-0-3)**

*(Faculty of Science)*

Relevance and principles of Biostatistics with application in Medicine and Biology. Descriptive statistics, sampling and sampling distributions. Estimation of parameters, probability and probability distribution, with emphasis on the normal. Tests of hypotheses for one or two means and one or two proportions. Measures of association between two continuous variables (correlation and regression) and two discrete variables (chi-square). Non-parametric tests commonly used in medicine.

### **0700-152 PHYSIOLOGY I (2-2-3)**

The course provides a basic understanding of the physiology of the cell, body fluids, nerves, muscles, blood, functions of the cardiovascular system, respiratory system, renal system, gastro-intestinal system, endocrine system and reproductive system. Emphasis is placed on the interactions of the systems.

**Prerequisite: 155 Anatomy I**

### **0714- 205 FUNDAMENTALS OF RADIOLOGIC TECHNOLOGY (3-3-4)**

An introduction to imaging in Diagnostic Radiology & Nuclear Medicine and the fundamentals of operation and use of imaging modalities in both tracks.

**Prerequisite:** 202 Patient Care and Management;  
204 Introduction to Medical Physics

### **0700-210 ANATOMY (1-3-2)**

A study in depth of the locomotor system and the peripheral nerves. The structure of the vertebral column, the respiratory system and the heart and diaphragm. General structure of the abdominal wall and abdominal viscera. The mechanics of respiration and the joints of the cranium. The blood vessels and lymphatics of the upper and lower limbs. The skull and facial muscles are also studied.

**Prerequisite:** 155 Anatomy I

### **0700-220 PSYCHOLOGY OF MEDICAL CARE A.H. (2-2-3)**

The course provides an overview of Psychology as the basic science concerned with individual human behaviour and mental processes. Empirical studies and theoretical models of basic processes such as learning, memory and perception are introduced. Factors that motivate behaviour are considered, as well as contemporary models that describe and seek to explain the major dimensions of temperament and personality variation. The course also draws on the material taught in the first part to clarify issues relating to patients' compliance and satisfaction with the medical care they receive.

**Prerequisite:** 182 English Language

## **TRACK 1: DIAGNOSTIC RADIOGRAPHY**

### **YEAR THREE, SEMESTER ONE**

#### **0714-354 IMAGING PROCEDURES I AND LAB (2-3-3)**

Presentation and demonstration of instrumentation and patient manipulation for diagnostic imaging of body systems.

**Prerequisites:** Year 2, Semester 2 courses

**Corequisites:** 361 Clinical Practicum;  
374 Physics of Medical Imaging I and Lab

#### **0714-361 CLINICAL PRACTICUM I (0-12-3)**

Supervised clinical participation through assigned modules of clinical experience in diagnostic imaging. Emphasis is placed on competency evaluation of clinical practice.

**Prerequisites:** Year 2, Semester 2 courses

**Corequisites:** 354 Imaging Procedures I and Lab;  
374 Physics of Med. Imaging I and Lab

#### **0714-365 DIGITAL IMAGING TECHNIQUES (2-3-3)**

This course is an introduction to digital imaging techniques, and their application to radiology and nuclear medicine. Didactic material is presented in the classroom and applications are investigated in the computer laboratory using commercial software. The fundamentals of spatial and grey-level quantization are reviewed. Students will analyse and implement various algorithms for image enhancement, selecting and using appropriate techniques. Image segmentation by thresholding and morphological operations is included.

**Prerequisites:** Year 2, Semester 2 courses

**Corequisites:** 354 Imaging Procedures I and Lab;  
374 Physics of Medical Imaging I and Lab

#### **0714-374 PHYSICS OF MEDICAL IMAGING I AND LAB (3-3-4)**

The course explores the nature of particulate and electromagnetic radiation, their production, interactions, detection and applications. Topics also include the structure and function of some equipment in the production of x-rays.

**Prerequisites:** Year 2, Semester 2 courses

**Corequisites:** 376 Imaging and Processing

### **0714- 376 IMAGING AND PROCESSING (2-3-3)**

The course introduces students to the fundamental principles of conventional radiographic image acquisition and processing. It also provides a basic introduction to the types of imaging equipment used in diagnostic imaging. Physical principles required to produce a diagnostic radiograph, including prime exposure factors, film processing techniques and chemistry, film-screen combinations and construction, processing artifacts, and radiographic accessories are covered.

**Prerequisites:** Year 2, Semester 2 courses

## **YEAR THREE, SEMESTER TWO**

### **0714-362 IMAGING PROCEDURES II AND LAB (2-3-3)**

Presentation and demonstration of instrumentation and patient manipulation for diagnostic imaging of body systems.

**Prerequisites:** Year 3, Semester 1 courses

**Corequisites:** 375 Physics of Medical Imaging II and Lab;  
378 Pathology in Imaging I

### **0714-373 CLINICAL PRACTICUM II (0-20-5)**

Supervised clinical participation through assigned modules of clinical experience in diagnostic imaging and therapy. Emphasis is placed on competency evaluation of clinical practice.

**Prerequisites:** Year 3, Semester 1 courses

**Corequisites:** 362 Imaging Procedures. II and Lab;  
378 Pathology in Imaging I

### **0714-375 PHYSICS OF MEDICAL IMAGING II AND LAB (3-3-4)**

This course is a continuation of Physics of Medical Imaging I and deals with the physical principles used in imaging modalities such as x-ray fluoroscopy, mammography, digital radiography, tomography (conventional, computed, spiral), ultrasonography and magnetic resonance imaging.

**Prerequisites:** Year 3, Semester 1 courses

### **0714-378 PATHOLOGY IN IMAGING I (3-0-3)**

The study of disease processes affecting the human body in relation to etiology, organ system involvement, pathological changes in the structure and function of tissues and organs, specific physical signs and symptoms, diagnostic procedures and common complications. The course also covers pathologic manifestations on the radiograph and the subsequent technical variation required to produce an optimal radiographic examination.

**Prerequisites:** Year 3, Semester 1 courses

**Corequisites:** 375 Physics of Medical Imaging II and Lab

## **YEAR FOUR, SEMESTER ONE**

### **0714-432 RADIATION PROTECTION AND RADIOBIOLOGY (2-0-2)**

This course covers the biological effects of ionizing radiation in human tissue and its potential effects on the cellular, organ and systemic levels. It also covers the principles and applications of radiation protection and applicable regulations, including an awareness of how to apply the “As Low As Reasonably Achievable” (ALARA) principle to ionizing radiation exposure.

**Prerequisites:** Year 3, Semester 2 courses

### **0714-455 IMAGING PROCEDURES III AND LAB (2-3-3)**

Presentation and demonstration of instrumentation and patient manipulation for diagnostic imaging of body systems.

**Prerequisites:** Year 3, Semester 2 courses

**Corequisite:** 432 Radiation Protection and Radiobiology

### **0714-466 COMPUTER APPLICATIONS IN IMAGING (2-3-3)**

Computer management of information in imaging departments is covered. Computer acquisition and processing of images in Radiology and Nuclear Medicine. Demonstrations and laboratories will be conducted in the areas of image acquisition, reconstruction, processing, analysis, feature extraction, and related topics.

**Prerequisites:** Year 3, Semester 2 courses

**Corequisites:** 472 Clinical Practicum III; 481 Quality Assurance

### **0714-472 CLINICAL PRACTICUM III (0-20-5)**

Supervised clinical participation through assigned modules of clinical experience in diagnostic imaging and therapy. Emphasis is placed on competency evaluation of clinical practice.

**Prerequisites:** Year 3, Semester 2 courses

**Corequisites:** 432 Radiation Protection & Radiobiology  
455 Imaging Procedures III & Lab

### **0714-481 QUALITY ASSURANCE (1-3-2)**

Lecture and demonstration on the techniques of evaluating imaging and processing equipment for operation according to manufacturers' specifications in Radiography.

**Prerequisites:** Year 3, Semester 2 courses

**Corequisites:** 472 Clinical Practicum III

## **YEAR FOUR, SEMESTER TWO**

### **0714-450 SPECIAL IMAGING PROCEDURES (3-0-3)**

Lecture and film viewing demonstrating the imaging requirements and pathologic conditions of specialized examinations. The different imaging modalities in Radiology will be presented demonstrating their unique imaging problems and their specific applications.

**Prerequisites:** Year 4, Semester 1 courses

**Corequisite:** 478 Pathology in Imaging II

### **0714-473 CLINICAL PRACTICUM IV (0-24-6)**

Supervised clinical participation through assigned modules of clinical experience in diagnostic imaging and therapy. Emphasis is placed on competency evaluation of clinical practice and final competency evaluation.

**Prerequisites:** Year 4, Semester 1 courses

**Corequisites:** 450 Special Imaging Procedures;  
478 Pathology in Imaging II

### **0714-478 PATHOLOGY IN IMAGING II (3-0-3)**

The study of disease processes affecting the human body in relation to etiology, organ system involvement, pathological changes in the structure and function of tissues and organs, specific physical signs and symptoms, diagnostic procedures and common complications. The course also covers pathologic manifestations on the radiograph and the subsequent technical variation required to produce an optimal radiographic examination.

**Prerequisites:** Year 4, Semester 1 courses

### **0714-495 RESEARCH (2-3-3)**

Students are exposed to the fundamental elements of the research process and embark on a small empirical project related to some aspect of the curriculum. The depth of study involved in the project will help them develop skills in independent learning.

**Prerequisites:** Year 4, Semester 1 courses

**Corequisite:** 473 Clinical Practicum IV

## **TRACK II: NUCLEAR MEDICINE TECHNOLOGY (NM)**

### **YEAR THREE, SEMESTER ONE**

#### **0715-354 IMAGING PROCEDURES I AND LAB (2-3-3)**

Presentation and demonstration of instrumentation and patient manipulation for diagnostic imaging of body systems.

**Prerequisites:** Year 2 courses

**Corequisite:** 374 Physics of Medical Imaging I and Lab

#### **0715-356 CHEMISTRY FOR NUCLEAR MEDICINE (2-3-3)**

This course provides students with the foundations of organic chemistry and biochemistry. The absorption, metabolism, and utilization of essential body nutrients at the cellular level are covered.

**Prerequisites:** Year 2 courses

#### **0715-365 DIGITAL IMAGING TECHNIQUES (2-3-3)**

This course is an introduction to digital imaging techniques and their application to radiology and nuclear medicine. Didactic material is presented in the classroom and applications are investigated in the computer laboratory using commercial software. The fundamentals of spatial and grey-level quantization are reviewed. Students will analyse and implement various algorithms for image enhancement, selecting and using appropriate techniques. Image segmentation by thresholding and morphological operations is included.

**Prerequisites:** Year 2 courses

**Corequisites:** 354 Imaging Procedures I and Lab; 374 Physics of Medical Imaging I and Lab

#### **0715-374 PHYSICS OF MEDICAL IMAGING I AND LAB (3-3-4)**

The course explores the nature of particulate and electromagnetic radiation (with emphasis on x-rays &  $\gamma$ -rays, their production, interactions, detection and applications. Topic also includes the structure and function of some equipment in the production of x-rays.

**Prerequisites:** Year 2 courses



### **0715-370 CLINICAL PRACTICUM I (0-16-4)**

Supervised clinical participation through assigned modules of clinical experience in diagnostic imaging. Emphasis is placed on competency evaluation of clinical practice.

**Prerequisites:** Year 2 courses

**Corequisites:** 354 Imaging Procedures I and Lab;  
374 Physics of Medical Imaging I and Lab

## **YEAR THREE, SEMESTER TWO**

### **0715-332 RADIATION PROTECTION AND RADIOBIOLOGY (2-0-2)**

This course covers the biological effects of ionizing radiation in human tissue and its potential effects on a cellular, organ and systemic levels. It also covers the principles and applications of radiation protection and applicable regulations, including an awareness of how to apply the “As Low As Reasonably Achievable” (ALARA) principle to ionizing radiation exposure.

**Prerequisites:** Year 3, Semester 1 courses

### **0715-362 IMAGING PROCEDURES II AND LAB (2-3-3)**

Presentation and demonstration of instrumentation and patient manipulation for diagnostic imaging of body systems.

**Prerequisites:** Year 3, Semester 1 courses

**Corequisites:** 378 Pathology in Imaging;  
384 Physics of Medical Imaging II and Lab

### **0715-371 CLINICAL PRACTICUM II (0-16-4)**

Supervised clinical participation through assigned modules of clinical experience in diagnostic imaging and therapy. Emphasis is placed on competency evaluation of clinical practice.

**Prerequisites:** Year 3, Semester 1 courses

**Corequisite:** 362 Imaging Procedures II and Lab

### **0715-378 PATHOLOGY IN IMAGING I (3-0-3)**

The study of disease processes affecting the human body in relation to etiology, organ system involvement, pathological changes in the structure and function of tissues and organs, specific physical signs and symptoms, diagnostic procedures and common complications. The course also covers pathologic manifestations on the radiograph and the subsequent technical variation required to produce an optimal radiographic examination.

**Prerequisites:** Year 3, Semester 1 courses

**Corequisite:** 384 Physics of Medical Imaging II and Lab

### **0715-384 PHYSICS OF MEDICAL IMAGING II AND LAB (2-3-3)**

A continuation of Physics of Medical Imaging I. Topics include Physics of Imaging systems used in nuclear medicine.

**Prerequisites:** Year 3, Semester 1 courses

**Corequisite:** 332 Radiation Protection and Radiobiology

## **YEAR FOUR, SEMESTER ONE**

### **0715-452 NUCLEAR PHARMACY & PHARMACOLOGY (2-3-3)**

This course covers the theory and practice of radiopharmacy, including preparation and calculation of the dose to be administered, quality control, radiation safety, and applicable regulations. In addition, it deals with nonradioactive interventional drugs and contrast media that are used as part of nuclear medicine procedures. For all administered materials, it addresses the routes of administration, biodistribution mechanisms, interfering agents, contraindications and adverse effects. Experience in laboratories, a clinical setting, or a centralized radiopharmacy is an essential component of this course for students to become proficient in this area.

**Prerequisites:** Year 3, Semester 2 courses

### **0715-455 IMAGING PROCEDURES III AND LAB (2-3-3)**

Presentation and demonstration of instrumentation and patient manipulation for diagnostic imaging of body systems.

**Prerequisites:** Year 3, Semester 2 courses

**Corequisite:** 452 Nuclear Pharmacy and Pharmacology

### **0715-466 COMPUTER APPLICATIONS IN IMAGING (2-3-3)**

Computer management of information in imaging departments. Computer acquisition and processing of images in Radiology and Nuclear Medicine. Student projects will be conducted in the areas of image processing and feature extraction, patient flow, quality assurance and related topics.

**Prerequisites:** Year 3, Semester 2 courses

**Corequisite:** 472 Clinical Practicum III

### **0715-472 CLINICAL PRACTICUM III (0-20-5)**

Supervised clinical participation through assigned modules of clinical experience in diagnostic imaging and therapy. Emphasis is placed on competency evaluation of clinical practice.

**Prerequisites:** Year 3, Semester 2 courses

**Corequisites:** 452 Nuclear Pharmacy and Pharmacology;  
455 Imaging Procedures III and Lab

### **0715-482 QUALITY ASSURANCE (1-3-2)**

Quality control tests in the evaluation of the imaging performance of Nuclear Medicine equipment are described. Laboratory exercises will develop skills required for performing these tests.

**Prerequisites:** Year 3, Semester 2 courses

**Corequisites:** 455 Imaging Procedures III and Lab;  
466 Computer Applications in Imaging

## **YEAR FOUR, SEMESTER TWO**

### **0715-450 SPECIAL IMAGING PROCEDURES (3-0-3)**

Lecture and film viewing demonstrating the imaging requirements and pathologic conditions of specialized examinations. The different imaging modalities in Radiology will be presented demonstrating their unique imaging problems and their specific applications.

**Prerequisites:** Year 4, Semester 1 courses

**Corequisite:** 478 Pathology in Imaging II

### **0715-457 NON-IMAGING PROCEDURES (1-3-2)**

The study of Nuclear Hematology including red cell mass, red cell survival, red cell sequestration, red and white blood cells tagging techniques, ferrokinetics, In-111 platelets, and In-111 leukocytes, and Carbon-14 urea breath test. Presentation and demonstration of Radionuclide therapy including therapeutic uses of different radiopharmaceuticals in Nuclear Medicine.

**Prerequisites:** Year 4, Semester 1 courses

**Corequisite:** 478 Pathology in Imaging II

### **0715-473 CLINICAL PRACTICUM IV (0-24-6)**

Supervised clinical participation through assigned modules of clinical experience in diagnostic imaging and therapy. Emphasis is placed on competency evaluation of clinical practice and final competency evaluation.

**Prerequisites:** Year 4, Semester 1 courses

**Corequisite:** 450 Special Imaging Procedures

### **0715-478 PATHOLOGY IN IMAGING II (3-0-3)**

The study of disease processes affecting the human body in relation to etiology, organ system involvement, pathological changes in the structure and function of tissues and organs, specific physical signs and symptoms, diagnostic procedures and common complications. The course also covers pathologic manifestations on the radiograph and the subsequent technical variation required to produce and optimal radiographic examination.

**Prerequisites:** Year 4, Semester 1 courses

### **0715-495 RESEARCH (2-3-3)**

Students are exposed to the fundamental elements of the research process and embark on a small empirical project, related to some aspect of the curriculum. The depth of study involved in the project will help them develop skills in independent learning.

**Prerequisites:** Year 4, Semester 1 courses

**Corequisite:** 473 Clinical Practicum IV



Department of  
**HEARING & SPEECH**  
**SCIENCES**  
**[HSS]**



## **DEPARTMENT OF HEARING AND SPEECH SCIENCES**

The department of Hearing and Speech Sciences established in 1996, will offer a Bachelor's degree programme in Audiology & Speech Therapy (AST).

Audiology is a clinical health-care profession devoted to hearing. Its unique mission is diagnosis and rehabilitation. Specifically, audiologists play a crucial role in early identification of hearing impairment in infants, evaluating hearing ability in people of all ages and the prevention, identification, assessment and amelioration of communication disorders that may result from hearing impairment. In addition, audiologists evaluate the need for hearing aid amplification and assess, fit and dispense hearing aids, cochlear implant program and other assistive listening devices such as FM system, loop system. Audiologists are also involved in the vestibular disorder diagnosis and rehabilitation, post-fitting rehabilitation and educational programming and facilitation.

While Audiology refers to the study of hearing and balance and involves clinical aspects of identification, evaluation and prevention of auditory and related disorders, the Speech Therapy profession works to assess, diagnose, treat and prevent clinical disorders in speech, language, communication, cognitive-communication, and swallowing. A person's ability to hear & speak are closely connected and impairment of one will affect the other. Children with hearing and/or speech impairment often have concomitant speech and language difficulties. Therefore, ASTs must work closely together and have an understanding of both domains to develop effective communication in infants and young children with speech and/or hearing impairment.

The Bachelor's degree in AST will prepare professionals as generalists, with the development of knowledge, skills, and clinical competencies in a wide variety of areas. Opportunities are available for audiologists in both the public and private sectors, including educational settings, rehabilitation settings and in research activities to broaden clinical understanding and application of diagnostic and treatment procedures. Audiology has the following sub-specialties: Audiology Specialist, Medical Audiology, Educational Audiology, Pediatric Audiology, Dispensing/Rehabilitative Audiology, Cochlear Implant Programmers, Electrophysiology and Audiology, Vestibular Diagnosis and Rehabilitation, Industrial Audiology, and Research Audiologist.



## **TEACHING STAFF**

Prof. Akram Asbeutah, Professor & Acting Chairman (2002)

B.Sc., 1986, Kuwait University; M.Sc., 1993, Kuwait University; Diploma of Medical Ultrasound (DMU), 1999, Melbourne, Australia; Ph.D., 2006, Monash University, Melbourne.

Dr Maram Al-Khaledi, Assistant Professor (2023)

B.Sc., 2001, Kuwait University, Kuwait; M.Sc., 2006, University of Queensland, Australia; Ph.D., 2011, University of Sydney, Australia.

**ENGLISH LANGUAGE  
UNIT**  
Health Sciences Centre  
**(ELU - HSC)**



## **ENGLISH LANGUAGE UNIT** **[Health Sciences Centre]**

The English Language and Medical Study Skills Unit assists students in their transition from the part-time study of the English language at the secondary school level to the full-time study of the health sciences entirely in the medium of English at the university. The programme designed to achieve this transition is a series of courses, (181, 182 and 250 English Language) each prerequisite to the next, which equip the students with the necessary language and study skills to complete the B.Sc. programmes in the Allied Health Sciences. The three courses are integrated skills courses focusing on listening, speaking, reading, writing and study skills in English.

### **TEACHING STAFF**

Ms. Debra Hoffer, Director and Senior Language Instructor  
B.S. Edu, 1984, Indiana State University, Terre Haute, IN, U.S.A.; Ed.M., Edu-TESOL, 1988, Ball State University, Muncie, IN, U.S.A.

Mrs. Zakara Gharibyar Alkhalidi, Associate Language Instructor  
B.Sc. Biology, 1995, University of Colorado, U.S.A.; M.A. Curriculum and Instructions, University of Colorado, U.S.A.

Ms. Suhare Al Mahmoud, Associate Language Instructor  
B.A., English Language & Literature, 1993, Kuwait University; M.A., TESOL, 1997, Georgetown University, Washington DC., U.S.A.

Ms. Christine Canzanella, Associate Language Instructor  
BA. French Literature, 1989, McGill University, Canada; M.A. Near Eastern Languages and Cultures, 1997, University of California, U.S.A.; M. A. TESL, 2001, University of San Francisco, U.S.A.

Mr. David Roddick, Associate Language Instructor  
B.Sc. Management Sciences, 1991, University of Manchester, U.K.; M.A. Linguistics for TESOL, 2001, Newcastle University, U.K.

Ms. Wadha R. A. Al Dousari, Language Instructor (A)  
B.A. Teaching (English), 2003, Kuwait University; M.A. Translation Studies, 2011, Kuwait University.

Ms. Najlaa Rasheed Aryan, Language Instructor (A)  
B.A. (Language and literature), 2008; M.A. (Linguistics), 2012, University of London (University College), U.K.

Ms. Eve Bispham, Language Instructor (A)  
B.A Hons. Italian and Business Studies, 2002, University of Hull, U.K.; M.A.  
Applied Linguistics, 2007, University of Liverpool, U.K.

Ms. Fatema Al Musalam, Language Instructor (B)  
B.A. (Linguistics), 2011, Gulf University of Science and Technology; M.A.,  
(Applied Linguistics), 2012, Essex University, U.K.

Ms. Fatima Ali Ibraheem, Language Instructor (B)  
B.A., 2011, American University of Kuwait; M.A., 2012, Durham University,  
U.K.

Ms. Fatema Alhajri, Language Instructor (B)  
B.Ed., 1997, Kuwait University; M.Ed., 2009, Kuwait University; M.Ed.  
(TESOL), 2014, The University of Sydney, Australia.

#### **SECRETARIAL STAFF**

- None

## COURSE DESCRIPTIONS

### **180 ENGLISH LANGUAGE (10-0-2)**

180 English is a high beginner course that is made to give Faculty of Allied Health Sciences students the language skills that are needed to succeed in their academic courses. Students will be taught academic English in the areas of reading, speaking, listening and writing. The course introduces sentence-level writing but will lead to guided paragraph writing. Students will be introduced to grammar that is necessary for each writing procedure. Academic and medical English vocabulary will be taught through reading and listening tasks. Students are expected to participate by asking questions and actively reading.

### **181 ENGLISH LANGUAGE (10-0-5)**

181 English is the first of three required English Language courses offered in the Faculty. Its purpose is to reinforce the specific language skills taught in 180 English and introduce language skills that require a higher level of cognition. 181 English is a reading-based, multi-skills course intended to further advance students' abilities to study content area courses in English. The macro-skills of reading, writing, listening, speaking and grammar are broken down into their component parts to give the students the opportunity to acquire fluency and accuracy in the language of the health sciences.

**Prerequisite: 180 English Language**

### **182 ENGLISH LANGUAGE (10-0-5)**

182 English expands the content of the five basic language learning skills of the previous courses. Students read and listen to materials of a scientific/medical nature, discuss the topics with their classmates to broaden their comprehension, and then write about the topics they have discussed to show they are able to communicate comprehensibly. Grammar instruction is explicit and includes grammar used for science and medicine.

**Prerequisite: 181 English**

### **250 ENGLISH (6-0-3)**

Language and study skills are perfected using authentic health sciences journal articles relevant to the students' majors. Report writing style, abstract writing, bibliography and referencing techniques are taught.

**Prerequisite: 182 English Language**



# **FACULTY REGULATIONS**



## ADMISSION AND TRANSFER REGULATIONS

### 1. Admission Regulations

- 1.1 Students must have a minimum high school g.p.a. of 80% in the scientific track. The student must sit for English Language, Maths and Chemistry Placement Tests. The weightage will be calculated based on the student's high school grade (70%); English Language Placement Test (20%) and Maths Placement Test (10%); while the Chemistry Placement Test score is needed to determine the level of the student in the subject.
- 1.2 All Year One students take a common, unified Year One curriculum and are admitted directly into the departments.
- 1.3 Admission to departments is based on student preference, availability of places and the student's weightage. Some students who opt for departments where the demand is high and/or capacity of the department is limited may not be allocated to their chosen department(s).

### 2. Transfer Regulations:

#### Transfer between departments in the Faculty

- 2.1 The required grade for 155 Anatomy, 152 Physiology and 220 Psychology shall be C+.
- 2.2 For internal transfer, the minimum GPA requirement is 2.67 in addition to the rules.
- 2.3 An interview will be held, if needed, by the Vice Dean, for Academic and Student Affairs, Chairpersons of the concerned departments and invited members.
- 2.4 The credit limit for transfer is 65 credits.

#### Transfer from other Faculties

- 2.5 To be considered for transfer from another Faculty, students must:
  - i. Be from the scientific track in high school.
  - ii. Have a minimum G.P.A. of 2.67.

- iii. Have a minimum of 25 passed credits and a maximum of 45 passed credits.
- iv. Have 5 Credits of English Language or 3 Credits of two levels of English Language (Average Grades C+ and above, an equivalence with Allied Health Sciences grading)
- v. Have a grade of **C+** and above in the following courses (**For HIIM, MLS and RS departments**)
  - a. 121 Physics
  - b. 125 Lab Physics
  - c. 110 Chemistry
  - d. 111 Lab Chemistry
  - e. 101 Biology
  - f. 115 Finite Maths
- vi. Have a grade of **C+** and above in the following courses (**For PT and OT departments**)
  - 125 Lab Physics
  - 111 Lab Chemistry
  - 101 Biology
  - 115 Finite Maths

And a grade of **B** and above in the following courses:

- 121 Physics
- 110 Chemistry

- 2.6 The students' admission to departments will be based on their g.p.a., which will be recalculated by the Student Counselling and Guidance Office, the availability of places and an interview with the Dean or Vice-Dean for Academic and Student Affairs, or both, and a representative of the Student Counselling and Guidance Office.

### **Transfers from outside Kuwait University**

- 2.7 The unified Kuwait University rules for transfer from other universities, available from the Dean of Admissions and Registration, will apply.

## **UNIVERSITY ACADEMIC REGULATIONS AS APPLIED TO THE FACULTY**

### **1 ACADEMIC ADVISOR**

- 1.1 Each student shall have an academic advisor who shall be a member of the Faculty of Allied Health Sciences. The advisor shall meet his/her students at prescribed times throughout the academic year and at any other times as requested by the students or as deemed necessary by the advisor. The advisor shall assist his/her students with the registration procedures ensuring that they complete the necessary cards which he/she must sign. The advisor shall also acquaint him/herself with all administrative, educational and personal matters appertaining to the students so as to be in a position to encourage, explain, advise, guide and warn his/her students, as appropriate, on any problem which they may encounter during their career at the University.

### **2 STUDY LOAD**

- 2.1 The academic department offering a course specifies the number of credit hours (C.H.) it is worth. The credit hour rating of a course is normally based upon one hour of theoretical study (i.e., a lecture) or at least two hours of applied study (e.g., a laboratory session) being equal to one credit hour. All courses must extend through a complete semester.
- 2.2 The normal study load in a regular semester is 15-19 C.H. The maximum study load is 21 C.H., and 7 C.H. for the summer semester.
- 2.3 With the approval of his/her advisor, Chairman and the Dean, a student who has passed at least 30 credits may register for 21 C.H. if he/she has a grade point average (G.P.A.) 3 on the 4-point scale (see section 3 below).
- 2.4 A student in the Health Sciences Centre may register for less than 15 C.H. in a regular semester with the approval of his/her advisor and the Dean.
- 2.5 To meet graduation requirements, a student may register for any number of credits up to a maximum of 21 with the approval of his/her advisor and the Dean.

### 3 GRADE POINT AVERAGE

3.1 A four-point scale is used to calculate a student's grade point average (G.P.A.). The G.P.A. for a student during his/her University study at the end of his degree course is calculated as follows:

- 1) The number of credit hours for a course is multiplied by the grade point which a student obtains. This procedure is followed separately for each course which a student has taken (i.e., Column B X Column C) (see example in table 3.2 below).
- 2) The results of (1) above are added together.
- 3) The result (2) above (i.e., Column D) is divided by the total number of credit hours for each course a student has obtained (i.e., total of Column B).
- 4) If a student fails a course, but subsequently re-sits and passes it, the initial grade 'F' will be recorded, but will not be counted in assessing the grade point average. The maximum grade that may be awarded for a re-sit is grade C. A student may not repeat any course in which his/her grade is C or better.

#### Example:

<b>A Course</b>	<b>B Credit</b>	<b>C Grade Point</b>	<b>D (B x C)</b>	<b>E Grade Point Average</b>
181 English	5	C+ = 2.33	11.65	
110 Chemistry	3	C = 2.00	6.00	
101 Biology	3	B+ = 3.33	9.99	
115 Mathematics	3	A = 4.00	12.00	
	14		39.64	$39.64 \div 14 = 2.83$

3.2 A student who is given grade 'F' in every course in the first semester will be dismissed from the University.

## 4 UNIVERSITY WARNINGS

- 4.1. First warning is issued to a student whose GPA falls below 1.67 and who has registered for 45 credits or more.
- 4.2. First or Second warning (as appropriate) is issued to a student whose GPA falls below 1.87 and who has registered for between 46 to 60 credits (inclusive).
- 4.3. First, Second or Third warning (as appropriate) is issued to a student whose GPA falls below 2 and who has registered for 61 or more credits.
- 4.4. If a student receives a Third warning, he/she is automatically suspended unless he/she has a GPA which is just under 2, in which case a special formula may be applied, and the student may be given a fourth warning.

**Note:** These warnings are independent of any warnings issued due to absence (see section 9 below).

## 5 SUSPENSIONS

- 5.1 A student who is suspended may submit an appeal to the Dean of Admissions and Registration on the prescribed form. The Dean of Admissions and Registration will send the submission to the Vice-Dean (Academic Affairs and Postgraduate Studies) for comment.
- 5.2 The Vice-Dean (Academic Affairs and Postgraduate Studies) shall solicit the opinion of the concerned Chairman. Should the Chairman support the submission of the student the Vice-Dean will support it accordingly.
- 5.3 All appeals are referred to the Student Affairs Committee, whose membership includes the Dean of Admissions and Registration, the Vice-Dean (Academic Affairs and Postgraduate Studies) of the University and the Vice-Dean (Academic Affairs and Postgraduate Studies) of the concerned Faculty. The final decision for accepting or rejecting the appeal rests within the committee.
- 5.4 If the appeal is accepted the student may continue studies in the Faculty. Alternatively, he/she must leave the university.

## **6 WITHDRAWALS**

- 6.1 A student may withdraw from one or more courses in which he/she has registered within a period not exceeding the end of the third week from the beginning of study or the third day in a summer semester. Withdrawal forms, which are available from the Office of Counselling and Guidance, must be signed by the student, student's advisor, class teacher, Chairman, the Registration Department and the Dean or Vice-Dean (Academic Affairs and Postgraduate Studies).

## **7 ADDING AND DROPPING COURSES**

- 7.1 Adding and dropping courses is done during the week for late registration. Forms for dropping, which are available from the Office of Counselling and Guidance, must be signed by the student, student's advisor, class teacher, the Registrar's Department, and the Dean or the Vice-Dean (Academic Affairs and Postgraduate Studies).

## **8 INTERRUPTIONS OF STUDY**

- 8.1 Except for freshmen and transferred students, a student can drop all courses in a semester, according to the withdrawal regulations above. His/her study for the semester will thus be postponed.
- 8.2 If a student interrupts his/her study for two consecutive semesters, he/she will be allowed to continue provided he/she has not been dismissed from another University. However, he/she will have to apply for re-registration.
- 8.3 A student who interrupts his/her study for 3 or 4 consecutive semesters will be allowed to continue provided he/she repeats all courses in which his/her grade was less than C. He/she will be required to abide by the graduation requirements of the year in which he/she re-registers.
- 8.4 A student who interrupts his/her study for 5 or 6 consecutive semesters will be allowed to continue as a freshman student provided that he/she has completed 18 credit hours and is not on probation.

## **9 ATTENDANCE AND ABSENCE**

- 9.1 The class teacher should take a record of attendance at the start of each class.
- 9.2 Students should attend all lectures, practical and clinical classes.
- 9.3 Copies of all warning notices are sent to the student, Chairman and class teacher concerned.

### **Unexcused Absence from didactic classes**

- 9.4 A student who misses 10% of class attendance in any course is given a first warning
- 9.5 A student who misses 15% of class attendance in any course for which he/she has received a first warning shall be given a final warning.
- 9.6 A student who misses 20% of class attendance in any course shall be considered to have failed that course.

### **Unexcused Absence from practical and clinical classes**

- 9.7 A student who misses one day of class attendance in any course is given a first warning.
- 9.8 A student who misses a second day of class attendance in any course for which he/she has received a first warning shall be given a final warning.
- 9.9 A student who misses a third day of class attendance in any course shall be considered to have failed that course.

### **Excused absence from class**

- 9.10 If a student is absent for a justified reason approved by the relevant Faculty committee, his/her absence is not calculated in the absence calculations given above.
- 9.11 When a student presents an excuse for any absence, this must be approved by the Vice-Dean (Academic and Student Affairs) in consultation with the Department Chairperson. Absences

due to registration, pre-registration, and dropping and adding courses will not be excused.

- 9.12 Any absence from clinical and practical classes requires the approval of the Department Chairman and the Vice-Dean (Academic and Student Affairs) and must be made up.
- 9.13 Any request for excused absence from class (didactic, clinical or practical) must be supported by a medical certificate from a government hospital (see 4.3)

## **10 PROGRESSIONS BETWEEN YEARS**

- 10.1 Students must pass all specified prerequisite courses, as detailed in the Faculty Handbook, including all courses of the previous semester, before registering for subsequent courses. However, if a student has failed courses of a given semester the department may permit him/her to register for one or two courses, based on individual merit. Departments are advised to consult the Vice-Dean, Academic Affairs and Postgraduate Studies in such matters.
- 10.2 A student will not be allowed to progress from one year of his/her programme to the next unless he/she has satisfied all university and faculty requirements and any additional requirements specified by his/her department.
- 10.3 To register to Year Three, all students in every department must mandatorily pass all the Year One and Year Two courses, especially 250 English and 107 Statistics for Medical Sciences.



## FACULTY EXAMINATION REGULATIONS

### 1 INTRODUCTION

- 1.1 Except as otherwise provided for in these regulations, the examination procedures of the Faculty of Allied Health Sciences will follow the general University regulations.
- 1.2 Students must also satisfy the graduation requirements of the Faculty (see section 4 of the University Academic Regulations as applied to the Faculty).
- 1.3 There will normally be at least two in-course assessments for each course. Mid-semester examinations will count towards the overall marks for the course.
- 1.4 The final examination grade for any course shall represent at least 50% of the total marks.
- 1.5 Students will be informed of their final grade, but not their final overall marks. No final grades will be released to students until they have been posted on the official notice board by the Faculty Administration, after the conclusion of the last Examination Board meeting and Faculty Council.
- 1.6 When, due to exceptional circumstances, it is only possible to have one in-course assessment, this will count only 25% towards the overall mark for the course and the final examination will count 75%. This regulation will normally apply to one credit hour courses.
- 1.7 At the beginning of each course the teacher responsible will inform students how the marks for the course will be allocated between in-course assessment and final examinations.
- 1.8 Students are required to attend all in-course and final examinations, including written examinations, practicals, hospital-based examinations and poster presentations at the specified date and time.

## 2 COURSE GRADES

<b>4 Point Scale</b>	<b>Percentage</b>	<b>Grade Description</b>	<b>Letter Grade</b>
4	95	Excellent	<b>A</b>
3.67	90-94		<b>A-</b>
3.33	87-89		<b>B+</b>
3.00	80-86	Very Good	<b>B</b>
2.33	70-79	Good	<b>C+</b>
2.00	60-69		<b>C</b>
0		Fail	<b>F</b>
0		Fail Absent	<b>FA</b>

- 2.1 Excellent: denoted by "A" and divided into two categories:  
"A" is given 4 grade points 95%+  
"A-" is given 3.67 grade points 90-94%
- 2.2 Very good: denoted by "B" and divided into two categories:  
"B+" is given 3.3. grade points 87-89%  
"B" is given 3 grade points 80-86%
- 2.3 Good: denoted by "C" and divided into two categories:  
"C+" is given 2.33 points 70-79%  
"C" is given 2 grade points 60-69%
- 2.4 Fail: denoted by "F" and is given zero.
- 2.5 Failed absent: denoted by "FA" and is given to a student who does not sit for the exam and is not given "I". Zero grade points.
- 2.6 "I" = Incomplete.

## 3 ASSESSMENT REGULATIONS

- 3.1 A student whose overall mark for a course is less than 50% will be given an F grade and will have to re-take the course the next time it runs.
- 3.2 A student whose final mark is 50% - 59% will be given an Incomplete (I) and will be eligible for a re-sit examination at the beginning of the next semester. Students taking a resit

examination are to be awarded a grade no higher than C, irrespective of the achieved examination score.

- 3.3 The final mark for a student who has an Incomplete shall be calculated by adding together the student's incourse assessment marks and resit examination marks.
- 3.4 In a given semester a student may have an Incomplete (I) grade and, as such, a re-sit examination in only two courses. However, if a student gets an Incomplete grade and/or a failing grade (F) in three or more courses he/she will be awarded a failing grade in all such courses.
- 3.5 A student given I or F in more than two courses in a semester must re-take all the courses in which he/she has I or F.
- 3.6 Students choosing not to take a re-sit examination must re-take the course concerned.

#### **4 STUDENT ABSENCES FROM INCOURSE ASSESSMENTS**

- 4.1 A student who misses an in-course assessment for a justified reason which is accepted by the Vice-Dean (Academic and Student Affairs) will be given a substitute examination and given a mark accordingly.
- 4.2 A student who is sick at the time of an incourse assessment must report to the Vice-Dean (Academic and Student Affairs) at the earliest opportunity. His/her relative should report to the Vice Dean if he/she is unable to come personally. If the sickness is proved serious enough to prevent the student taking the assessment the procedures in 4.1 will apply.
- 4.3 A medical certificate from a government hospital, signed by the Hospital Director, and evidence of the student's admission to hospital, must be submitted to the Vice-Dean (Academic and Student Affairs) at the earliest opportunity. However, in those cases where the student is admitted to hospital prior to the examination date, intimation to that effect should be sent to the Vice-Dean (Academic and Student Affairs) at the earliest opportunity and the necessary supporting evidence should be provided as soon as possible thereafter.

## **5 STUDENT ABSENCES FROM FINAL EXAMINATIONS**

- 5.1 A student who misses a final examination due to hospitalization will be given I on production of a medical certificate and permitted a make-up examination.
- 5.2 A student who is sick at the time of a final examination must present him or herself to the Vice-Dean (Academic and Student Affairs) at the earliest opportunity. His/her relative should report to the Vice-Dean (Academic and Student Affairs) if he/she is unable to come personally. If the sickness is proved serious enough to prevent the student taking the examination an Incomplete will be given and a make-up examination permitted.
- 5.3 A medical certificate from a government hospital, signed by the Hospital Director, and evidence of the student's admission to hospital, must be submitted to the Vice-Dean (Academic and Student Affairs) at the earliest opportunity. However, in those cases where the student is admitted to hospital prior to the examination date, intimation to that effect should be sent to the Vice-Dean (Academic and Student Affairs) at the earliest opportunity and the necessary supporting evidence should be provided as soon as possible thereafter.
- 5.4 A student granted a make-up examination under 5.2 will receive the grade he/she earns based upon the final examination and his/her in-course marks, as if he/she is attending the examination for the first time. A student who is sick and does not follow the above procedures will be given FA.

## **6 CHEATING IN EXAMINATIONS**

- 6.1 If an examinee is suspected of cheating from a book, notes, or any other tangible means in his/her possession, the means of cheating is to be removed and handed to the Chief Invigilator. A mark is to be made on the examinee's paper. No public accusation is to be made at this stage.
- 6.2 If an examinee is suspected of cheating from another examinee, the invigilator must note the precise details of the method of cheating. The examinee(s) suspected of cheating must be warned immediately. A mark should be made on their papers to indicate how far they had reached at that stage.

- 6.3 After the examination is over the suspected student(s) should be asked by the Chief Invigilator, in the presence of the Chairman of Department of the subject being examined (or another appropriate member of staff), to explain their apparent conduct.
- 6.4 Reports on all attempts at cheating should be submitted to the Vice-Dean (Academic and Student Affairs) before final submission to the Dean.
- 6.5 After careful consideration of all the circumstances, the Vice-Dean (Academic and Student Affairs) and the departmental Chairman must decide whether a formal charge of cheating should be brought against the examinee(s) concerned.
- 6.6 If a formal charge of cheating is made, the Vice-Dean (Academic Affairs) shall supply the Dean with the following:
  - a. a written report by the invigilator concerned giving full details of the incident of alleged cheating.
  - b. a written report by the department Chairman of the explanation given by the accused at their interrogation immediately after the examination.
  - c. the examination scripts concerned, and any physical means in the alleged cheating.
- 6.7 Any examinee found guilty of cheating by the Dean will be awarded an "F" grade for that course and for any other courses taken in that semester.
- 6.8 The student may register for any courses during the next semester for which he/she has passed the necessary prerequisites.
- 6.9 The Dean shall inform the Dean of Admissions and Registration of his/her decision.
- 6.10 If an examinee is found guilty of cheating on a second occasion, he/she shall be expelled from the University.

## **7 REGULATIONS ALLOWING POSTPONEMENT OF THE FINAL EXAMINATIONS**

7.1 The final examinations may be postponed for a student in exceptional circumstances, providing the following conditions are fulfilled:

1. A student's advisor testifies that he/she is diligent in his study.
2. A student's reason for seeking postponement is felt to be genuine e.g., Haj, pregnancy, delivery, hospitalization or any other excuse accepted by the Vice Dean (Student Affairs).
3. A student's request is approved by the Dean of his/her Faculty, his/her advisor, and the teacher concerned.
4. The teacher will enter on the mark sheet sent to the Registration Department the letter "I" (incomplete) against the student's name without giving a grade.
3. Such a student shall sit the examination, and his/her results must reach the Registration Department not later than 15th of March for the subjects of the previous Autumn semester, and the 1st of October for the subjects of the previous Spring semester.
6. If a student fails to sit for an examination before the dates mentioned in (5) above, he/she shall be considered to have failed.

## **8 EXTERNAL EXAMINERS**

8.1 A selection of examination papers completed by graduating students in Year 4, Semester 2, will be reviewed by an External Examiner, who will give a comprehensive viva voce examination.

## **INSTRUCTIONS TO EXAMINATION CANDIDATES**

1. If a student is unable to sit an examination because of illness, the student or his/her relative if he/she is unable to come personally should report to the Vice Dean (Academic Affairs) without delay.
2. It is the students' responsibility to ensure that they attend the examination at the right time, date and venue. They should be ready to enter the examination room 10 minutes before the scheduled starting time for the examination.
3. No bags, mobile telephones, pagers, books or papers may be taken into the examination room, unless specified.
4. Candidates must sit at the places that have been allocated to them.
5. No student will be permitted to enter the examination room more than 30 minutes after the examination has started.
6. No student shall leave the examination room before the expiry of 30 minutes from the start of the examination, or during the last 15 minutes of the examination.
7. Students shall not turn over the question paper until instructed by the Invigilator.
8. Students must ensure that they write their student number on all answer books used by them.
9. There must be no talking or other communication between students once they enter the examination room. If any student does so that shall constitute cheating.
10. No student should try to see the answers written by another student during the examination. If any student does so, that shall constitute cheating.
11. Smoking, eating, chewing and making any noise are not permitted during the examination.

## HEALTH SCIENCES CENTRE

### LIBRARY REGULATIONS

The Health Sciences Centre Library aims to facilitate information flow in support of education, research, patient care and to provide biomedical information services to health professionals and students throughout Kuwait and the Gulf region.

#### HOURS

##### Academic Semester

Saturday - Wednesday 8:00 a.m.- 9:00 p.m.  
Thursday 8:00 a.m.- 2:00 p.m.

##### Semester Break

Saturday - Wednesday 8:00 a.m.- 2:00 p.m. | 4:00 p.m.-9:00 p.m.  
Thursday 8:00 a.m.- 2:00 p.m.

##### Holy Month of Ramadan

Saturday - Wednesday 9:30 a.m.- 1:30 p.m. | 8:00 p.m.-12:00 midnight  
Thursday 9:30 a.m.- 1:30 p.m.

#### RESOURCES

- 1) **Periodicals:** A total of 4300 electronic journals that are accessible from the library homepage and 1603 current print titles are arranged alphabetically in the periodical area (Second floor of the new building). Details of the subscribed titles are searchable from the Online Library Catalogue.
- 2) **Reference Collection:** The reference collection contains encyclopaedias, dictionaries, directories and indexes to provide quick, concise answers. This collection is located adjacent to the reference desk and is available for in-house use.
- 3) **Books:** The HSC Library has 31069 book volumes. Books are arranged by call number and are located at the circulation display area (First floor of the new HSC building).
- 4) **Reserve Collection:** The reserve collection is located adjacent to the circulation desk. It includes both items designated by the faculty for their course usage, as well as highly used core texts which require limited circulation.



- 5) **Audio-visuals:** HSC library has an audio-visual collection of 2263 items which include videocassettes, slides, CD-ROMS and other media. Original audio-visual materials are restricted to in-house use (Third floor of the new HSC building)
- 6) **Databases:** A wide range of databases, such as: Ovid Databases - Access Medicine, Access Pharmacy, Access Surgery, Access Emergency Medicine, BMJ Learning, EMBASE - Biomedical answers, Essential Evidence Plus, STAT!Ref, CINAHL Plus, Up-To-Date, Ulrich's Periodical Directory, Global Books in Print, MD Consult, PsycINFO, PsycARTICLES DynaMed, Cochrane Library, Clinical Pharmacology, Micromedex, Embase Rehabilitation & Physical Medicine, Embase drugs & Pharmacology, International Pharmaceutical Abstracts, Analytical Abstracts, ISI Web of Knowledge, Scopus. All these databases are accessible from any workstations at the Health Sciences Centre.
- 7) **Digital Collection:** A collection of 901 electronic books, 373 CD-ROMS (Arabic and English), 248 audio cassettes and 1039 videos accessible either by LAN or VPN.
- 8) **HSC Publications:** HSCL Administration has created a database with all the publications of HSC staff before and after its inception. Those who wish to add their publications can submit the print format of the publication to the Automation and Literature Search Department in the library.
- 9) **Kuwait Health File:** a major project created by HSCL Administration. It attempts to include all publications related to health problems in Kuwait in the field of Medicine and Allied Health Sciences contributed by the residents of Kuwait. Kuwait Health File contains fields for journal articles, books, book chapters, conference proceedings and reports. Those who wish to add their publications may submit the print format to the Automation and Literature Search Department in the library.
- 10) **Dissertations & Theses:** HSCL Administration has maintained a database of dissertations and theses of Health Sciences Centre staff and students. Print copies are located in HSCL Administration as a special collection. Dissertations and theses are catalogued and can be identified through the Library Online catalogue.
- 11) The Health Sciences Centre Library Administration homepage can be accessed using the following URL:  

**<[http:// horizon.hsc.edu.kw/library](http://horizon.hsc.edu.kw/library)>**

## **Departments and Library Services**

The Health Sciences Centre Library Administration offers a variety of services that facilitate the effective use of information resources on campus and at remote sites.

### **Acquisitions:**

- Adding new library materials to the available library collection.
- Processing Faculty staff requests for library resources such as books, reference journals, databases and audio-visual materials needed for educational process.
- Following up Faculty staff requests.
- Following up with local and external vendors through emails or direct contact.
- Receiving library materials from the vendors and claim not received items.
- Applying Dynix – acquisitions modules in order to automate acquisitions process.

### **Cataloguing:**

- The library applies “National Library of Medicine” (NLM) classification to catalogue library collection such as books, references, software and audio-visual materials.
- Using Dynix-cataloguing module to enter different library materials in the Library Management System, in order to facilitate the search through the library “Online Catalogue”.
- Current awareness to update the Faculty with latest available resources in the library either through emails or the library homepage new arrivals.

### **Circulation:**

- Implement library policies on HSCL Administration members.
- Assist patrons in using library catalogue.
- Place course materials on reserve.
- Conduct library orientations and tours for staff and students.
- Register of borrowing privileges.

### **Reference and Journals:**

- Answer reference queries.
- Assist in the use of library resources print and electronic.
- Perform citation verification for bibliographies.
- Perform medicated literature search.
- Instruct patrons on database selection and usage.
- Conduct library orientations and training for students on how to use the resources available in the library.

**Automation & Literature Search:**

- Wide variety of 41 medical databases giving access to medical information online.
- Provides a rich collection of 4300 full text electronic journals.
- Provides e-books databases.
- Remote access through Athens on personal request by staff and students.
- Literature Search Department provides high quality services to students and staff of four faculties and other health professionals. It provides easy accessibility to hands on practice at the time of training for the large group of students and faculty members. In addition to the availability of online library orientation, guides and tutorials that can be accessed from the library homepage.

**Audio-visual Materials:**

- It houses audio-visual materials in support of the teaching programs in the University such as Videos, CD's, Laser Discs, Slides, Kits and Software.
- Implement library borrowing policies on HSCL Administration members.
- Assist patrons in using library catalogue for audio-visual material.

**Interlibrary Loan:**

- Journal articles which are not available in the HSCL Administration can be procured by staff and students through Interlibrary Loan facility.
- Correspondence with British Library as well as Canada Institute for Scientific and Technical Information (CISTI) to facilitate electronic document delivery transactions.
- Correspondence with GCC libraries.
- Resource sharing among medical libraries in the Arab World.

**Library System:**

- Designs and updates HSCL Administration websites and maintains its databases to locate articles, electronic books and other information to support staff and students.
- Use multi-media PC to create presentations with audio and video content or scan images.
- Updated "Union Database" with 18 libraries from the Arabian Gulf countries and Middle East countries is accessible from the library's homepage.
- More than 80 computer workstations throughout the library provide access to the World Wide Web as well as the productivity software such as Microsoft Office and to the campus network.
- HSCL Administration provides wireless connectivity throughout the building. You may also connect your own laptop to the KU Wi-Fi.
- Provides assistive technology for library users with special needs.

## CIRCULATION POLICY

HSC Faculty, Staff and Students need the following to obtain library membership:

<b>HSC Staff</b>	Copy of University ID & Civil ID	1 Photograph
<b>Student</b>	Copy of University ID & Civil ID	2 Photographs
<b>Ministry of Health Professional</b>	Copy of Work Centre ID & Civil ID	1 Photograph + KD. 40/-
<b>Private Health Professional</b>	Copy of Work Centre ID & Civil ID	1 Photograph + KD. 80/-

Library members are entitled to the following loan privileges:

	<b>HSC Faculty</b>	<b>HSC Staff</b>	<b>HSC Students</b>	<b>Postgraduate Students/Clinical Tutors</b>	<b>Others</b>
<b>Books</b>	10 books for one month	5 books for one month	5 books for two weeks	5 books for one month	3 books for one month
<b>Reserve Books</b>	1 book for two working hours				None
<b>Audio &amp; Video tapes</b>	3 items for three days				
<b>Slides</b>	3 sets for three days	None			
<b>Journals</b>	3 issues for two hours	None			

- Reserve book is to be checked out for two hours or overnight, weekends and throughout National holidays and are to be returned on the first working day.
- Periodicals, reference materials, microfilms, computer software, CDs and laser disc are restricted to in-house use.
- Periodicals are restricted to be checked out for faculty staff only for two hours.
- Borrowing privileges will be suspended for overdue materials or unpaid fines.

<b>Item</b>	<b>Fine</b>
Book	Fils 0.250/day
Reserve Book	Fils 0.250/2- hours delay & KD 1/day
Audiovisual Materials	Fils 0.250/day

## INTERLIBRARY LOAN POLICY

- HSC Faculty are entitled to obtain 20 articles per academic year free of charge from commercial document suppliers. Requester must sign interlibrary loan form to declare that the article is required for private study/research, and it is not for commercial purpose, in order not to pay the copyright fees.
- Students are eligible to obtain interlibrary loan for a fee.
- Turnaround time for a journal article is 48 hours and two weeks for books.

## LITERATURE SEARCH POLICY

- HSC Faculty are entitled to mediated literature search free of charge.
- Other HSC members, Clinical Tutors and Students are entitled to conduct free literature search and are charged for print out.
- Non-HSC members are entitled to conduct literature search for a fee.

## PHOTOCOPY POLICY

- Photocopy requests are usually completed within one working day.
- Self-service photocopying is available.
- Photocopying is permissible only for the materials held in the library.

	<b>Eligible</b>	<b>Fee</b>
<b>HSC Faculty</b>	600 pages/year	Additional 20 Fils/page
<b>Students</b>	-	20 Fils/page
<b>Clinical Tutors</b>	200 pages/year	Additional 20 Fils/page
<b>Non-HSC members</b>	-	20 Fils/page

Visit HSCL homepage for more details at  
<<http://horizon.hsc.edu.kw/library>>

## **TECHNICAL SUPPORT ADMINISTRATION (TSA)**

The Technical Support Administration maintains state-of-the-art facilities to keep its professionals well connected, knowledgeable and aware of advances in science and technology. Established in 1989, its objectives are directed towards the active automation of the activities and operations of the Health Sciences Centre and fulfilling the teaching and research computerization requirements of all HSC faculties, library and other Centres.

The strategic plan is to establish a well-organized, efficient, advanced and reliable computer Centre to maintain and promote the overall mission and objective of the Health Sciences Centre for professional excellence.

### **Technical support**

TSA provides professional assistance to correct and fix technical problems, whether software or hardware, for all the HSC staff and students.

### **PC labs and special equipments room**

TSA currently runs 7 PC labs (with 204 PCs) and one special equipment lab with 19 PCs. The labs are always updated with the latest hardware and software. 5 PC labs are equipped with a ceiling projector connected to the Instructor's PC for instant teaching. The following software is installed on each of the 223 PCs which are all connected to the HSC Network and the Internet.

- Windows XP Vista operating system
- Microsoft Office Professional Edition 2007 (Word, Excel, PowerPoint, Access).
- File Maker Pro (Flat Database)
- Adobe Photoshop (Photo Design)
- SPSS (Statistical Package)
- Sigma Plot (Statistical Package)
- Stata (Statistical Package)
- Antivirus

The special equipment room has 19 PCs with one additional software, Adobe Acrobat Professional, 18 scanners, one slide scanner for projector slides and one slide maker device to produce 35 mm slides.

A centralized Print Server facilitates one colour laser printer and 8 fast black/white laser printers connected to the network for printing services, 4 in four labs (one in each lab) and 4 printers in a shared facility area.

### **PC and e-mail accounts**

The Technical Support Administration has recently introduced a new service for students and staff to access the PC and e-mail through one account and start using the applications provided on any PC. This account can also be accessed through standard e-mail client program (Outlook) as well as directly through the web browser without the need for a separate mail client, which gives freedom to get e-mail anywhere simply by having access to Internet and a browser.

### **HSC official web site**

The TSA has designed and published an official web site for the Health Sciences Centre. The web site offers information related to the various HSC faculties and departments. Also, the web site presents many services including access to email for both staff and students, a directory service which provides a search engine to lookup contact information of staff and students as well as other links and services which would be useful.

### **E-Learning**

The TSA provides E-Learning resources that allows the teachers to interact electronically with students through the web and the internet. These resources allow a common place for students to go for many classroom resources. The teachers can post news items, assign and collect assignments, post electronic journals and resources and more.

### **Statistical software support**

SPSS is used in the Health Sciences Centre as it is the most popular statistical software for data management and statistical analysis in scientific research and is available on PCs (version 17.0).

### **Training**

TSA offers training courses to all HSC faculties, staff and students on the TSA supported software. The training takes place in the premises of the TSA PC labs. These courses are offered throughout the year free of charge to all staff and students.

### **Training courses available**

- Windows Operating System
- Microsoft Word (Word Processor)
- Microsoft PowerPoint (Presentation)
- Microsoft Excel (Spreadsheet and Charting)
- Microsoft Outlook (E-mail and Collaboration)
- File maker Pro (Simple Database)
- SPSS (Statistical Package)

**Application development**

In house application development is available at the TSA and is developed by using the latest versions of database engines (Oracle, Microsoft SQL server, Microsoft Access and Filemaker Pro) integrated to the web pages and to reliable security features to produce highly accessible, secure and user-friendly packages for the end user.

**Computerised examination scoring**

TSA facilitates the HSC faculties in evaluating students' MCQ exam scores through Optical Mark Reader and providing computerized scoring with results analysis.

**PC workshop**

TSA offers in-house maintenance for all PCs and printers. The workshop provides network cables and installation of new network points. It also maintains consumables such as toners and drums for printers.

**Network and servers**

Technical Support Administration has put great effort to give the best IT services to the staff and students of HSC. To provide an environment that enjoys the most efficient and maximum connectivity, network points have been installed in every office, lab, and floor within the HSC. Combined with the latest server technologies, the TSA provides secured, high speed, and low fault tolerant network and internet connection. TSA has a server environment that consists of Email Servers, Web Servers, Application Servers, Data Storage Servers, Antivirus Servers, Databases, E-Learning Servers and Security Servers. The TSA also provides wireless network connections for easy public access to internet.

**Other hardware facilities**

An in-house poster printing facility is available for Seminars, Poster Days and Conferences for the HSC staff.



## **FACULTY ADMINISTRATION CALENDAR 2023-2024**

### **Academic Staff Recruitment**

1. Advertisements for 2024-2025 to appear September/October 2023.
2. Closing date for receipt of applications, November-end 2023.
3. Short-listing meetings, end of November 2023.
4. Interviews in February/March 2024.
5. Preliminary offers to be sent by early April 2024.
6. Staff recruitment for 2024-2025 to be submitted by Chairpersons by March 2024.

### **Annual Reports**

1. Preliminary draft departmental Annual Report for 2022/2023 to be submitted by Sunday 23<sup>rd</sup> April 2023.
2. Departmental annual reports for 2022/2023 to be submitted by Sunday 8<sup>th</sup> October 2023.
3. Faculty Final Annual Reports for 2022/2023 to be completed by Sunday 12<sup>th</sup> November 2022.

### **Faculty Handbook**

1. Alterations to be submitted by Sunday 2nd April 2023.
2. Handbook to be sent to printers by end May 2023.

### **Staff Coordinators List & Lecture Schedule**

1. For Semester One - to be submitted not later than Sunday 23rd April 2023.
2. For Semester Two - to be submitted by Sunday 12th November 2023.

### **External Examiners**

1. Potential Examiners to be formally approached by end of November 2023.
2. University approval to be sought by end of December 2023.
3. External Examiners programmes to be agreed by end of March 2024.

### **Teaching/Class Timetables**

1. Detailed timetables and course contents for Semester One, 2023/2024 to be submitted to the Vice-Dean (Academic & Student Affairs) by Sunday 23<sup>rd</sup> April 2023.
2. Detailed timetables and course contents for Semester Two, 2023/2024 to be submitted to Vice-Dean (Academic & Student Affairs) by Sunday 12<sup>th</sup> November 2023.

**FACULTY CALENDAR**  
**SEMESTER ONE, 2023-2024**

Sunday	10/09/2023	Managers and new staff report for duty
Sunday	10/09/2023	Student registration
Thursday	14/09/2023	
Sunday	17/09/2023	Teaching staff report for duty   <b>Teaching starts</b>
Sunday	17/09/2023	Resit Examinations
Tuesday	19/09/2023	
Saturday	21/10/2023	Mid-Semester examinations ( <b>Teaching continues</b> )
Thursday	26/10/2023	Last day for stopping registration
	28/10/2023	Last day to withdraw courses
Wednesday	01/11/2023	Mid-Semester examinations ( <b>End</b> )
Thursday	30/11/2023	Last day for appeals and complete withdrawal from study
Thursday	14/12/2023	<b>Teaching ends</b>
Sunday	17/12/2023	Practical/Fieldwork Examinations & Preparatory days
Tuesday	26/12/2023	
Wednesday	27/12/2023	Final Examination Period ( <b>start</b> )
Monday	08/01/2024	Final Examination Period ( <b>last day</b> )
Tuesday	09/01/2024	Departmental Final Examination Boards
Tuesday	09/01/2024	Endorsement of Grades with Vice Dean Academics
Wednesday	10/01/2024	
Saturday	13/01/2024	Last day for submission of grades ( <i>Deanship of Admissions &amp; Registrations</i> )
Sunday	14/01/2024	Mid-Year break starts
Tuesday	16/01/2024	Transfer period between Faculties and Departments
Thursday	18/01/2024	
Saturday	27/01/2024	Mid-Year break ends (Management)
Saturday	03/02/2024	Mid-Year break ends (Teaching staff and students)

**FACULTY CALENDAR**  
**SEMESTER TWO, 2023-2024**

Sunday	28/01/2024	Managers and new staff report for duty
Sunday Thursday	28/01/2024 01/02/2024	Period of registration (Add and withdrawal from courses)
Sunday	04/02/2024	Teaching staff report for duty   <b>Teaching starts</b>
Sunday Tuesday	04/02/2024 06/02/2024	Resit Examinations
Saturday	09/03/2024	Mid-Semester Examinations (Teaching continues)
Thursday	14/03/2024 16/03/2024	Last day for stopping registration Last day to withdraw courses
Tuesday	19/03/2024	Mid-Semester Examinations (End)
Thursday	18/04/2024	Last day for appeals and complete withdrawal from study
Thursday	02/05/2024	Teaching ends
Sunday Tuesday	05/05/2023 14/05/2023	Practical/Fieldwork Examinations & Preparatory days
Wednesday Monday	15/05/2024 27/05/2024	Final examinations period
Tuesday	28/05/2024	Departmental Final Examination Boards
Tuesday Wednesday	28/05/2024 29/05/2024	Endorsement of Grades with Vice Dean Academics
Wednesday	29/05/2024	17 <sup>th</sup> Student Poster Day
Thursday	30/05/2024	Last day for submission of grades ( <i>Deanship of Admissions &amp; Registrations</i> )
Sunday	02/06/2024	Summer vacation starts
Tuesday Thursday	04/06/2024 06/06/2024	Transfer period between Faculties and Departments
Saturday Saturday	07/09/2024 14/09/2024	Summer vacation ends (Management) Summer vacation ends (Teaching Staff and Students)

**FACULTY CALENDAR**  
**SUMMER SEMESTER, 2023-2024**

Sunday	09/06/2024	Teaching starts
Sunday	09/06/2024	Period of registration (Add and withdrawal from courses)
Tuesday	11/06/2024	
Thursday	25/07/2024	Teaching ends
Saturday	27/07/2024	Final Examination period
Tuesday	30/07/2024	
Saturday	03/08/2024	Last day for submitting grades
Tuesday	06/08/2024	Transfer period between Faculties and Departments
Thursday	08/08/2024	
Sunday	04/08/2024	Summer vacation starts
Saturday	07/09/2024	Summer vacation ends (Management)
Saturday	14/09/2024	Summer vacation ends (Teaching Staff and Students)

**RELIGIOUS AND OTHER HOLIDAYS**

*Provisional dates for Religious and National holidays are as follows:*

Thursday	28/09/2023	Prophet's Birthday
Monday	01/01/2024	New Year' Day
Thursday	08/02/2024	The Prophet's Ascension
Sunday	25/02/2024	National Day
Monday	26/02/2024	Liberation Day
Wednesday	10/04/2024	Eid Al Fitr
	13/04/2024	
Saturday	15/06/2024	Waqfat Arafat Day
Sunday	16/06/2024	Eid Al-Adha
	17/06/2024	
Sunday	07/07/2024	Islamic New Year