Kingdom Saudi Arabia
Ministry of education
Shaqra University
College of Applied Medical Sciences in
Alquwayiyah



Shaqra University

Faculty of Applied Medical Sciences at Al-Quwayiyah,

Department of Clinical Laboratory Sciences

Clinical Laboratory Sciences program

Program Handbook

Shagra University

Revised on April; 2023

Contents

Introduction	3
Dean's word	4
About the program	4
Program Organizational Structure	10
Program admission requirements	10
Graduate Attributes	12
Fields of work for the graduate:	13
College Facilities	13
Study Plan of the CLS	15
Description of the Courses of the Program	17
University rules and regulations	29
College Working Committees & Units	44
The Working Committees of the Department	49
Faculty Members - Male Section	52
Faculty Members - Female Section	52

Shagra University

Introduction

Dear student, this introductory guide serves as a guiding way to clarify the most questions that revolve in your mind and guide you to what must be followed. The purpose of this guide is to provide general information about the Bachelor of Clinical Laboratory Science (CLS) program, including the rules, regulations, and committees and/or units in CLS department. It also provides you with extracts from the program's systems and services that organize your academic and university life in general. We ask God to grant us and your success



Dean's word

Dear students,

The College of Applied Medical Sciences, AlQuwayiyah welcomes all of you. The college would like to put in-between your hands this brief guide which introduces you to the Clinical Laboratory Science (CLS) program and makes you aware of the study regulations generally.

The College of Applied Medical Sciences in AlQuwayiyah aims to graduate highly qualified national competencies in applied medical specialties to meet the needs of the current and future labor market through the CLS Department in both male and female sections, as well as the Medical Laboratories Department in both parts, and this in turn will contribute to raising the level of medical services provided to citizens under the leadership of the Custodian of the Two Holy Mosques The two honorable King Salman bin Abdulaziz, may God protect him, and his faithful Crown Prince, His Royal Highness Prince Muhammad bin Salman, may God protect him, and through the unlimited support of His Excellency the Director of Shaqra University, Prof. Dr. Ali bin Muhammad Al-Saif.

The introductory guide is an effective way to introduce academic programs such as the CLS program and what it contains, through which the student can learnabout related matters, including the study plan of the program and the description of the courses that the student studies in university semesters.

Dean of the College, Dr. Abdulelah Alsolais

About the program Development

The College of Applied Medical Sciences was established in the year 1413H,under the name of an intermediate health institute affiliated to the Ministry of Health and developed until it reached in the year 1428H into an intermediate healthcollege that grants a diploma in CLS and public health. On 12/22/1429H, the Noble Royal Decree (No. 11032) was issued to annex health colleges and institutes to the Ministry of Higher Education, and the institute was joined to become the College of Health Sciences affiliated with King Saud University. Immediately after less than two years, the honorable royal decree was issued by the Custodian of the Two Holy Mosques King Abdullah bin Abdul-Aziz, may God have mercy on him No.7305 dated 9/3/1430H, to establish Shagra University.

The college moved to be one of the colleges of Shaqra University and bears the name of the College of Applied Medical Sciences in AlQuwayiyah. The college has started offering more academic specializations in addition to the CLS, such as the Bachelor of Medical Laboratories.

The CLS profession is one of the highest human professions as it extends a helping hand to the sick and the healthy. CLS plays a pivotal role in providing health services to all members of society of all sects and ages and improving the health of its members

The CLS Department is one of the leading departments in the College of Applied Medical Sciences at Shaqra University, and it is the only department until the beginning of the academic year 1431-1432H in order to meet the national needsof technologist who provide the best health care programs for laboratory diagnosis, whether inhospitals, health centers or school health or other community sites.

CLS Program Vision:

Academic and research excellence in clinical laboratory sciences.

CLS Program Mission:

Preparing a clinical laboratory specialist capable of competing scientifically, professionally and research to meet the needs of society with the best professional and ethical values.

Program Goals

- 1. Preparing and qualifying competent personnel with knowledge and professionalism to meet the Kingdom's need for healthcare personnel in the field of clinical Laboratory Sciences
- 2. Continuous improvement of education quality standards to qualify personnel capable of keeping up with developments in the field and meeting the needs of the job market
- 3. Supporting graduates to meet the requirements of successful employment in all areas of practicing the profession in laboratories.
- 4. Enhancing scientific research and participation in scientific conferences and discussion forums.
- 5. Developing community awareness through active participation in community health awareness activities.
- 6. Enhancing the ability to bear responsibility and awareness of ethical and legal issues related to professional ethics.

Program Philosophy:

CLS is aligned with clinician of the Future Competencies: Patient-Centered Care, Professionalism, Leadership, Systems-Based Practice, Informatics and Technology, Communication, Teamwork and Collaboration, Safety, Quality Improvement, and Evidence-Based Practice.

Demonstration of the competencies signifies preparation for successful transition into CLS technology and further professional development. CLS has adopted a constructer framework which guides delivery of educational experiences, acknowledging the uniqueness and complexity of the individual learner and the importance of active learning and personal engagement in the process of learning.

Program Information

The Bachelor of Science in CLS (BSC) Program was established in line with the aspirations of the Ministry of Higher Education to achieve its general objectives in preparation and development of national human resources. Also, the program was instituted for the provision of qualified personnel and trained to meet the requirements of health care delivery system and the demands of the labor market. Lastly, it was designed to enrich scientific research and produce graduates to meet community issues and development

needs. CLS program of college of applied medical science- AlQuwayiyah, offer Bachelor of Science in Clinical Laboratory Sciences (B. Sc. Degree in CLS).

National Competency for Bachelor of CLS Programs:

- 1-**Professionalism**: The CLS graduate will demonstrate accountability and responsibilities for the delivery of CLS care that is consistent with moral, ethical, legal, humanistic and regulatory principles.2-**Patient Centered Care**: The CLS graduate will deliver compassionate and coordinated care that recognizes patients' preferences, values, and needs and respects the patient as an active partner in providing holistic, safe, and effective care.
- 3-Evidence Based Practice & Research: The CLS graduate will be able to conduct scientific research related to current trends, issues in CLS, technology-based precision and accuracy using their research expertise and make clinical decisions based on laboratory diagnosis, experience and values of turn over time (Adapted from QSEN, 2007).
- 4-**Leadership and Management:** "The CLS graduate will demonstrate leadership and management competencies to have affected the conduct of CLS and healthcare professionals in their community in a way that will facilitate the establishment and fulfillment of shared goals". (Tomey, 2009)
- 5- Quality and Safety Management "Quality: The CLS graduate will be aware and uses information to display the effects of care given and uses improvement techniques to design and check modifications to continuously enhance the fine and protection of health care systems". (QSEN, 2007) "Safety: The CLS graduate will minimize error in diagnosis so that the health care providers utilize system effectiveness and individual performance". (QSEN, 2007)
- 6-**Health Education and Promotion**: The CLS graduate will be able to identify communities, individuals and patients' needs related to their health preventions, and promote healthy behaviors by providing health information and educational activities using reliable resources with respect to different age groups and cultural backgrounds.

7-Communication and Information Technology: The CLS graduates are expected to maintaineffective communication and interaction with patients and their families notwithstanding them co-workers. They will also be expected to foster mutual respect for one another and harbor cooperative decision-making with the outcome of optimizing patient Satisfaction and the overallimprovement of the patient's health outcomes. Information Technology, The Graduate in CLS will be expected to take advantage of these developments to analyze and synthesize information in order to collaboratively make critical decisions for the best patient outcome. (National Academies of Sciences, Engineering, and Medicine, 2015).

Learning outcomes for the program:

Knowledge and understanding:

- Establish a personal scientific knowledge base that prepares them to read, to interpret, and to utilize scientific knowledge in clinical practice.
- Define the theoretical concepts of medical laboratory sciences used in conducting medical laboratory tests

Skills:

Cognitive Skills

- Proficiency to problem-solves, troubleshoot, recognize and interpret abnormal laboratory results and use statistical approaches when evaluating data and conducting research.
 - Exercise the principles of management and safety to include preventive and corrective maintenance of equipment as well as identify appropriate sources for repair.

Practical and Physical Skills

- Establish proper procedures, for collecting, safe handling, processing, and analyzing human specimens to maintain accuracy and precision in all laboratory procedures
- Perform microscopic examination and analytical tests of cells, tissues, blood, body fluids, and other materials, interpreting laboratory results and relating the data to various disease states.

Communication and Information Technology Skills

- Demonstrate effective communication with patients, laboratory personnel and other health care professionals.
- utilize computer technology applications to interact with computerized instruments and laboratory information systems

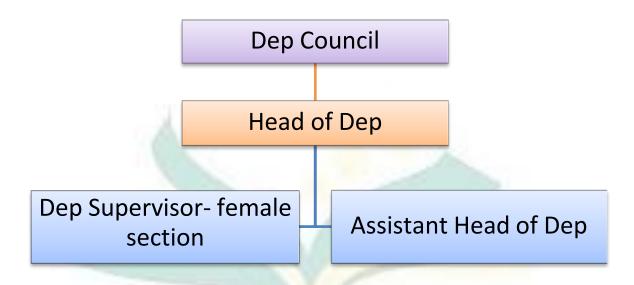
Values:

- Follow the principles, ethics, rules and regulations of clinical laboratory practice and at various healthcare settings.
- Demonstrate leadership, team player, and the desire for continuing education for one's professional development and application of safety and governmental standards as applied to medical laboratory practice

Learning method and strategies:

- Interactive lecture
- Class activities (Quizzes, Seminars, graded recitation, role playing, Laboratory reports,
 Essay, Assignments, Group projects, Research presentations and discussions, Case analysis and presentation)
- CLS care plan development
- Clinical placement
- Skills demonstration and return demonstration
- o mentoring
- Virtual clinical learning
- Simulation learning system
- debriefing
- o Exams (oral, written, & OSCE).
- Class feedback.
- Audiovisual Materials
- o Inquiry-Based Instruction
- o Direct observations by the instructors
- Journal reading/sharing

Program Organizational Structure



CHANNELS OF COMMUNICATION:

There is an expectation of mutual respect between faculty and students. If an issue should arise, the student schedules a meeting in faculty member office hours to discuss the issue with the faculty member. Issues are often resolved by direct communication between the faculty member and the student.

Program admission requirements

Admission:

- According to the general conditions for admission to Shaqra University via theuniversity's website www.su.edu.sa
- The student is free from any physical or mental disabilities.
- Obtaining a secondary certificate in an academic track, this certificate not to exceed two years from the date of obtaining.
- The weighted percentage is determined annually by the admission and registration committee.

Admission of New Students.

The Council of Shaqra University determines the number of **Requirements**:

The Bachelor of CLS program requires regular study for a period of four years - eight levels of study(the first and second levels are taught at the preparatory year headquarters), after which the student attends a compulsory internship (internship) for a year in an accredited hospital before obtaining a bachelor's degree in medical sciences Applied in CLS.

STUDENT RIGHTS AND RESPONSIBILITIES

Statement of Student Rights

The university is a community of scholars in which the ideals of freedom of inquiry, freedomof thought, expression, and for the individual are sustained. It is committed to preserving the exercise of any right guaranteed to individuals by the laws of the Kingdom of Saudi Arabia. However, the exercise and preservation of these freedoms and rights require a respect for the rights of all in the community to enjoy them to the same extent. The following is vested upon thestudents at Shaqra University:

- 1. The student has the right to participate in his or her own education in an environment free from discrimination and harassment.
- 2. The student has the right to receive instruction from competent and qualified faculty and to engage in scholarly academic discourse with them.
- 3. The student has the right to be treated in a professional manner by faculty, staff, and other students.
- 4. The student has the right to reasonable privacy and accessibility on his or her academic records and other related documents.

Statement of Student Responsibilities

The opportunity to attend Shaqra University is a privilege which carries certain obligations. Presented below is the list of responsibilities that are expected from students to preserve the community and to pursue self- development.

- 1. Understanding and following the academic rules and regulations of the university
- Conformity with the Code of Student Conduct and to respect the authority of ShaqraUniversity officials.

- 3. Truthful in all his or her interactions at the university
- 4. Respect the rights of others in the campus community
- 5. Compliance with educational requirements by attending class, respecting academic requirements and deadlines, meeting financial obligations to the university, and completing assigned academic work in a satisfactory manner
- 6. Observance of dress code as prescribed by the university

Graduate Attributes:

Code	Program graduate Attributes.	Scope
CLS-At-1	Clinical Laboratory safety in reference to governmental	knowledge and
	regulations and universal precautionary	understanding
	standards;	
CLS-At-2	Educational pedagogies and strategies for the training of	
	interns and others;	
CLS-At-3	Administration and supervision relevant to the	skills
	practice of Clinical Laboratory Science;	
CLS-At-4	Basic research in terms of clinical study design, implementation and dissemination of results	200
CLS-At-5	Communication and collaboration among the patients,	
	the community, the healthcare team and	
	other stakeholders	
CLS-At-6	Continuing professional and scientific enhancement	Values
CLS-At-7	Professionalism and ethics	



Fields of work for the graduate:

- 1. CLS Specialist.
- 2. CLS Educator.
- **3.** CLS Teacher.
- **4.** At hospitals, clinics, health centers **as**
- Public and private hospitals
- Public and private healthcare centers
- **5.** Health research centers
- **6.** Educational institutions, schools or university colleges.

College Facilities

Classrooms:

There are nine classrooms, three of them have a capacity of 50 students, and six rooms with acapacity of 30 students. All these classrooms are equipped with audio and visual aids. Each classroom includes a computer, a projector, and a connection to the Internet to effectively facilitate teaching process.

Meeting room:

A hall equipped with all modern technology means used to hold department meetings, workshops, conferences and various meetings

University theatre:

The College of Applied Medical Sciences has a university theater that conforms to specifications and standards, in which all private and public activities, conferences and workshops are held

CLS department laboratories:

- 1. Anatomy and Physiology Lab.
- 2. Clinical Chemistry Lab.
- 3. Hematology Lab.
- 4. Microbiology Lab.
- 5. Molecular Genetics and cytology Lab.
- 6. Histopathology Lab.
- 7. Computer lab

Student training sites:

- 1- College Labs.
- 2. Pathology laboratory Al-Quwayiyah General Hospital.
- 3. Hematology laboratory Al-Quwayiyah General Hospital.
- 4. Microbiology laboratory Al-Quwayiyah General Hospital.

Study Plan of the CLS Program

Level	Course	Course Title	Required	Pre-Requisite Courses	Credit	Type of requirements
	Code		or Elective	Courses	Hours	(Institution, College or Department)
Level	NGM 109	English -1	Required	-	3+6=9	College
1	PHYS 107	Introduction to Physics	Required	-	2+2=4	College
	MATH 130	Introduction to mathematics	Required	-	3+2=5	College
	NGM 110	English 2	Required	-	3+3=6	College
Level 2	CHEM 109	Introduction to Chemistry	Required	-	3+2=5	College
	BIO 101	Introduction to Biology	Required	-	2+2=4	College
	NGM 147	English for Medical Purpose	Required	-	2+1=3	College
Level 3	ACT 105	Academic and Life Skills	Required	-	2+2=4	College
	TECH 130	Computer skills	Required	-	3+2=5	College
	HLT 101	Health and fitness	Required	-	3+0=3	College
	Islamic 102	Islam & Building Society	Required	-	3+0=3	Institution
	HLT 231	Professionalism & Health Care System	Required	-	3+0=3	Department
Level 4	CLS 231	Human Anatomy and Physiology	Required	BIO 101	4+2=6	Department
	CLS 232	Clinical Biochemistry I	Required	CHEM 109	4+2=6	Department
	Arabic 103	Arabic Edition	Required	-	3+0=3	Institution
	CLS 241	Basic Microbiology	Required	CLS 231	3+3=6	Department
	CLS 233	Clinical Analytical Chemistry	Required	-	3+1=4	Department
Level 5	CLS 243	Descriptive Histology	Required	CLS 231	3+1=4	Department
	HLT 232	Basics of Emergency Care	Required	-	3+2=5	Department
	CLS 242	Clinical Biochemistry II	Required	CLS 232	4+2=6	Department
	CLS 244	Clinical Instrumental Analysis	Required	-	4+2=6	Department
Level	Islamic 103	Islam Politics	Required	-	3+0=3	Institution
7	CLS 352	Hematology	Required	CLS 231	3+3=6	Department

Level	Course Code	Course Title	Required or Elective	Pre-Requisite Courses	Credit Hours	Type of requirements (Institution, College or Department)
	CLS 354	Clinical Mycology	Required	CLS 241	3+2=5	Department
	CLS 355	Histological Techniques	Required	CLS 243	2+1=3	Department
Level	CLS 361	Clinical Bacteriology I	Required	CLS 241	3+2=5	Department
8	CLS 351	General Pathology	Required	CLS 243	3+1=4	Department
	CLS 353	Clinical Biochemistry III	Required	CLS 242	4+2=6	Department
	STA 106	Biostatistics	Required	-	3+0=3	Department
Level 9	CLS 363	Immunology	Required	CLS 353	4+2=6	Department
	CLS 362	Medical Parasitology	Required	CLS 241	4+2=6	Department
	HLT 261	Epidemiology	Required	-	3+1=4	Department
	Islamic 104	Islam Economy	Required	-	3+0=3	Institution
Level 10	CLS 473	Immunohematology	Required	CLS 352 CLS 363	3+3=6	Department
	CLS 471	Clinical Bacteriology II	Required	CLS 361	2+2=4	Department
	CLS 476	Clinical Practice Biochemistry	Required	CLS 353	1+2=3	Department
	CLS 472	Virology	Required	CLS 241	3+0=3	Department
Level 11	CLS 474	Cytopathology	Required	CLS 243	2+1=3	Department
	CLS 483	Medical Genetics	Required	CLS 476	3+2=5	Department
	CLS 475	Clinical Enzymology	Required	CLS 353	2+1=3	Department
	CLS 481	Environmental Microbiology	Required	CLS 261	2+1=3	Department
	HLT 281	Computer Applications for Health Sciences	Required	-	3+0=3	Department
Level 12	CLS 486	Department Seminar	Required	-	3+0=3	Department
	CLS 482	Clinical Practice Microbiology	Required	CLS 471	3+2=5	Department
	CLS 484	Clinical Practice Hematology	Required	CLS 476	1+2=3	Department
	CLS 485	Laboratory Management	Required	-	3+0=3	Department

***After the completion of the eight (12 levels, one (1) year internship in an accredited hospital is required in partial fulfillment for the degree of Bachelor of Science in CLS.

Description of the Courses of the Program

Code & No: CLS 231	
Course: Principles of Anatomy & Physiology	
Credits: 5.5(4+1.5)	
Pre-requisite: BIO 101	

Co-requisite: CLS 232

The principles of Anatomy and Physiology course will cover the shape, structure, and function of the human body and its parts. Content includes: basic anatomy and directional terminology, structure and function of various organ systems of the body and special sense organs, fundamental concepts and principles of body organization, histology, and hematology.

Code & No: CLS 232
Course: Clinical Biochemistry I
Credits: 6 (4+2)
Pre-requisite: CHEM 109
Co-requisite: CLS 231
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This course covers the structures and functions of biomolecules, which include carbohydrates, proteins, lipids, nucleic acids, enzymes and hormones. Emphasis on the molecular structure and its relationship with the biological function. In the practical part of this course, students study the detection and determination of some of these biomolecules in the urine and other body fluids.

	Code & no: CLS 233
	Course: Clinical Analytical Chemistry
	Credits: 3 (2+1)
	Pre-requisite: -
	Co-requisite: -
This co	ourse introduces students to the different types of chemical equilibria and how they affect the

This course introduces students to the different types of chemical equilibria and how they affect the proceedings of a chemical reaction and different types of titrations, and their applications in the lab.

Code & No: CLS 241
Course: Basic Microbiology
Credits: 6(3+3)
Pre-requisite:
Co-requisite: CLS 231

This course provides the fundamental concepts and general characteristic features of different kinds of microorganisms. Basic concepts and techniques of the cultivation of bacteria and fungi with the preparation of various types of culture media. Practical portion of the course involves the basic staining techniques and microscopy for morphological identification of the medically-significant bacteria and fungi

Code & No: CLS 242

Course: Clinical Biochemistry II

Credits: 4(3+1)

Pre-requisite: CLS 232

Co-requisite:

This course is designed to enable the student to understanding the principles of metabolic activity of animal tissue and its regulation. Major catabolic pathways related to carbohydrates, amino acids, and fatty acids are in detail. Also, student will understand principles of bio-energetic of cells.

Code & No: CLS 241

Course: Basic Microbiology

Credits: 6(3+3)

Pre-requisite: CLS 231

Co-requisite:

This course provides the fundamental concepts and general characteristic features of different kinds of microorganisms. Basic concepts and techniques of the cultivation of bacteria and fungi with the preparation of various types of culture media. Practical portion of the course involves the basic staining techniques and microscopy for morphological identification of the medically-significant bacteria and fungi

Code & No: CLS 243

Course: Descriptive Histology

Credits: 3 (2+1)

Pre-requisite: CLS 231

Co-requisite:

This course will provide the student with the basic knowledge of the theoretical and applied aspects of cells and tissues which form the organs of human body. This course will also cover the four basics tissues, their function, and the gross as well as the microscopic appearance of organs of the human body such as nervous system, circulatory system, lymphatic system, respiratory system, digestive.

Code & No: CLS 244

Course: Clinical Instrumentation Analysis

Credits: 4(3+1)

Pre-requisite:

Co-requisite:

This course covers the knowledge of the principles of instrumentation which essential for a clinical laboratory technologist, and can be utilized in a modern laboratory set-up. A good understanding of the operation and principles of various instruments such as different types of microscopes including electron microscope; autoclave, hot air oven, laminar air flow, centrifuge, incubator and other laboratory equipment.

Code & No: CLS 352 Course: Hematology Credits: 4 (2+2) Pre-requisite: CLS 231

Co-requisite:

Students will study the normal haemopoiesis, nutritional factors in haemopoiesis and classification and causes of anemias and their laboratory findings. They will be taught the structure, synthesis and functions of normal haemoglobins, as well as the abnormal haemoglobins and their laboratory findings. Normal and abnormal leucopoiesis will be taught and mention will be made of the classification and laboratory findings of acute and chronic leukaemias. The process of Haemostosis will be underscored along with the laboratory test of haemostatic failure.

Code & No: CLS 354

Course: Clinical Mycology

Credits: 3 (3+2)
Pre-requisite: CLS 241

Co-requisite:

The course deals with the theoretical and practical aspects of structure and physiology of various fungi and yeasts, their cultural characteristics, diseases and clinical presentation, pathogenesis, modes of transmission, laboratory diagnosis, prevention and control

Code & No: CLS 355

Course: Histological Techniques

Credits: 3(2+1)

Pre-requisite: CLS 243

Co-requisite:

This course will provide the student with the basic theoretical knowledge and practical experience in the methods and techniques in dealing with the surgical biopsies. This course will enable the student to perform the common techniques in tissue processing and produce stained sections by using the correct instruments. Instructions on the maintenance of such instrument will be given.

Code & No: CLS 361

Course: Clinical Bacteriology I

Credits: 3(2+1)

Pre-requisite: CLS 241

Co-requisite:

The first part of this course deals with the theoretical and practical aspects of chemotherapeutic agents, their modes of action, methods of evaluation and susceptibility testing, and mechanism of microbial resistance. The second part deals with brief description of host-parasite relationships, followed by detailed study of structure and physiology of Gram (+) & (-) cocci, aerobic spore and non-spore forming bacilli and the Mycobacterium, their cultures, diseases and clinical presentation, pathogenesis, modes of transmission, laboratory diagnosis, prevention and control.

Code & No: CLS 351 Course: General pathology Credits: 3(2+1) Pre-requisite: CLS 243 Co-requisite:

This course includes an introduction to pathology terminology, etiology, manifestation and diagnosis, the course will include inflammation tumor and immunological reaction. The other part of this course will cover an application of these facts on different body systems and organs. This will give the also, the response of the cell towards various stimuli in the form of students the knowledge of different disease processes involving different system.

Code & No: CLS 353
Course: Clinical BiochemistryIII
Credits: 4 (3+1
Pre-requisite: CLS 242
Co-requisite:

This course is designed to enable the student to understanding the knowledge of principles of laboratory tests performed in routine and special chemistry laboratory, biochemical principles of the tests performed, clinical significance and interpretation of the data against the normal values on the test performed in a manual/setting.

Code & No: STA 106	
Course: Biostatistics	
Credits: 2 (2+0)	
Pre-requisite: -	
Co-requisite:	
	C

The undergraduate student will be able to understand the importance of statistics, use of statistics in health sciences, methods of sampling, data collection, analysis, interpretation of the result and presentation.

Code & No: CLS 363
Course: Immunology
Credits: 4(3+1)
Pre-requisite: CLS 353
Co-requisite:

Students will study the nature of immunity including basic immunity (i.e. innate immunity, adaptive immunity, complement system, and adhesion molecules) & clinical immunity (i.e. hypersensitivity, transplantation, autoimmune diseases, immune deficiency, and tumors). Also, their laboratory findings will be learned by using various serological techniques and different immunological assays. They will be taught the immune recognition of common bacterial components (PAMPs) that interact with PRRs, and the HLA system including structure, processing & presenting antigenic peptides of each types, and their laboratory applications. Leukocytes & cytotoxic activity of Natural Killer cells will be taught (i.e. different identification methods of NK cells and their mechanisms to kill target cells). They will be underscored the basic structure, classes and functions of immunoglobulins along with different methods of immunization and the various types of vaccines.

Code & NO: CLS 362

Course: Medical Parasitology

Credits: 4 (3+1)

Pre-requisite: CLS 341

Co-requisite:

This course is designed to prepare students for a career in the diagnosis and control of human parasitic infections. The mode of instrumentation will be lectures, laboratory practical and internship. Lectures on the classification, morphological characteristics, life cycles of all the protozoa and helminthes of medical importance. Mechanism of their disease production, epidemiology and prevention are emphasized as well as the detailed teaching of various laboratory techniques in the examination of biological specimens for the detection and identification of parasites.

Code & No: CLS 473

Course: Immunohematology

Credits: 3 (3+3)

Pre-requisite: 4(2+2)

Co-requisite: CLS363, CLS 352

The main aim is to give a basic understanding of the theoretical and practical aspects of immunohematology and blood bank, including blood groups systems, blood transfusion tests and Hemolytic transfusion reactions. By the completion of the course the students will be able to perform all tests and techniques required for blood transfusion, blood preservation and blood products preparation and to discuss the causes and investigations of Hemolytic transfusion reactions, hemolytic disease of the newborn and immune Hemolytic anemias.

Code & No: CLS 471

Course: Clinical Bacteriology II

Credits: 3(2+1)

Pre-requisite: CLS 361

Co-requisite:

This course deals with the study of structure and physiology of Gram-negative bacteria to include tribes of Enterobacteriacae, Pseudomonads, Vibrios, Campylobacter, Helicobacter, Bordetella, Brucella, Haemophilus, Legionella and related organisms, Spirochetes, Mycoplasma, Chlamydia, spore and non-spore forming anaerobes, their cultures, diseases and clinical presentation, pathogenesis, modes of transmission, laboratory diagnosis, susceptibility testing, prevention and controls.

Code & No: CLS 476

Course: Clinical Practice Biochemistry

Credits: 2 (1+1)

Pre-requisite: CLS 353

Co-requisite:

This course is designed to enable the student to accept the knowledge of laboratory skills including overall organization, safety precautions, specimen handling and quality control procedures. Students are expected to perform the routine and special tests (electrophoresis, RIA, ELIZA) on serum/plasma & urine using manual or automated equipment in a hospital set-up.

Code & No: CLS 472
Course: Virology
Credits: 2(2+0)
Pre-requisite: CLS 241
Co-requisite:

This course deals with the structure and physiology of various groups of medically important viruses, their propagation, diseases and clinical presentation, pathogenesis, modes of transmission, laboratory diagnosis, prevention and controls.

Code & No: CLS 474	
Course: Cytopathology	
Credits: 2(1+1)	
Pre-requisite: CLS 243	
Co-requisite:	

This course will provide the student with the basic knowledge of the theory and practical aspect in the diagnosis of tumor cells and non-malignant conditions. This can be achieved by microscopic examination of smears prepared from exfoliated cells or fine-needle aspirated material. The course will enable the student to identify through the microscope the normal and malignant cells by which malignant tumors can be diagnosed. The students will also be trained to perform the different technical methods applied in cytology preparation and self-precautions.

Code & No: CLS 483
Course: Medical Genetics
Credits: 3 (2+1)
Pre-requisite: CLS 476
Co-requisite:

This course deals with the study of structure and function of the cells, control of protein synthesis in prokaryotic and eukaryotic cells. It also covers types of mutation, genetic engineering and it applications in clinical diagnosis and genetic abnormalities.

Code & No: CLS 475
Course: Clinical Enzymology
Credits: 2 (1+1)
Pre-requisite: CLS 353
Co- requisite:
This course is designed to enable the student to become constituted with basis and clinical. Improved do

This course is designed to enable the student to become acquainted with basic and clinical knowledge of enzymes, study the theoretical and practical aspects of chemical structures and actions of various enzymes, their assay methods, and clinical applications in the diagnosis of diseases related to disorders of various organs in humans.

Code & No: CLS 481	
Course: Environmental Microbiology	
Credits: 2(1+1)	
Pre-requisite: CLS 261	
Co-requisite:	

This course is designed to provide students with an understanding of vital activities that microorganisms perform in nature, and in the broader dimension of organic activities in the total ecosystem. Students would develop an appreciation in the useful and harmful roles of microorganisms in the food and dairy industries. They will also learn to appreciate the use of microorganisms, microbial quality controls in industrial processes and in the treatment of waste materials.

Code & No: HLT 281 Course: Computer Applications for Health and Science Credits: 2 (0+2) Pre-requisite: Co-requisite:

This course focuses in the importance of utilization of computer in health care, education, research, practice, and administration with specific emphasis on medical laboratory applications. The course place emphasis on the clinical information system, the internet, word processing, and data bases.

Code & No: CLS 486	
Course: Department Seminar	
Credits: 2(1+1)	
Pre-requisite: - CLS 361	
Co-requisite:	

This course is designed to provide students with an understanding of vital activities that microorganisms perform in nature, and in the broader dimension of organic activities in the total ecosystem. Students would develop an appreciation in the useful and harmful roles of microorganisms in the food and dairy industries. They will also learn to appreciate the use of microorganisms, microbial quality controls in industrial processes and in the treatment of waste materials.

Code & No: CLS 484
Course: Hematology practice
Credits: 2(1+1)
Pre-requisite: CLS 475 CLS 352 + CLS473
Co-requisite:

Clinical Practice Hematology intends to orient students of the working system of routine Hematology laboratory and Blood Bank. Students are expected to perform routine laboratory work starting from specimen collection until results are sent to the clinicians. Emphasis will be given to interpretation of results and identification and quick reporting of grossly abnormal life-threatening results to clinicians. In the Blood Bank section, students are encouraged to participate in processing of blood products (packed cells, platelet concentrate, fresh frozen plasma, cryoprecipitate, etc.)

			Cod	le & 1	No: (CLS 4	82					
	Co	ourse: (Clini	ical P	arac	tice M	licrobi	iology	•			
			C	Credi	ts: 3	(1+2)						
			Pre-r	requi	isite:	CLS 4	471					
				Co-r	equis	site:						

This course is designed to train the students, under close supervision, in routine and special techniques performed in a clinical microbiological laboratory at a university hospital or specialist hospital. The completion of this course should provide the students the knowledge of laboratory skills to include overall

organization, safety precautions, handling and processing of specimens, data analysis, quality control, and to be familiar with conventional and rapid diagnosis of microbial pathogens using manual and automated equipment in a hospital set up.

Code & No: HLT 261
Course: Epidemiology
Credits: 3(2+1)
Pre-requisite: None
Co-requisite:

This course introduces the basic concepts of epidemiology and biostatistics as applied to public health problems. Emphasis is placed on the principles and methods of epidemiologic investigation, appropriate summaries and displays of data, and the use of classical statistical approaches to describe the health of populations.

Code & No: CLS 485	
Course: Laboratory Management	
Credits: 2 (2+0)	
Pre-requisite: -	
Co-requisite: -	

Laboratory Management deals with the study of basic concepts of management, planning, organizing, leading, staffing, controlling as applied to a clinical laboratory set-up Organization of laboratory facilities; fiscal and personnel management; specimen's collection, transport and storage; specimen's analyses and data collection; quality assurance/quality control program; policy and procedure manuals, infection controls; and laboratory safety.

University rules and regulations

Article 1: General regulations:

- 1- All students must comply with the provisions of the Student Handbook and the student shouldbe familiar with its contents. Ignorance of any provision regarding the Student Handbook does not excuse any student from being penalized for non-compliance.
- 2. The student's registration in the College of Applied Medical Sciences in Alquwayiyah Shaqra University is an expression of the student's desire to abide by all the rules and regulations prevailing in the college, and therefore he is committed to respecting these rules.
- 3. An original identification card is issued to the student upon registration, containing numbers registered by the computer. This card must always be in the student's possession to be presented upon request. The card is valid as long as the student is registered in the college.
- 4. The college is aware of the harms of smoking, so it declares that the college buildings are anarea where

smoking is prohibited.

- 5. The student should be polite and kind towards everyone within the college premises.
- 6. The college encourages students to take advantage of the capabilities of the college library andto communicate with the heads of departments.
- 7. The student should make sure to attend the various college activities as they are an integral part of the student's life.

Article 2: Academic Regulations:

Section 1: Definition of Terms

- 1. Academic year: refers to the two semesters and the summer semester, if any.
- 2. Academic Semester: Refers to a period of approximately 15 weeks of attendance to weeklylessons by students. Student registration and final exams are not part of the regular semester.
- 3. Summer: The term summer for about 8 weeks of attendance refers to weekly lessons bystudents, excluding student registration and final exams.
- 4. Level: It refers to the level of the stage where the student is accepted on the basis of the studyplan of the program. The college caters to Levels III through VIII of the Medical Laboratory Science and CLS programs.
- 5. Study plan: refers to a set of compulsory courses with allotted credits. The student must complete the total number of credit hours in order to qualify for graduation and obtain a bachelor's degree in his specialization.
- 6. Course: Refers to the instruction transferred in a series of lessons or meetings that meet the requirements of each level as stipulated in the study plan of the program. The course has a code, number, title and description. The course outline file should be kept in the department head's office for follow-up, evaluation and improvement purposes. Some courses require a prerequisiteor participation in concurrent courses.
- 7. Credit Hour: Equivalent to a weekly theoretical lecture of approximately 50 minutes, apractical session of 120 minutes, or a clinical lesson of 50 minutes.
- 8. Academic Probation: It refers to the notification of the student whose cumulative average has decreased and reached the maximum allowed as determined by the regulation.
- 9. Semester work degree: The degree awarded for work that shows the student's achievementduring a semester of tests, research, and educational activities related to the course.
- 10. The end-of-semester test score is calculated from the final semester test score and the practical test score, if any.
- 11. Final Exam: A course test held once at the end of the semester.
- 12. Final score: It indicates the sum of the semester work scores with the final exam that the student obtained in the semester based on 100%.
- 13. Grade: A description of the percentage or alphabetical symbol of the final grade obtained bythe student in any course.

- 14. Incomplete Grade (INC): Temporarily refers to a student who fails to complete all requirements for his course on time due to some circumstances beyond his control.
- 15. Continuous assessment: It is indicated if the course cannot be completed in a semester, sothere is a need to continue the course to the next semester.
- 16. Semester GPA: It is the sum of the grade points over the total number of credit hours for all courses in the semester. The grade points are calculated by multiplying the course evaluation value by the approved.
- 17. Accumulative Average is the total of dividing the grade points by the sum of the credit hoursof all the finished and passed courses of a student since he first joined the College.
- 18. General Assessment refers to the evaluation of the level of learning of a student during hisstay with the College.
- 19. Study Load refers to the total credit hours a student can register in a semester. The maximum and minimum limit of the study load is based on the existing rules of the College.
- 20. Academic Record shows the performance of a student that includes passed courses, creditsearned, grades, semester average, accumulative average and academic warnings if any.
- 21. Academic Advisor refers to a teaching staff who is in charge to supervise, guide and monitora student during his study at the College.
- **Section 2. Admission of New Students.** The Council of Shaqra University determines the number of students to be admitted to the College for a succeeding year, in accordance to the proposal of concerned departments.
- **Section 3. Requirements for Admission.** The following requirements should be met prior to admission to the university/college:
- (1) the applicant should obtain a secondary school certificate or its equivalent inside or outsideSaudi Arabia;
- (2) the secondary school certificate should not be more than 5 years old but the council of the university may give exemptions under valid circumstances;
- (3) he/she should be of good moral character;
- (4) he/she should pass an interview conducted by the university council;
- (5) he/she should be medically fit;
- (6) he/she should obtain written permission to study from his employer if the applicant is currently working; and

- (7) he/she should comply with other requirements prescribed by the university council at the time of application.
- **Section 4. Provisions for Admission.** The University gives priority to the applicants with complete requirements, in reference to their secondary school marks and interview result. The rules regarding admission are as follows:
- (1) The deanship of admission and registration, in coordination with the College specifies the procedure of admission examination, interview, submission of admission application and announcement of accepted students:
- (2) Students dismissed from other universities should not be admitted;
- (3) Priority is given to applicants who meet the requirements stipulated in Section 3.
- (4) A successfully accepted student should be issued an ID that he can use for all official transactions in the university; and
- (5) The deanship of admission and registration keeps a record file of every student such as admission, academic record, disciplinary action if any and other pertinent documents.
- Section 5. The Study System. A student should progress to finish the study plan, which consists of 8 levels in accordance to the College policies. An academic year is divided into 2 levels and a summer if applicable. Section 6. Program Levels. A degree program has 8 levels based on its study plan. A student should enroll in each level that offers courses with corresponding credits. Requirements should be fully completed in order for a student to get a passing mark and be promoted to the next level. Section 7. Registration, Dropping and Adding of Courses.

The University Council sets the rules of registration, dropping and adding of courses based on the study plan of a degree program with a purpose of regulating the minimum or maximum courses load of a student. The rules regarding

registration, dropping and adding of courses are as follows:

- (1) The deanship of admission and registration specifies the dates of registration, dropping and adding of courses;
- (2) Provisions of registration for the 1st and 2nd semesters include:
- The early registration starts from the 10th week of every semester for the incoming newsemester;
- The confirmation of registration is during the week preceding the semester;

- A student may cancel his registration within the 3 days of the 1st week of the semester and hecan request for postponing his study after 2 weeks of the semester; and
- A student has a privilege of dropping or adding courses within the period of early registrationand confirmation with the guidance of an academic advisor (head department) based on the provisions of the study plan
- (3) provisions of registration for the summer include:
- The academic council of the College specifies the courses to be offered during the summer 5weeks before the end of the 2nd semester;
- A student is permitted only to register a maximum of 3 courses with at least 10 credit hours; and
- Dropping of courses in the summer should be done within the first 3 weeks of the term upon the approval of the College.

Section 8. Attendance:

- 1. Prompt and regular attendance in all classes is encouraged for all students throughout the semester.
- 2. The teaching staff should be expected to begin their classes promptly. However, unavoidable circumstances may cause them to be late for class. In such cases, the following guidelines are to be observed:
- For 50-minute classes, students should not leave until 15 minutes, for 100-minute classes, students should wait for 30 minutes. A teaching staff may consider his students absent if they leave their classes earlier than the prescribed time.
- 3. A student who is absent is held responsible for all assignments and for the entire content of the course missed, regardless of the reason for the absence. The student is encouraged to consult with the teaching staff regarding his current academic status.
- 4. A student is considered absent from class if he is not present within the first third fraction of the scheduled class time period. However, such grace period should not exceed 30 minutes. Thus, a student is considered absent if he arrives after 15 minutes for a 50-minute class; or 30 minutes for a 100-minute class (lecture or practical).
- 5. It is the student's responsibility to keep a record of his absence; however, he may verify such from the teaching staff concerned.
- 6. The teaching staff should enter the absence of a student to the university system on a weekly basis. A student who accumulates 25% total absence is considered dropped from the course. A

student with valid reason for his absence is excused but he is considered dropped if he accumulates 30% total absence in a semester.

- 7. Regulations regarding excused absences are as follows:
- An excused absence is one authorized by the head of the department or his authorized representative because a student has to attend an official function or activity.
- Absences due to sickness of not more than 2 weeks are considered excused absences and should therefore not be counted against the student's attendance if it is certified by a medical doctor. In case of absences due to prolonged illness, a student or his duly authorized representative should notify as soon as possible the department head who shall recommend the appropriate action to be taken.
- Students with excused absences should not be put to a disadvantage. The teaching staff shouldgive special makeup activities, other requirements or special considerations, the manner and form determined by the teaching staff following pertinent college policies.
- 8. A student is not allowed to take the final examination if he has incurred 25% absence in a semester;
- 9. A student who is barred to take the final examination due to absences is considered "failed";
- 10. The Academic Council or his duly authorized representative may allow a student to take the final examination in special cases with valid reasons, provided that the student has not exceeded 30% absence in a semester;
- 11. A student who is absent during the final examination schedule automatically gets zero mark unless there are valid reasons to excuse his absence and be given a special examination later, upon the discretion of the Department head;
- 12. A student may withdraw a course or more courses for a semester if he has a valid reason expressed through a letter to the Department head for discussion with the academic council; and
- 13. If the academic council approves the withdrawal of a student, he is given a grade (W). **Section 9. Postponement of Study**. A student is entitled to apply for postponing his studywithin the 1st week of the semester due to valid reasons. Upon approval, the Dean of the Collegemay grant a postponement period for not more than 2 consecutive semesters or 3 cumulativesemesters throughout his stay at the University

Section 10. Suspension of Study. If a student discontinues his study in a semester without applying for postponement, his registration with the College will be deemed suspended. A

visiting student to another university is not considered discontinued from the semester while hisstudies are ongoing.

Section 11. Re-Registration. A suspended student may apply for re-registration using the sameID number, in accordance to the following rules:

- (1) Submission of re-registration request within 4 semesters from the date of suspension
- (2) Approval of the re-registration request by the Academic Council or its authorized representative
- (3) If the 4-semester period lapses, the applicant can register as a new student provided that hefulfills the admission requirements stated in Section 3
- (4) The re-registration should not be availed more than once
- (5) The student applying for re-registration should not have been dismissed based on academic violations; and
- (6) Grounds for approving the re-registration request by the Academic Council include:
- ■The suspension period does not exceed the specified period for the regular study;
- The reason for suspension should be valid
- The student should pass 50% his credits earned; and
- His accumulated average should not be less than 2.5 out of 5.0.

Section 12. Graduation. A student is eligible for graduation after successfully satisfying all the requirements provided by the study plan of the program. The rules regarding graduation are as follows:

- (1) A graduate will be granted a certificate that bears the student's complete name, university number, civil record number, place and date of birth, name of the College, official seal of the University, degree earned, specialization, general weighted average (GWA) of his grades and the date of issuing the approval of granting the degree to the student by the University Council
- (2) The certificate should be signed by the Dean or his authorized representative; and
- (3) Issuance of a replacement for a missing graduation certificate is governed by the followingrules:
- The graduate should apply to the deanship of admission and registration for a certificate replacement; and
- A seal bearing these terms "a replacement of missing" should be affixed on every issued certificate replacement.

(4) If a student fulfills the requirements for graduation but obtains an accumulative average of less than 2.0, he should register some courses upon the recommendation of the department council and approval of the academic council or its authorized representative in order to increase his average for obtaining the degree based on the study plan.

Section 13. Dismissal from the University. A student can be dismissed from the university due to the following situations:

- (1) If a student is given 3 or more warnings due to his low accumulative average (2.0 out of 5.0);
- (2) If a student failed to fulfill his graduation requirements within the specified duration of study; and
- (3) If a student violates the rules and regulations of the College and found guilty after an investigation by a committee.

Section 14. Examinations. The College may establish a committee to facilitate the preparation of final examination by the teaching staff. The main function of the committee is to review the marks obtained by each student within a period not exceeding 3 days from the date of the examination in any course. The following rules should be observed:

Preparation of Examination Questions:

- Confidentiality should be applied to all aspects of the final examination procedures.
- It is necessary to report any problems encountered by any member of the teaching staff whether while preparing the questions or during or after the conduct of the examination.
- ■When the same subject is taught by more than one teaching staff, the examination should be departmentalized. The examination should be formulated by one of the competent teaching staff handling the course, duly nominated and chosen by the other teachers.
- Questions should be based on deductive reasoning rather than merely memorizing questions. Items should stimulate critical thinking.
- Examination questions for all the courses should cover the whole syllabus. Each member of the teaching staff is required to explain it in a report he submits to the head of the department.
- Copies of examination papers and answer key document should be placed inside sealed envelopes for submission to the control for safe keeping.
- Teaching staffs are assigned as invigilators, with the task of supervising students when taking the final examinations. With the presence of the course teacher, the invigilators receive the sealed examination papers from the person-in-charge thirty (30) minutes before the conduct of the examination

Checking Examination Papers

- All examination papers should be checked inside the premises of the College only. It is strictly forbidden to take any examination paper outside the College to avoid paper loss or other potential problems.
- Where a course is taught by more than two (2) teachers, a committee should be formulated to check the papers where each member will check one question and recheck the previous questionbefore endorsing the paper to the next member until all questions are checked. Such checking should be based on an answer key paper. After checking the papers, they should be returned to the control for future need twenty-four (24) hours after the examination schedule.

Entering the Marks into the System

- Marks should be entered into the system on a certain day to be specified by the head of thedepartment.
- Marks should be entered into the system by two members of teaching staff to avoid anymistakes. This includes midterm grades in addition to final ones.
- After the marks are entered into the system, take a printout and provide a copy to the head of the department and keep another copy for personal record

Regulations for Students

- The student should not be given more than 2 examinations in a day.
- No student should be allowed into the final examination hall after half an hour from its beginning. Likewise, no student should be allowed to leave the exam hall before an hour from its beginning.
- Cheating in examinations or violating relevant regulations and procedures will be punished accordingly to the student disciplinary regulations issued by the university
- All mobile phones should be switched off and placed in an area specified by the invigilators.
- A student may submit a letter to request to the Dean of the College or his authorized representative for the re-correction of his examination paper within a period not exceeding the start of the next semester. The Dean may create a committee to do the re-correction. The committee should submit its findings to the Dean for discussion with the Academic Council. The Academic Council is final and executor.

Section 15. Grading System. The College adopts the following grading system:

An Example of a method to calculate the Semester & Cumulative Average: First Semester:

Code &	No. of	Mark	Letter	Value of	No. of	
No.	Units		Equivalent	Grade	Points	
Islamic	2	05	D.	15	0	
103	2	85	B+	4.5	9	
CLS 351	3	70	C	3	9	
CLS 352	4	80	В	4	16	
CLS 354	3	92	A	4.75	14.25	
	12				48.25	

First Semester Average = $\underline{\text{Sum of Points } (48.25)} = 4.02$ Sum of Units (12

Second Semester:

Code & No.	No. of Units	Mark	Letter Equivalent	Value of Grade	No. of Points
STAT 106	2	96	A+	5	10
HLT 261	3	83	В	4	12
CLS 361	3	81	В	4	12
CLS 362	4	71	C	3	12
	12				46

Second Semester Average = Sum of Points (46) = 3.83

Sum of Units (12)

Student's Cumulative Average =
$$\underline{\text{Sum of Points } (48.25+46)} = \underline{94.25} = \underline{3.93}$$

Sum of Units (12+12) 24

Section 16. Honors and Awards. The first honor award is granted to a student who obtains an accumulative average of 4.75 - 5.00 upon graduation. The second honor award is given to a student who gains an accumulative average of 4.25 - 4.74 upon graduation.

To attain the first or second honor awards, the following should be met:

- (1) The student should have no failed courses
- (2) The student should have satisfied all the graduation requirements within the prescribed period by the College; and
- (3) The student should have at least 60% residency of study at the University.

Section 17. Transfer from a University to Shaqra University.

A student who aspires to transfer to Shaqra University should meet the following requirements:

- (1) The student should have studied in a recognized university
- (2) The student should not have been dismissed from a university due to disciplinary oracademic reasons

- (3) The student should satisfy the admission requirements of Shaqra University; and
- (4) Upon admission, the College should review the academic record of the student and compareit to the existing study plan. Similar courses obtained from his previous university may be credited based on the course description.

Section 18: Transferring from one program to another within the college

After the approval of the head department and the approval of the dean of the college the studentmay transfer from one major to another within the college according to the specific period approved by the Deanship of Admission and Registration and in accordance with the following conditions:

- 1. Satisfying the conditions for joining the specialization to which you want to transfer.
- 2. Availability of vacant seats in the specialization to be transferred to, according to the department's absorptive capacity.
- 3. He must have spent at least one semester in the specialization he wishes to transfer from, provided that the number of academic units registered in his academic record shall not be lessthan (14) units.
- 4. He should not have dropped out, postponed or apologized for studying from the specializationhe wishes to transfer from.
- 5. To submit the transfer request starting from the tenth week of the start of the study until the fifteenth week of the semester preceding the semester in which he wishes to transfer.
- 6. Transfer between majors is allowed only once during the duration of the university study.
- 7. Any other conditions determined by the College Council and the Deanship of Admission and Registration.

All students within the college are required to comply with the disciplinary regulations of Shaqra University.

Section 1: A breach of the existing rules and regulations of the College is regarded as disciplinary offense such as follows:

(1) Actions against the university system and facilities

- (2) Inciting or masterminding non-attendance to scheduled classes, clinical sessions, tutorials, workshops and other activities commissioned by the College
- (3) Any offending words and actions that affect the honor and dignity of the College and itspersonnel
- (4) Cheating in the quiz and examinations or attempting to cheat
- (5) Breach of the examination regulations
- (6) Organizing assemblies inside the College
- (7) Destroying facilities or equipment of the College; and
- (8) Deliberate abuse of the College facilities and other accessories like residential accommodation units .

Section 2. The penalties for the offenses stipulated in Section 1 are the following: (1) Warning

- (2) Written reprimand
- (3) Depriving the student to enjoy some of the benefits of the university
- (4) Forfeiting results of examinations and giving a failing grade
- (5) Disallowing a student to take the final examination
- (6) Suspension
- (7) Dismissal from the college; and
- (8) Expulsion from the university.

Section 3: Sanctions Committee

The college dean has the right to form a committee to hold a student accountable for any violation. The sanctions committee investigates the violating student and submits the investigation result to the college dean to take the necessary disciplinary measures.

Practical training guidelines and rules

The student must know that his appearance and behavior are the appearance and address of the college in particular and the university in general

Therefore, every student must abide by all regulations and guidelines for practical training, whether inside the college, in laboratories CLS skills or outside at hospital or health carecenter.

Firstly: Uniforms for students in the college and health facilities:

Medical uniform is a uniform worn by members of the medical team and health practitioners responsible for patient care. Its use has extended outside the hospital setting in work environments and health colleges in universities and higher education institutions and its wearingbrings many benefits in addition to facilitating the distinction of students in different departments.

Instructions of unified uniform:

- The uniform must be short-sleeved, with a V-neckline, made of cotton / polyester.
- The outfit must be comfortable, and allow free movement of the body without beingtight or tight in a striking way.
- The shirts that are worn under the uniform can be white, black, or the same color as the uniform. The uniform should be worn as a complete set of pants and shirt.
- The uniform must be clean and well tidy and not torn or look dirty andunprofessional. Also, regular washing is required.
- Underwear (shirts/sleeves and underwear) are not visible.
- Shoes must be closed, clean, in good condition, provide adequate safety and fit theneeds of the
 department. Socks must be worn at all times and slippers are not permitted.
- Outer jackets, or what is known as the jacket, must be in proportion to the colors of theoutfit, and the closed jacket is not allowed.
- Students should keep their uniforms clean. Fingernails should be trimmed, makeup, nailpolish, and jewelry are not allow.
- Behavior: Students must comply with all practical training guidelines and regulations, whether in the hospital or health care center.
- Healthy in addition to the college's instructions in practical training and observance of appropriate behaviors from the rate of sound.
- Students must know that any violation of the instructions exposes them to punishmentand deprivation of training practical.

Secondly: Instructions during training in the CLS skills lab:

- All educational goals to be achieved from training in the skills lab according to the course description
- The student is responsible and must attend practical training without absence or delay.
- The student must abide by the dates of practical training in the skills lab without delay.
- A student is not allowed to bring food or drinks into the skills lab. A bottle of mineralwater is sufficient
- The student must keep the tools safe and clean after training on them and return the tools in their place before leaving the lab.
- The student must maintain a clean and tidy laboratory environment.
- The student must abide by all the rules and guidelines for training in the skills lab, whether before, during or after training.

Thirdly: Instructions during training in a hospital or primary care center:

- It is not permissible for the student to bring food or drinks inside the departments or withthe patient, and a bottle of mineral water is sufficient.
- A student may not practice CLS skills without a training supervisor or a CLS from the department.
- The student must follow the international precautions for security and safety duringtraining in order to
 maintain the health and security of the patient, especially when dealing with blood and fluids leaving the
 patient's body.
- The student must abide by the appointments and the uniform prescribed for training in the hospital, and the student may not enter the hospital or departments without it.
- The student must follow the directions and instructions of the training supervisor.
- The student must submit practical papers or topics and case studies that are requested from the student to the training supervisor on time.
- The student may not leave the hospital during the practical training except with an acceptable excuse from the training supervisor and the head of the academic department of the college.
- The student must maintain the privacy and dignity of the patient and follow behaviors that take into account the patient's psychological and physical condition.
- The ethics and ethics of the CLS profession must be adhered to while communicating with the patient, his family, the CLS staff in the hospital, and colleagues in training, whether from within the college or another college.

College Working Committees & Units

(1) Quality Development Unit:

Goals:

Supervising the activities and works of quality and academic accreditation at the departmentlevel.

Tasks of the Committee:

- Drawing up general policies for development and quality at the department and collegelevels.
- Spreading the culture of quality in the department and supporting related activities.
- Supervising the evaluation and academic accreditation activities in the department.
- Follow up the level of discipline and quality in the department.
- Work on continuous quality improvement in the department.
- Nomination of distinguished employees of the department for various awards of excellence.

(2) Training and Laboratories Unit:

Goal:

To take care of everything related to scientific laboratories and follow up everything related to field training in the department.

Tasks of the Committee:

- Supervising the laboratories in the department in terms of equipment and infrastructure.
- Make a periodic inventory of the laboratories and identify the shortcomings of consumables, devices and tools.
- Periodically reporting to department heads about the status of devices that needmaintenance and preparing periodic reports.

- Create a database on all the devices in the laboratories and make a code for each deviceand all the consumables.
- Suggesting development plans for the department's laboratories.
- Perform other tasks assigned to the committee. π Inventory of all male and femalestudents applying for training in the year of excellence.
- Coordination with hospitals and medical centers all over the Kingdom for training.
- Visiting hospitals in Alquwayiyah Governorate to follow up on the progress and performanceof students.
- Gathering opinions from training bodies and delivering them to department heads in order to develop the program periodically to ensure its effectiveness and improve its performance.
- Issuing certificates of completion of the concession year after completing the training period.
- Preparing a periodic report on the work accomplished

(3) Scientific Research Unit:

Goal:

Paying attention to everything related to the affairs of graduate studies and scientific research within the department, such as reviewing study plans for graduate programs and conducting admission tests for applicants for graduate studies, while setting standards for scientific researchin accordance with a clear methodology and plan, and other related matters.

Tasks of the Committee:

- Presenting proposed research topics that are related to reality and the environment for thepurpose of applying them through various research support programs.
- Develop an ambitious plan for scientific research and study the research problems that require study.
- Providing guidance to Saudi teaching assistants and lecturers applying for postgraduateprograms at home and abroad.
- Providing consultations in various research fields.
- Studying the proposals for master's and doctoral theses and submitting them to the scientific councils of the college.
- Preparing a periodic report on the work accomplished.

(4) Study plans unit:

Goal:

Follow up and prepare study plans and programs in the college departments and review them toensure that they meet the necessary conditions.

Tasks of the Committee:

- Supervising the preparation of study plans and programs in the college departments andreviewing them to ensure that they meet the necessary conditions.
- Supervising the development of academic plans and programs at the college, and determining their compatibility with the standards of the Saudi Authority for QualityAssurance and Accreditation and the requirements of the labor market.
- Preparing reports on study plans and programs in the college departments and submittingthem to the Dean of the College for approval by the College Council.
- Coordination with the college departments and the university's curriculum unit to approveplans.
- Preparing a periodic report on the work accomplished.

(5) Community service unitVision:

Excellence and leadership in the field of community service and development in Alquwayiyah Governorate through the various programs that we offer targeting different segments of society.

Mission:

Providing innovative practices in the field of assistance in achieving comprehensive sustainable development through:

- The quality of the scientific material provided and the experience of the trainer.
- Providing scientific material in modern training methods and methods.

Providing an adequate amount of information and skills related to the submitted scientific article.

Goals:

- Deepening the concept of partnership between the College of Applied Medical Sciences and thelocal community.
- Designing development programs such as lectures, workshops, seminars and awareness campaigns to support and develop a healthy culture for members of the local community.
- Conducting studies, applied research and health databases.

(6) Student Activities Unit:

Vision:

Advance the college through its distinction in the various student activities, in order to achieve aleading position among the colleges of the university, as well as other universities.

Mission:

Developing students' skills through engaging in various student activities, instilling in themconcepts and moral values that help them practice their work in practice.

Goals:

Contribute to the integrated preparation of students culturally, socially and scientifically anddeepen some of their social values

Unit tasks:

- Supervising various student activities.
- Planning for central activities and following up their implementation at the college level.
- Issuing bylaws, regulations and general plans for the activity.
- Monitoring and evaluating student activities programs in the faculties.
- Proposing a budget for student activities, and distributing its items.

(7) Alumni Affairs Unit:

The unit seeks continuous communication with the graduates and the community with the aim of continuity of development and raising the level of quality by following up on the college graduates to develop and improve study programs to comply with the requirements of the local, regional and global labor markets.

It aims to open channels of communication between the college and its graduates for purposefuland constructive cooperation to serve the college and the community with the aim of continuous development in the college's educational process to match the requirements of the labor market.

Goal:

Follow up on everything related to alumni and alumni and communicate with them.

Unit tasks:

- ❖ Inform and motivate graduates to participate in courses, seminars and workshops.
- Opening channels of communication between the college and the surrounding healthauthorities to know their needs for graduates.
- ❖ Informing graduates of the needs of health authorities and the local community for jobsappropriate to their specializations.
- ❖ Inviting graduates to college events and continuous development programs.
- Create a database of college graduates.

- ❖ Providing a platform for graduates through the unit to raise their issues, concerns and aspirations and to work collectively to overcome the difficulties they face, especially in relation to the university's mission or mission.
- * Keeping the graduate in constant contact with the academic and scientific climate to exchange opinions and update his scientific information by following up on the latestscientific developments.
- Preparing a periodic report on the work accomplished.

(8) Statistics and Information UnitGoal:

This unit is concerned with collecting, categorizing and maintaining documents and information, both paper and electronic, and submitting them to all college units and other relevant authorities.

Unit tasks:

- ❖ Make periodic reports and statistics for basic information about the department in each semester
- Compiling and preparing the annual statistical report.
- Collecting the necessary data, classifying it and putting it into versions.
- Modify, review and correct data.
- Publishing information and statistics about the college in publications or websites
- ❖ Informatics support inside and outside the university.
- Create statistical databases by designing tables of statistical data and establishing relationships between them.
- Supporting the exchange of statistical publications and scientific research publications with parties inside and outside the university.
- Providing studies and consultations that meet decision support needs and developing databases to support performance management.

(8) Academic advising unitTarget:

Supervising student affairs, including guidance, counseling, and student complaints, in addition to various activities.

Mission:

- Guiding students in departments with regard to study materials and the necessary skills, following up on stumbling students and guiding them academically and psychologically.
- * Receiving student complaints regarding the course or faculty members.
- ❖ Studying students' problems and proposing solutions to them.

- ❖ Discussing academic obstacles between academic advisors and students to find appropriate solutions.
- Preparing a periodic report on the work accomplished.

The Working Committees of the Department

Student Dialogue Committee:

Target:

Supporting the rights of students on the basis of compatibility with the applicable laws and regulations at the university, developing a culture of justice and fairness among students, providing them with the necessary consultations, informing them of their university rights, and obtaining them through regular channels.

mission

- Supporting the rights of students on the basis of compliance with the applicable laws and regulations.
- Develop a culture of justice and fairness among students.
- Studying cases of breach of public order, rules and laws in force at the university, ordeviation from academic norms or Islamic morals.
- Creating a spirit of belonging, dialogue and understanding between the college and its students in presenting problems and proposals, thus improving the academic and service process in the department and college.
- ❖ Participation with the college administration to solve students' problems and decision-making.
- ❖ Deepening the students' relationship with the college by motivating them to participate in the college's various activities.
- ❖ Development of personal leadership skills among students.
- Preparing a periodic report on the work that has been accomplished.

Student Disciplinary Committee:

Target:

Study cases of breach of public order, rules and laws in the college, or deviation from academic norms or Islamic morals. In the event that such cases are proven to one of the students, the committee takes the appropriate decision and submits it to the college council in preparation for submitting it to the competent authorities to take the necessary action in accordance with the regulations governing this. Violations committed by students outside the college and do not affect the college and its various regulations are excluded from the application of penalties.

Tasks of the Committee:

- * Controlling the behavior of students and the like inside the college or in any of itsfacilities.
- * Refining the behavior of violating students and treating them using the educational methods available in the college.
- ❖ Inviting the parties to the case or the heads of departments to hear their statements.
- ❖ Approving disciplinary penalties for violating students according to the rules and regulations in force in the college.
- Submitting its decisions to the Dean of the College for submission to the competent authority.
- Preparing a periodic report on the work accomplished.

Information Technology Committee: Target:

Supervising the workflow of the college laboratories and e-learning halls, implementing theapproved policies and programs for the fields of information technology and educational assistance services, and achieving the objectives set for them.

Tasks of the Committee:

- Supervising the content, development and updating of the college's website.
- Supervising the computer labs and providing them with the necessary programs.
- Supervising and maintaining meeting rooms and e-learning rooms.
- ❖ Providing technical support to the college and its employees in accordance with the relevant supporting deanship policies.
- Follow-up the work of information technology and computer management in the college.
- ❖ Follows up on the maintenance of computers in the college and provides support andtechnical assistance to the employees of the college, direct transport units, and smarthalls.
- * Recommending the request for software, hardware and accessories needed for eachlaboratory in proportion to the quality of the subjects being taught.
- ❖ Coordination with the competent authorities regarding technical support, networkperformance, internet connection, and the website.
- Preparing a periodic report on the work accomplished

Academic Schedules and Exams Committee: Target

Follow up on all new matters related to the academic schedule and distribute it to the members of the department, and provide relevant information to the department and its membersin a way that serves the department and contributes to the completion of its affairs.

Tasks of the Committee:

- Studying the number of sections expected for courses with the Deanship of Admissionand Registration.
- ❖ Communication with department members and follow-up office and academic advisinghours.
- Coordination with faculty members in the department to find out the distribution of grades for the year's work.
- Forming the department and college control and follow up the examination work.
- ❖ Coordination with the faculty members of the department to find out if the course each ofthem teaches needs an answer book.
- Ensure the readiness of the classrooms in terms of chairs, lighting and air conditioning.
- Ensure the attendance of the course teacher and invigilators on time, which is a quarter of an hour before the start of the exam.
- Preparing student forms (cheating absence) in coordination with the college's monitoring committees.
- Distribution of groups of students to the examination halls.
- Preparing a periodic report on the work accomplished.

Faculty Members - Male Section

No	Name	Academic degree	e-mail
1	Dr. Ziyad Althafar	Assistance professor	zaldosari@su.edu.sa
2	Dr. Mohammad Hakami	Assistance professor	m.hakami@su.edu.sa
3	Dr. Sultan Alnomasy	Assistance professor	s.alnomasy@su.edu.sa
4	Dr. Bader Alotaibi	Assistance professor	balotaibi@su.edu.sa
5	Dr. Moghram Alomari	Assistance professor	malamri@su.edu.sa
6	Dr. Ahmad Zamami	Assistance professor	aalzamami@su.edu.sa
7	Dr. Mohammad Raghibul Hasan	Assistance professor	malhasn@su.edu.sa
8	Dr. Khatir Baltoon	Lecturer	kbalatone@su.edu.sa
9	Dr. Basheer Omar Adham	Lecturer	bomar@su.edu.sa
10	Dr. Farhan Khan	Lecturer	Riyazuddin@su.edu.sa
11	Dr. Maher Salim Alweziani	Lecturer	malwethaynani@su.edu.sa
12	Dr. Mubarak Almutari	Lecturer	m.almutairi@su.edu.sa

Faculty Members - Female Section

No	Name	Academic degree	e-mail
1	Dr. Samia Saad Alkhalil	Assistance professor	salkhalil@su.edu.sa
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3	Dr. Haiam Mohammed Farrag.	Assistance professor	hayammahmoud@su.edu.sa
4	Dr. Marwa Kamal Darwish	Assistance professor	marwakamal@su.edu.sa
	DR. Ahlam Saleh Alamri	Assistance professor	ahlam@su.edu.sa
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9	Dr. Hamda ainzan Aseadi	Lecturer	halsaeedi@su.edu.sa
10	Dr. Nabila Gaffer Al maliki	Lecturer	na_almalki@su.edu.sa

Electronic Services

Official Email:

Each faculty member is provided with an official email address at su.edu.sa platform which can be accessed by login through Gmail. This official email address should be used for official communication inside and outside Shaqra university.

E-Services

(https://www.su.edu.sa/ar/e-services) is a service that allows faculty members for official communication within the department and also with the management of the university.

E-learning system services

E-learning system services is an online system, which both faculty members and students can access. On their blackboard page, faculty members can uploadinformation about their courses (e.g. syllabus, slides, handouts...etc), create a discussion forum for students, and post assignments and quizzes.

Website: https://www.su.edu.sa/en/e-services/e-learning-system-services

Electronic Library

Visit http://library.ksu.edu.sa to access the catalog and databases of KSU'slibrary.

This document was approved by clinical laboratory sciences department council No (3) on 7/4/1445

And the summary of the following council was attached <u>here</u>