2 Theory + 1 Practical = 3 credits	**Nutritional Biochemistry (1)**	**CLN 212**
المتطلب السابق: **Chemistry for Health programs** **HFSC 101–1**	This course deals with the structure, chemical properties and biological functions of nutrients. This includes carbohydrates, protein, lipids and enzymes as well as the mechanism of action of biomolecules. Analysis of blood pH, glucose, total protein, blood lipid profile and the activity of some enzymes will be carried out during the practical part of this course • To describe the structure, chemical properties and biological functions of nutrients including carbohydrates, protein, lipids and enzymes • To explain the importance of nutrients • To list the common diseases related to nutrients • To recognise the chemical structures and functions of biological molecules • To identify the mechanism of action of biomolecules	

3 Theory = 3 credits	Principles of Nutrition	CLN 213
المتطلب السابق: لا يوجد	This course is an introduction to nutrition, appropriate for the students enrolled in the clinical nutrition program. It presents the major concepts in nutrition including the body's use of nutrients plus all the essential information for providing the best nutrition care. The course includes a detailed study of carbohydrates, lipids, proteins, vitamins and minerals and their importance for human nutrition. The course also covers the study of energy sources and energy balance and its role in clinical nutrition. - To recognise the factors affecting food intake and the impact of cultural patterns - To compare micronutrients and macronutrients - To identify the role of water and electrolytes in human nutrition - To study macrominerals necessary for human health - To describe the role of various macronutrients in the body - To recognise the importance of protein in body building, tissue repair and maintenance - To distinguish between sources of energy in the body and its effects on human health - To understand the importance of a healthy diet in disease prevention To calculate the nutritional requirements of the human body based on its needs and level of physical activity	

3 Theory = 3 credits	Nutrition Through the Lifecycle	CLN 214
المتطلب السابق: لا يوجد	− This course provides a study of nutritional requirements based on the assessment of the nutritional status of individuals at any age from birth until old age. It addresses humans' nutritional requirements in various physiological states during their lifecycle: preconception, pregnancy and lactation, infant feeding, Pre-school, school-age, adolescents, and the elderly. − To recognise the importance of nutrition during various life stages − To describe the basic nutrients necessary for women during the pre-conception period. − To calculate basic nutritional requirements for all age groups from newborn to the elderly − To identify basic nutritional needs of women during pregnancy and lactation − To define the components of human milk and recognise their importance for growth and development − To compare the advatages and disadvatages of breast feeding and bottle feeding − To Undersatnd the factors which may affect breast feeding − To recognise the diffculties between the breast feeding of full-term, near-term and premature babies − To provide an overview of medical contraindications to breast feeding. − To list the American 2010 Health objectives	

2 Theory + 1 Practical = 3 credits	Nutritional Status Assessment	CLN 222
المتطلب السابق: لا يوجد	This course is offered to students of the clinical nutrition program of the College of Health and Rehabilitation Sciences. It covers the nutritional assessment systems and methodology including the latest technology in dietary, biochemical, anthropometric and clinical evaluation. Emphasis is placed on the design of systems, the interpretation of nutritional indices for all age groups in health and disease and the application of data in nutritional counselling and consultation. − To assess the nutritional status of a patients using data collected from medical history, family and social history, dietary history, anthropometric measurements, physical examination and biochemical tests − To recognise the importance of nutritional assessment in improving the health status of populations − To understand the advantages and limitations of different methods of nutritional status assessment − To identify and compare methods of assessing body size, dietary intake, physical activity and energy expenditure − To calculate the energy and nutrients needs of individuals using nutrient analysis software taking into consideration the nutritional status To apply anthropometric techniques (height, weight, skin fold thicknesses, circumferences), dietary intake assessment and nutrient analysis	

2 Theory + 1 Practical = 3 credits	Nutritional Biochemistry (2)	CLN 223
المتطلب السابق: **Principles of Nutrition** **CLN 213**	This course covers the basic concept of metabolism, the role of vitamins and minerals in metabolism as well as the integration of metabolism. The practical part of this course will enable students to recognise haemoglobin, albumin, creatinine, urea and bilirubin in blood samples. – To explain the basic concept of metabolism – To define the metabolism of lipids, carbohydrates and protein – To recognise the role of vitamins and minerals in metabolism To recognise the basic concept of energy and integration of metabolism	

2 Theory + 1 Practical = 3 credits	Medical Microbiology	CLN 224
المتطلب السابق: **Biology for Health programs** **HFSB 101–1** **Human Biology for Health programs** **HFSB 102–1**	This course provides an introduction to medical microbiology, microbial cell structures and different physiological processes within various microorganisms. Also, it categorises various pathogenic human bacteria, viruses and fungi. It describes the principles and pathogenesis of diseases caused by micoorganisms and the set methods to control them. This course will enable students to prepare and sterilise culture media, isolate various types of microorganisms and identify them biochemically and serologically. – To define normal flora and infective microorganisms of the human body and describe the host parasite relationship – To identify microbial cell structure, motility, uptake of nutrients, chemotaxis, gene regulation, cell division – To list various pathogenic human micro-organisms (bacteria, viruses and fungi) and describe their general characteristics, classifications, nomenclature & methods of identification – To explain the dynamics of disease transmission (source, modes of transmission and susceptible host) – To describe the principles and pathogenesis of bacterial, viral and fungal human diseases – To differentiate between types of immunity – To apply the methods of sterilisation and disinfection to prevent and control infections – To prepare and sterilise culture media, isolate various types of microorganisms and perform biochemical and serological identification of various species of microorganisms To recognise various methods to control microorganisms	

1 Theory + 1 Practical = 2 credits	Communications Skills	CLN 225
المتطلب السابق: لا يوجد	This course provides an introduction to communication concepts and the process necessary for establishing positive relationships with patients/clients, families and colleagues. This course also covers transmission skills, perception skills, various types of feedback as well as barriers that challenge effective communication with all types of patients/ clients. - To demonstrate the fundamental skills necessary for establishing relationships with patients/clients, families and colleagues - To recognise different communication modes in the workplace - To discuss and apply the principles of effective professional verbal and non-verbal communication - To demonstrate the skills involved in active listening & feedback - To recognise factors that lead to barriers in communication - To analyse the ways of preventing/ addressing communication difficulties - To establish strategies and skills necessary to ensure effective communication To explain theoretical concepts of communication	

2 Theory + 1 Clinical = 3 credits	Clinical Nutrition (1)	CLN 311
المتطلب السابق: **Principles of Nutrition** **CLN 213** **Nutrition Through the Lifecycle** **CLN 214**	The course is offered to students on the Clinical Nutrition program at the College of Health and Rehabilitation Sciences. It intends to explore the basis and implementation of diet therapy and nutritional support in the treatment and prevention of chronic diet-related conditions such as obesity, diabetes, cardiovascular, renal, liver, rheumatic, bone and gastrointestinal diseases. The practical part of the course includes hospital visits and case studies from which students can obtain and analyse the required information from patients' medical records in order to design a diet management plan. To ensure students have a thorough understanding of nutrition-related illnesses, including their definition, pathophysiology, risk factors, biomarkers, drug nutrient interaction as well as medical nutrition therapy To highlight the differences in the nutritional management of adult and paediatric patients To help students collect and analyse information from patients' notes, recording it in the SOAP and ADIME note formats To interpret the relationship between patients' eating habits and their lifestyle in the prevention of chronic diseases To focus on diet plans that are beneficial for nutrition-related disease management To help students design a dietary intervention plan that can manage and help to prevent complications of nutrition-related diseases	

3 Theory = 3 credits	Human Behaviors	CLN 312
المتطلب السابق: لا يوجد	The purpose of this course is to introduce students to the basics of human behaviours, factors affecting human behaviours, theories of motivation, human sensory receptors and principal behavioural causes of accidents. The course will also include limitations and degradation of human performance, various kinds of human error, features and functions of attitude as well as elements and functions of human behaviour. − To define human behaviours, attitude, motivation and perception − To recognise individual behaviour in dangerous situations − To recognise accident causation theories − To identify features and functions of attitude − To Ccassify factors affecting human behaviour − To illustrate theories of motivation − To interpret limitations and degradation of human performance To classify various kinds of human error	

2 Theory + 1 Practical = 3 credits	Nutritional Epidemiology	CLN 313
المتطلب السابق: **Introduction to Biostatistics** **HFSS 101–1**	The purpose of this course is to introduce students to the basic concepts of nutritional epidemiology, its goals and objectives as well as its advantages and disadvantages. The course also includes the measurement of diet in epidemiologic studies, nutritional surveillance and monitoring as well as studies used in nutritional epidemiology. The course also covers the epidemiological triad, basic measurements in epidemiology, different level of prevention and the epidemiology of some nutrition related health problems e.g. cardiovascular disease, diabetes and obesity. − To describe the epidemiologic triad in terms of agent, host and environment − To recognise indices of community health − To define the factors influencing disease prevalence − To recognise sources of epidemiological data − To compare observational and experimental epidemiological studies − To calculate different morbidity, mortality and fertility rates − To compare different levels of prevention − To list common dietary assessment methods used in nutritional epidemiology − To identify advantages and limitations of biomarkers − To recognise causality and confounding factors − To compare study designs in nutritional epidemiological studies − To compare surveillance, monitoring and surveys To measure the association between exposure and outcome	

2 Theory = 3 credits	Sport Nutrition	CLN 314
المتطلب السابق: **Nutritional Biochemistry (1)** **CLN 212**	To explain the importance of maintaining a healthy level of various vitamins and minerals and adequate hydration during training To detail the positive health related outcomes of a physically active life style To recognise the impact of the intensity, duration and frequency of physical activity on an individual's micronutrients requirements To describe the main energy sources available to the contracting skeletal muscle and the mechanisms regulating the metabolic response to exercise To consider how an optimum diet can affect exercise performance before and after training and competition To discuss the impact of physical activity on dietary protein requirements and protein turnover	

2 Theory = 2 credits	Food safety	CLN 315
المتطلب السابق: لا يوجد	This course includes the defining of different types and sources of food contaminants and the causes, types, contributing factors and prevention of foodborne diseases and food poisoning. The course also covers different types of food additives extensively used in food industries including their economic and public health impact as well as different food processing technologies from the public health point of view. − To describe various types of food additives, food contaminants and food processing technologies − To recognise factors affecting microbial growth in food − To recognise health hazards associated with food additives and contaminants To suggest measures for preventing the problem of foodborne diseases	

2 Theory + 1 Clinical = 3 credits	Nutrition Support	CLN 321
المتطلب السابق: لا يوجد	The course addresses adult and paediatric nutritional assessment and requirements, proper indications for nutrition support therapy, routes, policies and techniques for nutrition support administration. The course also covers complications associated with parenteral and enteral nutrition and their management, monitoring and evaluating response to nutrition support therapy, parenteral nutrition during pregnancy and home nutrition support. This course should help students apply theory into practice. The practical part teaches students to perform some calculations related to enteral and parenteral nutrition in addition to hospital and pharmacy visits. To discuss clinical circumstances when enteral or parenteral nutrition support is the most appropriate mode of feeding To understand how to formulate a nutrition care plan, with patient-centered and measurable nutrition goals To identify contraindications or complications in using nutritional support To complete case studies which will promote an in-depth understanding of the relationships between clinical conditions and nutrition support To assess patients' needs and determine appropriate nutritional support or medical nutritional therapy intervention To research current issues on the nutritional support for diseases and clinical conditions	

1 Theory + 2 Clinical = 3 credits	**Clinical Nutrition (2)**	**CLN 322**
المتطلب السابق: **Clinical Nutrition (1)** **CLN 311**	The course is offered to students of the Clinical Nutrition Program of the College of Health and Rehabilitation Sciences. It is designed to examine the implementation of diet therapy and nutrition support in the treatment, alleviation and prevention of acute diseases and critical illness such as burns, surgery and sepsis. It also describes the scientific basis behind using enteral and parenteral nutrition and immune-nutrients to modulate the immune response and improve clinical outcomes in surgical and critically ill patients. The practical part of the course includes hospital visits and some class-case studies to teach the student how to obtain and analyse the required information from the patients' medical records and design a diet management plan accordingly. • Describe the effect of hypermetabolic response on substrate utiliation and the body's adaptation to starvation • Introduce students to the concept of physiologic response to stress and critical illness • Highlight the role of nutrition in the management, alleviation and prevention of critical illness • Describe the hypermetabolic response of the body to critical illness • Help students to plan a nutrition therapy program using enteral or parenteral routes or both Review the guidelines of the use of immune-modulating enteral formulations in critically ill and surgical patients	

2 Theory + 1 Clinical = 3 credits	Nutrients Drugs Interaction	CLN 323
المتطلب السابق: **Nutritional Biochemistry (1)** **CLN 212** **Nutritional Biochemistry (2)** **CLN 223**	The course is offered to students of the clinical nutrition program of the College of Health and Rehabilitation Sciences. This is an interactive course studying the numerous drugs that can cause depletions through a variety of biochemical mechanisms. It is designed to provide students with the knowledge and skills for the nutritional management of drug and food interactions in disease therapy. It introduces students on how to approach drug–nutrient interactions and explains the influence of nutrition status, food, nutrients, supplementation on drug disposition, nature and effect. It also focuses on the drug–nutrient interactions in specific health conditions and the effect of age on such interactions. • To describe the classification of drug–nutrient interactions with examples of each • To provide students with the knowledge and skills for the drug and food interactions in disease therapy • To focus on the drug–nutrient interactions in specific health conditions • To explain the term drug–nutrient interaction in its broadest sense • To clarify the influence of nutrition status, food, nutrients, or supplementation on drug disposition, nature and effect • To provide students with an approach to the concept of drug–nutrient interactions • To interpret the effect of life stage / age on the drug–nutrient interactions To list possible approaches for identifying, preventing and managing drug–nutrient interactions	

3 Theory = 3 credits	Research Methods in Health Sciences	CLN 324
المتطلب السابق: **Biostatistics** **HRS 116**	The course introduces students to the principles of research methodology and how to apply them when conducting medical research. The course covers how to identify a study question and select the appropriate study approach. Sampling, data collection and management as well as reporting, presenting and publishing the research findings will be discussed. − To recognise the different methods in medical research and how to formulate research questions and objectives − To outline the research process − To recognise various types of study designs − To formulate research questions and queries − To compare qualitative and quantitative approaches to research − To distinguish various types of research population − To conduct a literature review − To set research timelines and responsibilities − To develop the appropriate research design − To estimate a sample size To publish research findings	

2 Theory + 1 Clinical = 3 credits	Family Nutrition	CLN 325
المتطلب السابق: **Principles of Nutrition** **CLN 213**	The purpose of this course is to introduce students to the topics of family nutrition, food requirements of an average family, sharing and enjoying meals as well as food labelling. The course also includes purchasing and storing food as well as personal hygiene during food handling in the home. The course covers successful parental feeding behaviours and the negative consequences of prompting children to eat and using food to reward them. − To describe the role of the parent in improving family health and nutrition − To identify the role and impact of three predominant nutritional environments: home, school and external location on a child's food choices. − To recognise the connection between nutrition and school performance − To recognise the purpose of food labelling − To discuss negative consequences of prompting children to eat and using food to reward them To discuss the benefits of keeping foods safe and clean in the home	

1 Theory + 2 Practical = 3 credits	Clinical Nutrition Practice (1)	CLN 411
المتطلب السابق: **Clinical Nutrition (1)** **CLN 311** **Nutritional Status Assessment** **CLN 322**	This course is designed to help students examine and apply the theory and knowledge of medical nutrition therapy to practice in local hospitals and outpatient clinics. This course covers diseases and conditions included in "CLN 201 Clinical Nutrition I" such as obesity, general medicine, diabetes, cardiology, orthopedics, neurology, liver and gastrointestinal diseases. This course should help students apply current theories, strategies and philosophies of counselling in ways that enable and assist patients to make healthy dietary changes. Emphasis is also placed on the practical application of evidence-based practice to medical nutritional therapy in providing ethical and optimal care for patients. To understand the metabolic and physiological changes occurring in chronic diseases and the consequent dietary modification necessary for therapeutic purposes To complete case studies, which will promote an in-depth understanding of the relationships between clinical conditions and diet modifications To explain the relationships between nutrition and illness To understand how to formulate a nutrition care plan, with patient-centered and measurable nutrition goals To research current issues on the nutritional management of chronic diseases and clinical conditions To develop critical thinking, teamwork and oral communication skills	

2 Theory = 2 credits	**Research Project (1)**	**CLN 412**
المتطلب السابق: **Research Methods in Health Sciences** **CLN 324**	The course provides students with an opportunity to acquire skills necessary to critically review a number of current journal articles in the field of Clinical Nutrition in order to select a topic relating to their area of interest. A written proposal on the selected topic is made by the students and an oral presentation and final written report are required. − To conduct an appropriate literature search based on the research questions (topic of research) using appropriate databases e.g. Medline or PubMed − To understand how to write a well constructed proposal which includes all the appopriate components on a selected topic in the field of clinical nutrition To prepare and present a final report on the proposal of the selected topic using Microsoft PowerPoint	

2 Theory + 1 Practical = 3 credits	Inherited Metabolic Disorders	CLN 413
المتطلب السابق: لا يوجد	This course deals with metabolic diseases, most of which can be described in biochemical terms. These anomalies produce symptoms, or structural abnormalities, which impair the fitness, quality of life or potentially lead to to the death of the individual. The attention is focused on the mechanism(s) thought to participate in disease development, the affected metabolic pathways and the clinical manifestations which lead to disease symptoms. The role of nutrition both in the prevention of disease development and as part of the therapeutic strategy to diminish symptoms or reverse pathology are studied in details for each metabolic disorder. Classic treatment strategies involving lifestyle modification, drugs and supplements provided as nutraceuticals or functional foods are also studied. The practical part enables students to perform some calculations using specialised nutrition formulas used for patients with metabolic disorders, as well as hospital visits. To understand the mechanism that causes the development of metabolic disorders To understand how to formulate a nutrition care plan, with patient-centered and measurable nutritional goals for patients with metabolic disorders To understand the affected metabolic pathways and the clinical manifestations which lead to disease symptoms To complete case studies which will promote an in-depth understanding of the relationships between clinical conditions and nutrition support To assess patients' needs and determine appropriate dietary intervention To research current issues on metabolic disorders and diet	

2 Theory = 2 credits	Molecular Nutrition	CLN 414
المتطلب السابق: لا يوجد	This course is offered to students of the clinical nutrition program of the College of Health and Rehabilitation Sciences. It aims to introduce key concepts of molecular nutrition and demonstrate how modern molecular biology techniques can be applied in nutrition research. The main focus of the course is to examine the relationship between diet, health and disease at molecular level (in cells and tissues) and the nutritional mechanisms involved in disease development and disease prevention. It addresses the role of dietary nutrients, toxins and non-nutrient agents in disease development. It also highlights the effect of food production, supply and preparation methods on the chemical composition and availability of nutrients and other dietary components. • To enable students to effectively summarise and critically analyse relevant information in accordance with professional guidelines • To enable students to develop an understanding and appreciation of the key components of the human diet • To teach students to identify the effects of cooking and preparation methods on food composition • To ensure that students recognise the effects of food supply, production and preparation on nutrient availability To describe the scientific principles of human nutrition and metabolism	

2 Theory + 1 Practical = 3 credits	Food Science	CLN 415
المتطلب السابق: **Food safety** **CLN 315**	The purpose of this course is to introduce students to the field of food science, including various aspects of food quality, reactions and properties of carbohydrates, protein and fat. The course also addresses sensory properties of foods. − To recognise various aspects of food quality − To compare subjective and objective evaluation of foods − To evaluate the sensory properties of foods − To recognise reactions and properties of carbohydrates, proteins and fats − To list various types of sugars and sugar syrups − To identify denaturation and coagulation of protein − To discuss the role of water in food preservation and the shelf life of food − To identify different browning colours that occur in food products	

2 Theory + 1 Clinical = 3 credits	Nutrition Education and Counseling	CLN 416
المتطلب السابق: لا يوجد	The course helps students to understand how to strengthen their relationships with patients / clients by providing a solid foundation of nutritional counselling and education principles to change food behaviour and improve nutritional status. The course promotes changes to facilitate self-management, group facilitation and counselling, which are key to successful nutrition education interventions. The course also covers planning, selecting and using instructional media, as well as counselling for behavioural modification and cognitive change. − To define nutrition education and counselling − To identify factors affecting patients in a counselling relationship − To describe nutrition counselling models and protocols − To explain the importance of behaviour change models and theories for a nutrition practitioner − To illustrate cultural competencies models applied to nutrition intervention − To establish goals and objectives for nutrition education intervention − To develop appealing and informative nutritional mass media materials To conduct an evaluation of nutrition education interventions	

1 Theory + 2 Clinical = 3 credits	**Clinical Nutrition Practice (2)**	**CLN 423**
المتطلب السابق: **Clinical Nutrition Practice (1)** **CLN 411**	This course is designed to help students examine and apply theory and knowledge of medical nutrition therapy in order to practice in local hospitals and outpatient clinics. This course covers acute diseases and conditions included in Clinical Nutrition II (CLN 322) such as burn, cancer, surgery, sepsis and other acute and critical diseases. This course should help students apply current theories, strategies and philosophies of counselling in ways that assist patients in making healthy dietary changes. Emphasis is also placed on the practical application of evidence-based practice to medical nutritional therapy in and providing ethical and optimal care for patient. To discuss the metabolic and physiological alterations in acute diseases as a basis for diet modification for therapeutic purposes To complete case studies, which will promote in-depth understanding of the relationships between clinical conditions and dietary changes To explain the relationships between nutrition and acute illness To understand how to formulate a nutrition care plan with patient-centered and measurable nutrition goals To research current issues on the nutritional management of acute diseases and clinical conditions To develop critical thinking, teamwork and oral communication skills	

2 Theory = 2 credits	Research Project (2)	CLN 424
المتطلب السابق: **Human Behaviors** **CLN 312** **Research Methods in Health Sciences** **CLN 324**	The course gives students the opportunity to acquire, develop and demonstrate research project skills in the field of Clinical Nutrition. The students devise a research plan based on the research proposals written during their study of Research Project I course (CLN 412). The students are required to statistically analyse their findings and write a final report and present it using Microsoft PowerPoint. − To use the appropriate research tools to conduct a research project on a selected topic in the field of clinical nutrition − To analyse data collected from the research project using the appropriate statistical techniques − To defend research methods and results in both final reports and Microsoft PowerPoint presentations − To make recommendations that solve the encountered Clinical Nutrition research project problems To prepare and present a final report on the research project of the selected topic using Microsoft PowerPoint	

2 Theory = 2 credits	Seminar in Nutrition	CLN 425
المتطلب السابق: لا يوجد	During this course, the students will conduct a search and will review documents from scientific journals and textbooks to select a topic and gather relevant, most update information in the field of clinical nutrition, with specific reference to the needs of Saudi patients requiring nutrition care. Also, the students will prepare and present their topics using Microsoft PowerPoint. − To enable student to search and review the scientific literature in order to select a specific topic relevant to the most update research findings in the field of clinical nutrition − To discuss various parts of the selected topic i.e. introduction, objectives, methodology, results and discussion as well as learn how to write references using specilialized software To prepare and present the selected topic using Microsoft PowerPoint	

2 Theory + 1 Clinical = 3 credits	Food services in hospitals	CLN 426
المتطلب السابق: **Food safety** **CLN 315** **Food Science** **CLN 415**	The purpose of this course is to introduce the students on how to operate and manage a successful food service operation in hospitals. This course covers management of a hospital food service department including environmental issues and waste management, food safety and sanitation in kitchens. Plus other aspects of food service management such as product selection and purchasing, receiving, storage and inventory control, food preparation, distribution and service as well as facility design and equipment selection − To identify the functional organisation of a food service department − To understand and apply guidelines of occupational safety and health administration − To describe advantages and disadvantages of using contract management companies to operate a food service versus self operation − To identify the role of an institutional food service − To recognise menu types and planning − To compare various systems for food purchasing and food distribution To discuss the benefits of professional food service organisations	

2 Theory + 1 Practical = 3 credits	Community Nutrition	CLN 427
المتطلب السابق: **Family Nutrition** **CLN 325**	This course provides students with sufficient knowledge and skills necessary to conduct effective community nutrition programs. Other topics covered include food and nutrition policies and legislation, nutrition monitoring and food assistance programs. The course also covers principles and factors affecting food choices and food security. − To define community nutrition and recognise its importance − To describe the principles of effective community nutrition programs − To distinguish between community nutrition and nutritional related diseases − To define food choices and describe their principles − To recognise the assessment of nutritional، food system and food security − To identify data collection methods commonly used in community assessments − To compare community nutrition with public health nutrition. To differentiate between the scope of practice of the community nutritionist and the public health nutritionist − To appreciate the nutritional needs of each category in the community − To develop national nutrition policies To conduct food and nutritional assessment of the community	

3 Theory + 1 practical = 4 credits	Human Anatomy and Physiology	HRS 111
المتطلب السابق: **Human Biology** **HFSB 101–1** **Biology for Health programs** **HFSB 102–1**	This course deals with the structure and function of the human body and mechanisms for maintaining homeostasis within it. It includes the study of cells, tissues, the integumentary, skeletal, muscular and nervous systems. The endocrine, cardiovascular, lymphatic, respiratory, digestive, urinary and reproductive systems, as well as the concepts of development, metabolism, fluid and electrolyte balance, and acid-base balance are included. Identification of anatomical structures on a Human Anatomy Torso model will be required in the laboratory. Moreover students are required to perform some laboratory tests related to certain organ systems. – To understand the organization of the human body and how the body works – To understand Organs' structure, location in the body, their function and how they interact with other parts of the body to maintain internal homeostasis To understand what the body is doing and how they can help the body cope with many different situations (exercise, relaxation, disease, injury, etc.)	

2 Theory + 1 practical = 3 credits	Emergency life support techniques	HRS 114
المتطلب السابق: **Human Biology** **HFSB 101–1** **Biology for Health programs** **HFSB 102–1**	The course is a 3 unit course of lectures and laboratory which develops the students knowledge on the basic concepts first aid and cardiorispiratory resuscitation. The student will also be learning how to assess emergency situations such as bleeding, fractures , wounds and shock. The student will also be learning how to prevent disease transmition, and isolation concepts. To realize the general concepts and the basis of first aid and perform CPR effectively To deal with and manage common first aid emergencies. To deal with and manage common first aid emergencies. To assess the emergency situation and categorize the patients according to the periorities and degree of illness To communicate with the operator , colleagues and patients relatives effectively based on professional ethics and control protocols	

3 Theory = 3 credits	**Society and Health**	**HRS 115**
المتطلب السابق: **لايوجد**	This course deals with various determinants of health, recent trends in population health, biological, social, political, ethical and psychological dimensions of health and illness as well as health status differences among different communities or cultures. This course also deals with the causal model of the determinants of disease, health function and well being − Recognize how the community affects health − List various determinants of health − Explain recent trends in population health − Compare biological, social, political, ethical and psychological dimensions of health and illness − Explain health status differences among different communities or cultures Illustrate causal model of the determinants of disease, health function and well being	

2 Theory + 1 practical = 3 credits	**Biostatistics**	**HRS 116**
المتطلب السابق: **Human Biology** **HFSB 101–1**	After the introductory course "Introduction to biostatistics".The goal of this course is to learn advanced techniques in data analysis for quantitative and cathegorical variables. In this course, students will perform inference about means, correlation, regression and inference about proportion, using hand calculations and computational support (SPSS) Multiple linear regression Students will learn inference about mean Inference about a proportion Comparing independent means Comparing two proportions Comparing several means –ANOVA- Cross tabulated counts Correlation Stratified 2 by 2 tables Regression Multiple linear regression	

2 Theory + 1 practical = 2 credits	**Health administration and informatics**	**HRS 117**
المتطلب السابق: لا يوجد	This course provides the students with basic knowledge and skills pertaining to the current issues in Health administration and informatics. Topics include healthcare, health organizations, management, planning, organizing, leadership, controlling and improving performance, making decisions and solving problems, management information systems as well as improving services with informatics tools − Define management, leadership, planning and health information − List various health systems prototypes − Recognize reasons, structures and processes of groups and teams − Recognize leadership theories, traits, skills and behaviors − Recognize record linkage and data protection − Differentiating management and leadership − Compare methods for making decisions − Discuss barriers to effective decision making − Assess quality of health information Coordinate jobs and positions in a healthcare organization	