Course Descriptions

ENGL 201      English Language III (N&DT, PH, PT)  3 cr.
This course offers practice in different techniques of reading, inferring meanings of new words and word formation, writing short paragraphs and developing essays; it includes short and long reading passages and exercises in comprehension. Prerequisite: ENGL 102

BIOC 201      Biochemistry I (N&DT, PH)  3 cr.
This course provides knowledge about structures and functions of carbohydrates, lipids, amino acids, proteins, enzymes and nucleic acids, and vitamins sources, in addition to functions and deficiency diseases. Prerequisite: CHEM 102

HPHY 201      Human Physiology I (N&DT, PH)  3 cr.
This course provides knowledge about cell membrane physiology and body fluids, blood, excitable tissues, cardiovascular system and nervous system. Prerequisite: BIOL 101.

BIOS 201      Biostatistics (N&DT, PH)  3 cr.
This course introduces basic concepts and principles of statistics and applications to problems relevant to students’ fields of study. Prerequisite: MATH 102

MICB 201      Microbiology (N&DT, PH)  3 cr.
This course covers developments, microbial groups, morphology, physiology, reproduction, nutrition, genetics, distribution and importance. Practical lessons cover isolations, examination and testing physiological, biochemical characteristics and antimicrobial reactions. Prerequisites: BIOL 101 and BIOL 102

ENGL 202      English Language IV (N&DT, PH)  3 cr.
This course guides to analysis of language, covers grammatical systems, develops skills of reading, writing, speaking and listening in integrative way, and reading passages related to different fields. Prerequisite: ENGL 201

PARA 202      Parasitology (PH)  3 cr.
This course provides basic knowledge of parasitic agents of local and regional human diseases and epidemiology awareness, for prevention and control at individual and community levels. Prerequisite: BIOL 101
BIOC 202  Biochemistry II (N&DT, PH)  3 cr.
This course illustrates degradation and biosynthesis of biochemical compounds within animal and human tissues, movement of metabolites and calculation of produced and consumed energy through different pathways. Prerequisite: BIOC 201

HPHY 202  Human Physiology II (N&DT, PH)  2 cr.
This course provides knowledge about endocrinology, digestive, respiratory, urinary and reproductive systems. Prerequisite: HPHY 201

NUTR 202  Introduction to Human Nutrition (N&DT, PH)  2 cr.
This course explains relationship of nutrition and human body, includes dietary sources, intake levels, biological determinants of nutrient requirements, energy balance, measurements of body composition, use of food tables, exchange lists and nutrition pyramid in diet planning and evaluation. Co-requisite: BIOC 201

HUAN 203  Functional Anatomy (N&DT)  3 cr.
This course describes fundamentals of human anatomical structure of major body systems, emphasizing form-function relationships; practical lessons involve human skeletal collections, dissection of cadavers and preserved specimens. Prerequisite: BIOL 101.

NUTR 301  Nutrition Assessment and Surveillance (N&DT)  3 cr.
This course introduces techniques and interpretations of nutrition assessment parameters for nutritional status, requirements for interventions/applications in health and disease, theories and practices of surveillance supported by examples from Sudan and the developing world. Prerequisites: NUTR 202 and BIOC 202

DIET 301  Basic Principles of Dietetics (N&DT)  2 cr.
This course presents overview of the profession, career options, developments, professional organizations, code of ethics, standards of practice, values, creativity, and an introduction to legislative processes and issues. Prerequisite: None

FOOD 301B  Food Science (PH)  2 cr.
This course explains roles of biology, chemistry and physical sciences for the study of food production, processing, preparation, microbial spoilage, deterioration, preservation, and management. Prerequisite: BIOC 201

FOOD 301  Food Science (N&DT)  3 cr.
It is the discipline in which biology, physical science, and food chemistry are used to study the nature, chemical changes, and the different preservation methods which influence the quality of the food. Prerequisites: NUTR 202 and FOOD 202

GENE 301  Genetics (N&DT)  2 cr.
This course presents principles of heredity at organism, cellular and molecular levels and discusses functions of chromosomes, genes and genetic material with emphasis on eukaryotic gene structure and expression, and some human heritable diseases as examples. Prerequisite: HPHY 202
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>RUEX 301</td>
<td>Rural Extension (N&amp;DT, PH, PT)</td>
<td>4 cr.</td>
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<td>Prerequisite: None</td>
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<tr>
<td>WOST 301</td>
<td>Women Studies (N&amp;DT, PH, PT)</td>
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<td>Prerequisite: None</td>
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<td>HEAL 301</td>
<td>Reproductive Health (PH)</td>
<td>2 cr.</td>
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<td>This course provides basic knowledge on female and male reproductive systems, reproduction, and common abnormalities and diseases, to understand social impact of reproductive health services, programs and policies. Prerequisite: HPHY 202</td>
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<tr>
<td>COMM 301</td>
<td>Community Development (PH)</td>
<td>2 cr.</td>
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<td>This course describes theories and approaches in community development and explains indicators of developed and developing countries (North and South). Prerequisite: None</td>
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<tr>
<td>POPU 301</td>
<td>Population Studies (PH)</td>
<td>2 cr.</td>
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<td>This course introduces population studies, demography, population dynamics, growth, fertility, mortality, migration, economic development and related topics of urbanization and international migrations. Prerequisite: None</td>
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<td>HEAL 303</td>
<td>Fundamentals of Public Health (PH)</td>
<td>2 cr.</td>
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<td>This course introduces key terms and concepts of public health science and practices, contrasts individualized and population approaches of health and disease, and evolution of modern approaches to public health. Prerequisite: None</td>
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<td>FOOD 303</td>
<td>Primary Nutritional Disease (N&amp;DT)</td>
<td>2 cr.</td>
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<td>Basic types of malnutrition, Protein energy malnutrition and starvation, Obesity, Micronutrient deficiencies. Prerequisite: NUTR 202</td>
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<td>NUTR 302</td>
<td>Nutrition during Human Life Cycle (N&amp;DT, PH)</td>
<td>2 cr.</td>
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<td>This course explores nutrition across lifespan from biological and psychosocial perspectives, impact on preconception, pregnancy, lactation, infancy, childhood, adolescence, adulthood, and ageing, normal growth, recommended dietary allowances, deficiencies and health problems. Seminars presented by students Prerequisite: NUTR 202.</td>
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<td>FOOD 302</td>
<td>Fundamentals of Food Preparation (N&amp;DT)</td>
<td>3 cr.</td>
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<td>This course covers basic principles of food preparation and latest standards of quality control, involving theoretical and practical sessions. Prerequisite: FOOD 301</td>
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<td>FOOD 304</td>
<td>Food Microbiology (PH)</td>
<td>3 cr.</td>
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<td>This course provides knowledge about microbial growth requirements, food spoilage, preservation methods, microbial food production, fermentations, food-borne diseases, legislation and strategies for control. Prerequisite: MICB 201</td>
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<td>FOOD 407</td>
<td>Food Safety (N&amp;DT, PH)</td>
<td>3 cr.</td>
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<td>This course covers aspects of food sanitation and hygiene, including introduction to hygiene, food handling, vending, processing, factory water reuse, food safety - contamination routes and control measures. Prerequisite: MICB 201</td>
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HEAL 302  Child Development and Health (PH)  2 cr.
This course provides knowledge on child development and health from conception to late adolescence with emphasis on illness, immunization, postnatal screening, infant feeding, effects of social environment, accidents, child abuse and disabilities. Prerequisite: HEAL 301

WOST 302  Gender and Development (N&DT, PH, PT)  2 cr.
Prerequisite: WOST 301

IMMU 302  Immunology (N&DT)  2 cr.
This course explores fundamental principles of immunity system and clinical applications of immunology. Co-prerequisite: MICB 201 & HPHY 202

WASN 302  Water and Sanitation (PH)  3 cr.
This course highlights health risks due to lack of safe drinking water, disease transmission due to poor sanitation and hygiene practices, emphasizing interventions for improving water, sanitation and hygiene practices to reduce disease transmission. Prerequisite: MICB 201

HEAL 306  Principles of Health Education and Promotion (PH)  2 cr.
This course covers methods for health promotion, for individual and community by explaining health determinants, ideologies and theories of health promotion, history, politics, ethics, community development, public policy, behavior, change, communication risks, planning and interventions evaluation. Prerequisite: HEAL 303

ENHL 301  Environmental Health (PH)  3 cr.
It constitutes a set of policy, regulatory, advocacy and market-based mechanisms which transform human behaviour to achieve society's goals for the environment. Prerequisite: ENVI 101

DIET 401  Diet Therapy I (N&DT)  3 cr.
This course provides knowledge, skills and techniques of planning nutritional care for specific patients with certain health problems, and importance of diet in the treatment focusing on theoretical aspects of nutritional care, aetiology, symptoms and nature of diseases. Prerequisites: NUTR 302, FOOD 302, DIET 202 and NUTR 301.

PHAR 401  Pharmacology (N&DT)  2 cr.
This course covers roles of nutrition and pharmacology in improvements of patients' treatments, using both approaches. Co-prerequisite: Prerequisite: HPHY 202

EPID 401  Epidemiology (N&DT, PH)  3 cr.
This course introduces basics of descriptive and analytic epidemiology, key concepts on classification of disease, principles of inference, definitions of incidence and prevalence, use of rates, rate adjustment, outbreak investigation, design, cohort studies, case-control, and experimental, surveillance and screening. Prerequisite: BIOS 201

MEEN 401  Medical Entomology (PH)  3 cr.
The role of arthropods as vectors of pathogens, or as parasites, causing disease in humans and animals. The principals involved will be illustrated with examples from selected diseases. The interaction of host and parasite and the dynamic nature of the epidemiologic system will be stressed. Prerequisite: PAR A 202
FOOD 401  Food Service Management I (N&DT)  3 cr.
This course introduces principles of effective resources management in design and administration of food service facilities, application of managerial processes of food delivery in a variety of settings, food preparation and high quality customer service. Prerequisite: FOOD 302

HEAL 305  Primary Health Care (PH)  3 cr.
This course provides knowledge about primary health care within primary health program in low income settings, philosophy, history, principles and practice of primary health care in developing countries. Prerequisite: HEAL 303

CNCD 401  Communicable and Non-Communicable Diseases (PH)  3 cr.
This course focuses on common communicable diseases through food and vector-borne diseases, or by direct contact, immunizing, sexually transmitted infections and zoonotic diseases, prevention, and control, also covers non-communicable diseases (NCD): cardiovascular diseases, diabetes, cancer, obesity and nutritional diseases. Prerequisite: HEAL 303 and WASN 302

HEAL 403  Public Health Ethics, Laws (PH)  2 cr.
This course describes coherent, understanding of relationships between public health laws, ethics and human rights as important features, and issues in respective fields related to theory and practice of public health. Prerequisite: HEAL 303

VECO 401  Vector Control (PH)  3 cr.
This course describes principles and practices of vector management, emphasizing arthropod pests affecting humans, effective use of today’s vector control tools and development of novel methods of targeting vectors. Prerequisite: ENMG 301, MEEN 401

HEAL 405  Occupational Health (PH)  2 cr.
This course highlights history of occupational health, exposure to disease and occupational health hazards, focusing on legal and regulatory issues in provision of occupational health services and workplace health improvement. Prerequisite: ENVI 101

NUTR 407  Management of Nutrition Program (N&DT)  2 cr.
This course describes implementation, monitoring and evaluation of nutrition programs in broader contexts, and impact to improve life quality. Co-prerequisite: NUTR 302; NUTR 405

FOOD 403  Food Analysis (N&DT)  3 cr.
This course provides knowledge on scientific procedures and methodologies to quantify major components in food: moisture, fats, proteins, sugars, fibres, total ash and ash values, minor elements, vitamins and minerals, additives, and contaminants, Prerequisite: FOOD 306 and BIOC 202.

DIET 402  Diet Therapy II (N&DT)  3 cr.
This course provides knowledge, skills and techniques of diet therapy where diet plays an important role in treatment, focusing on theoretical aspects of nutritional care, aetiology, symptoms and nature of diseases, training for skills of planning nutritional care for specific patients. Prerequisites: DIET 401, NUTR 302, FOOD 302, DIET 202 and NUTR 301.
RESM 401  Research Methods (N&DT, PH, PT)  3 cr.
This course gives aspects of qualitative and quantitative research methods, introducing theoretical research methods: design, data collection, analysis and writing up, and presentation to demonstrate scientific approach. Co-prerequisites: BIOS 201 and EPID 401 (FUBE 301 for PT)

FOOD 402  Food Service Management II (N&DT)  3 cr.
This course continues Food Services Management course II, emphasizing food catering, supply marketing and service. Prerequisite: FOOD 401

DIET 404  Dietetics Education and Counselling Skills (N&DT)  2 cr.
This course describes application of counselling and learning theories with individuals and groups in clinical and community settings, including discussion, interviewing, counselling, assessment of learning activities, documentation, utilizing behavioural theory and evidence-based strategies to increase effectiveness of diet therapy. Co-prerequisite: DIET 301 and DIET 401

IBEM 402  Inborn Errors of Metabolism (N&DT)  3 cr.
This course provides basic information of biochemical pathways, physiology, and factors of inborn errors of metabolic diseases of newly born infants, manifestations, diagnosis and inter vention with medical and nutritional therapies. Prerequisite: NUTR 302

FOOD 404  Functional Foods (N&DT)  2 cr.
This course covers perspectives of functional food and health promoting food recipes; biochemical aspects and disease prevention, exploring health enhancement with dietary components beyond basic nutrition, or gaining specific non-nutritive benefits to reduce disease risks. Prerequisite: FOOD 301

HEAL 402  Communication and Counselling in Health Settings (PH)  2 cr.
This course explains positive response with confidence to situations in a variety of health care settings, and ways of health care in hospital, primary care, or in community settings, affecting counsellor roles and therapeutic processes, considering help of people with special needs. Prerequisites: HEAL 401 and HEAL 403

HEAL 404  Sociology of Health and Illness (PH)  2 cr.
This course demonstrates the relationship between social structures, disease incidence and distribution of health care in modern society, and impacts of class, medical profession, gender and ethnicity. Prerequisite: CNCD 401

HEAL 406  Health Management Information System (PH)  3 cr.
This course provides an over view of management of information system in health care settings, presenting review of information management value and role of information technology in provision of high quality care and decision making. Prerequisite: HEAL 401

HEAL 408  Health Economics and Health Care Finance (PH)  2 cr.
This course introduces models and concepts in health economics with a view to benefit health care cost containment, looking at experiences employed by western countries and socialist regimes in cost-containment of high health care prices, citing Chinese model of low costs effective programs. Prerequisite: HEAL 402
NUTR 408  Sociocultural Aspects of Food and Nutrition (N&DT)  2 cr.
This course explains influence of socio-cultural determinants: economic, structure, product value, habits and other factors of individuals' nutrition. Prerequisite: None.

NUTR 401  Food Nutrition Policy and Planning  2 cr. hrs
This course applies relevant policy-making theory and practice to the area of food and nutrition. It uses qualitative and quantitative information to assess nutrition problems.

COMM 401  Community Nutrition (N&DT)  3 cr.
This course expands on the basics of nutrition courses with special emphasis on community nutrition and the nutrition needs of the population. It explores the role, function, and principles necessary for the professional effectiveness of a community nutritionist; principles of program planning and educational theory. Prerequisites: NUTR 302 and NUTR 406

NUTR 406  Nutrition in Emergency (N&DT)  2 cr.
This course describes disasters in the world and Sudan, refugees and displaced in developing world, and public health interventions, emergency food polices, feeding programs, food as a right for refugees and displaced, role of scientists, agencies and governments in food assistance. Prerequisites: NUTR 302 and FOOD 303.

DIET 503  Special Topics in Nutrition & Dietetics (N&DT)  1 cr.
This course provides opportunity to integrate knowledge of clinical and community dietetics and management principles through public speaking, writing, organizational and problem-solving skills, to perform, supervise, manage and participate in activities completed by entry-level dieticians. Prerequisite: all subjects from semester 1 to semester 8

DIET 501  Internship I and II (N&DT)  28 cr.
& DIET 502
Students practice eight months on food services, in hospitals and community affiliations, an internship of eight contact hrs/day for four days/week (32 hrs/week), a full-time program beginning July, ending in March each academic year. Prerequisite: all subjects from semester 1 to semester 8

HEAL 501  Health Policy and Planning (PH)  2 cr.
This course provides an overview about three major issues in health care: first, health policy principles and practices in Sudan, second, planning health care basics, cycles and results, and third, on management of public health practitioners. Co-prerequisites: HEAL 406 and HEAL 408.

HEAL 503  Public Health during Emergency (PH)  2 cr.
This course provides an overview of current health-related challenges and policy debates concerning appropriate responses to populations affected by conflicts. Prerequisite: HEAL 401

NUTR 501  Nutrition Counselling and Communication Skill (N&DT)  3 cr.
This course focuses on counselling and learning theories with individuals and groups in clinical and community settings, and communication skill needed to convey a counselling session, and training for target groups. Prerequisite: NUTR 402
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<th>Course Code</th>
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<tbody>
<tr>
<td>FOOD 501</td>
<td>Food and Nutrition Policy Planning (N&amp;DT)</td>
<td>2 cr.</td>
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<tr>
<td>HEAL 506</td>
<td>Special Topics in Global Health and Development (PH)</td>
<td>1 cr.</td>
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<tr>
<td>HEAL 504</td>
<td>Attachment (PH)</td>
<td>4 cr.</td>
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<tr>
<td>RESP 502</td>
<td>Research Project (N&amp;DT, PH, PT)</td>
<td>6 cr.</td>
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<tr>
<td>CRGD 502</td>
<td>Career Guide (N&amp;DT, PH, PT)</td>
<td>1 cr.</td>
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<tr>
<td>BIOC 203</td>
<td>Biochemistry (PT)</td>
<td>3 cr.</td>
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<tr>
<td>PHYS 201</td>
<td>Physiology (PT)</td>
<td>4 cr.</td>
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<td>ANAT 205</td>
<td>Anatomy (PT)</td>
<td>6 cr.</td>
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<tr>
<td>PSYC 201</td>
<td>Child Development (PT)</td>
<td>2 cr.</td>
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This course offers diverse skills for successful impact on food policy and nutrition interventions, providing conceptual and analytical skills required for program managers and policy analysts with statistical and research skills, for technical program planning, implementation and evaluation. Prerequisite: NUTR 405

This course provides concepts and aspects of global health, including: burden, distribution of disease and mortality; determinants of global health disparities; planning of global health policies, outcomes of health interventions. Prerequisite: all subjects from semester 1 to semester 8

This course offers significant opportunity to apply knowledge and classroom skills for achievement of practical goals and refinement of skills, under the supervision of a preceptor and a faculty advisor. Prerequisite: all subjects from semester 1 to semester 8

This is an assigned research problem in a field of specialization supervised by a staff member, dissertation presented at the end of semester for evaluation by an internal supervisor and/or an external examiner. Prerequisite: RESM 401

This course provides 5th year students with basic information of different service systems of future work activities and methods in Sudan, for clear understanding of jobs in relation to labour market for graduates. Prerequisite: None

This course introduces bio-molecules, importance, sources, sites and structures of compounds, enzymes, vitamins, and deficiency diseases, degradation and biosynthesis of metabolites inside human tissues, their movement, and energy calculation for different biochemical pathways. Prerequisites: CHEM 101 and CHEM 102

This course introduces general principles of human physiology, includes neural and hormonal control mechanisms, of musculoskeletal, circulatory, respiratory, digestive, urinary, immune, reproductive, and endocrine systems, and body response to exercise, and integration of organ system functions. Prerequisite: BIOL 101

This course emphasizes anatomical structure of muscles, skeleton, joints, central and peripheral nervous system offering basis for physiotherapist specific subjects. Prerequisite: BIOL 101

This course provides information about child physical and motor development. Prerequisite: None
BIOM 304  Biomechanics (PT)  2 cr.
This course provides basic Biomechanics of the Musculoskeletal System and an understanding of forces acting on the human body in given situation, during work and therapeutic exercise. Co-prerequisite: ANAT 205.

PHTH 203  Physiotherapy: Assessment and Evaluation (PT)  6 cr.
This course introduces theoretical and practical principles and concepts, assessment and evaluation of a person's motor function approach, case history and basic examination to evaluate findings for functional diagnosis according to ICF, including placement for four days to record normal movements. Prerequisites: ANAT 205 and PSYC 201.

ANAT 202  Functional Anatomy (PT)  2 cr.
This course offers the opportunity to learn functional anatomy through movement experiences, analysis and reflection, including practical skill training sessions and independent study, focusing on selected body areas. Prerequisite: ANAT 205 and BIOM 304.

FUBE 301  Fundamentals of Biostatistics and Epidemiology (PT)  2 cr.
This course introduces basic biostatistics and epidemiology, descriptive and analytic; concepts include disease classification, principles of inference, incidence and prevalence, rates, adjustment, outbreak investigation, study design, cohort studies, case-control, experimental surveillance and screening. Prerequisite: MATH 102.

INHD 202  Introduction to Human Disorders (PT)  2 cr.
This course describes structure and function of the normal human tissues and microbial disorders and general pathology and disease mechanisms of certain systems. Prerequisite: PHYS 201.

PHTH 204  Physiotherapy II: Orthopaedics and Traumatology (PT)  7 cr.
This course provides theoretical and practical learning activities for basic set of exercises for patients with musculoskeletal disorders, including resistance, range of motion, endurance, motor learning, coordination, balance, stability, biomechanics therapy and use of external forces or body positions. Co-prerequisites: PHTH 201 and ORTR 202.

ORTR 202  Orthopaedics and Trauma (PT)  2 cr.
This course highlights orthopaedics and fractures affecting locomotion of human body, introducing orthopaedics relationship and physiotherapy, musculoskeletal disease, of bone and soft tissue components, orthopaedic operations needed by physiotherapists to plan pre and post-operative interventions. Prerequisite: ANAT 204.

PLAC 202  Placement: Orthopaedics and Trauma (PT)  6 cr.
This course offers supervised placement at hospitals and outpatient facilities with access to patients to assess plans and implement treatments. Co-prerequisite: PHTH 204.

PSYC 301  Children with Special Needs (PT)  2 cr.
This course explains disabilities and impairments related to children needing special care and educational requirements, emphasizing physiotherapist role. Prerequisite: PSYC 201.
PEDI 301  Pediatrics (PT)  2 cr.
This course offers basic understanding of pediatric diseases and conditions requiring physiotherapy as part of management plan. Prerequisite: PHYS 201.

PHTH 301  Physiotherapy: Pediatrics (PT)  6 cr.
This course presents knowledge about development of functional skills and musculoskeletal structures, diseases and body function, physical therapy management, limitations, including neurologic and other conditions. Prerequisite: PHTH 202, Co-prerequisite: PEDI 301.

AMPR 301  Amputation and Prosthesis (PT)  2 cr.
This course explains medical theory behind causes, types and assessment of amputation surgeries and physiological status of amputees. Prerequisite: PHTH 202.

PHTH 303  Physiotherapy: Amputation and Prosthesis (PT)  3 cr.
This course describes accidents and trauma that might require removing limbs or parts of limbs; it provides experience to put on elastic bandage, prosthesis or orthosis to extremity, restore gait, locomotion, and balance. Prerequisite: PHTH 202, Co-prerequisite: AMPR 301.

PLAC 301  Placement: Pediatrics (PT)  6 cr.
This course supervises placement at community care, outpatient facilities, rehabilitation institutions focusing on physiotherapy in pediatrics for three weeks and extra three weeks focusing on physiotherapy for amputees, carrying out relevant practical physiotherapeutic tasks. Prerequisite: PHTH 202, Co-prerequisite: PHTH 301.

PLAC 301  Placement: Amputation and Prostheses (PT)  6 cr.
Clinical placement focusing on amputation physiotherapy, amputee care and relevant prosthetics and orthotics, Co-prerequisite: AMPR 301.

NEUR 302  Neurology (PT)  2 cr.
This course offers basic knowledge on patho-physiological mechanisms affecting Central and Peripheral Nervous System in relationship to rehabilitative process, to acquire basic clinical and instrumental neurological semiotics for planning and evaluating physiotherapy treatment of neurological patients. Prerequisite: PHYS 201.

PHTH 302  Physiotherapy: Neurological Disorders (PT)  6 cr.
This course is designed to develop skills in analysis and management of movement disorders, including theories of motor control and neuroplasticity to develop skills in clinical reasoning, promotes knowledge of neurological conditions enabling flexible, holistic rehabilitation. Prerequisite: PHTH 202, Co-prerequisite: NEUR 302.

HELU 302  Heart and Lung Diseases (PT)  2 cr.
This course is designed to help acquire basic concepts of cardiovascular diseases more relevant to Physiotherapy, and investigates diagnostic processes to individuate when dealing with heart and lung diseases to plan the rehabilitative treatment. Prerequisite: PHYS 201.

PHTH 304  Physiotherapy: Heart and Lung Diseases (PT)  4 cr.
This course provides an introduction to assessment and treatment of cardiovascular and respiratory problems to develop problem solving and evidenced based approach, enabling
effective clinical reasoning, to integrate, apply and evaluate both specific and generic physiotherapeutic skills of assessment and management. Prerequisite: PTH 202, Co-prerequisite: HELU 302.

**PHTH 306  Internal Medicine (PT)  2 cr.**
This course provides introduction to assessment and treatment of rheumatologic diseases to develop problem solving and evidenced based approach, giving fundamental knowledge of general and specialist medicine to plan adequately rehabilitative interventions for different diseases. Prerequisite: INHD 202 and PHYS 201.

**PHTH 308  Therapeutic Exercises (PT)  4 cr.**
This course offers practical courses for different types of exercises, and experience to train and instruct, choosing beneficial exercise levels for patients, learn changing exercises, evaluate quality of exercise programs and plan for progression. Prerequisite: PTH 202, ANAT 205 and PHYS 201.

**PHAR 302  Pharmacology (PT)  2 cr.**
This course offers basic knowledge for understanding different drug treatments, related to physiotherapy, providing information about common drugs for rehabilitation, such as painkillers, anti-inflammatory and anti-spastic. Prerequisite: BIOC 203 and INHD 202.

**PSYC 302  Abnormal Psychology (PT)  2 cr.**
Explores historical views and current perspectives of abnormal behaviour, emphasizing major diagnostic categories and criteria, individual and social factors of maladaptive behaviour, adjustment, anxiety and personality disorders. Prerequisite: None.

**FAID 401  Fundamental of Nursing Aid (PT)  (1-1) 2 cr.**
This course provides the skills necessary to give care in the case of an emergency, to help sustain life and minimize the consequences of injury or sudden illness encountered during a physiotherapy patient session. Co-Prerequisite: PHYS 201.

**PHTH 401  Physiotherapy: Community Based Rehabilitation (PT)  4 cr.**
This course emphasizes principles of Primary Health Care to orientate towards provision of “global” Health Care, promotion, disease prevention, rehabilitation through community action, for people with disabilities and families under CBR, to ensure benefits. Co-Prerequisite: INHD 202.

**PHTH 403  Physiotherapy: Health Promotion and Prevention Work (PT)  6 cr.**
This course covers approaches in health promotion practice, addressing individuals and community, describing structural health determinants and practice settings-based for health promotion, planning and interventions, focusing on physical activity to obtain goal. Co-Prerequisite: PTH 202.

**PLAC 401  Placement: Physiotherapy in Neurology, Heart and Lung, and Rheumatology (PT)  6 cr.**
This course offers full-time supervised placement at hospitals and rehabilitation units with access to neurology, heart/lung and rheumatologic patients, for practicing assessment, interventions and evaluation of treatments. Prerequisites: NEUR 302, PTH 302, PTH 304, PTH 306 and HELU 302.
PMGT 402  Pain Management (PT)  3 cr.
This course helps to understand interdependent relationships between biological, psychological and social phenomena of pain, implications for physiotherapy in pain management, emphasizing basic concepts to assess theoretical rationale in designing physiotherapy interventions. Prerequisites: PHYS 201, INHD 202 and PHTH 202.

ETLA 402  Ethics and Laws for Physiotherapy (PT)  3 cr.
This course offers the opportunity to appreciate the National Health and Judicial System governing medical practice, by learning the professional code of conduct in order to maintain high degree of excellent service to uphold Physiotherapy as a Profession. Prerequisite: None.

PSYC 402  Counselling Skills (PT)  2 cr.
This course provides techniques and skills, focusing on core conditions towards client, with right approach and skills, and demonstrating and practicing acquired knowledge in form of role plays and exercises in group work. Co-prerequisite: Prerequisite: None.

GYOB 402  Gynaecology and Obstetrics (PT)  2 cr.
This course helps acquiring basic concepts of common gynaecological and obstetrical pathologies, urological disorders and changes of pregnancy. Co-Prerequisite: PHYS 201.

HSMG 402  Health Services Management (PT)  2 cr.
This course helps thinking critically about fundamental issues of health services, new concepts and practices in healthcare management, drawing attention for important issues, as strategic planning, evaluation, information management, and quality control. Prerequisite: None.

EBPR 402  Evidence Based Practice (PT)  1 cr.
This course provides basic theoretical and practical knowledge about evidence-based practice in clinical settings and research on EBP skills for clinical placement. Prerequisite: RESM 401.

PHTH 402  Physiotherapy: Women's Health (PT)  4 cr.
This course introduces role of physical therapists in women's health, specifically obstetrics and gynaecology and health promotion for assessment and treatment techniques, applying evidence and context based practice when implementing effective treatments. Co-prerequisite: GYOB 402.

PLAC 402  Placement: Physiotherapy in Community Based Rehabilitation and Health Prevention and Promotion Work (PT)  4 cr.
This course offers supervised a 2-week placement project at a given community to use physiotherapy as prevention and health-promotion, to enhance equal participation and accessibility for all groups in society. Prerequisite: PHTH 401 and PHTH 403.

PLAC 404  Placement: Physiotherapy and Women's Health (PT)  8 cr.
This course offers supervised a four-week placement at hospitals, community-care services and outpatient facilities focusing on women's health. Co-prerequisite: PHTH 402.

OCTH 501  Occupational Therapy (PT)  3 cr.
This course offers basic knowledge of occupational therapist practice with emphasis on work risk factors, showing skills of occupational therapists in various fields for successful intervention with patients of impaired functional activities. Prerequisites: PHTH 202 and PHTH 403.
PHTP 501    Physiotherapy Practice (Comprehensive exam) (PT)  1 cr.
T he exam aims to assess and evaluate students’ knowledge in basic sciences and physiotherapy skills. Prerequisite: all PHTH courses.

NDTH 501    Nutrition and Diet Therapy (PT)  3 cr.
This course introduces certain problems in health and diet role in treatment, focusing on theoretical aspects of nutritional care process, disease, symptoms and nature, and acquaints students with nutritional care needed by patients. Prerequisite: BIOC 203.

PHTH 501    Physiotherapy: Geriatrics (PT)  3 cr.
This course presents a comprehensive overview of geriatric exercise principles, including differential diagnosis, practice patterns pertaining geriatric syndromes responding to therapeutic exercise programs by examination and evaluation procedures applicable for treating without referral for each area of physical therapy. Prerequisite: PHTH 202.

PHTH 503    Physiotherapy: Sport (PT)  3 cr.
This course introduces a scientifically-based clinical approach to treating athletes, based on the concept that sporting activities require a state of readiness, which requires a basic level of fitness to perform at highest levels of musculoskeletal and neuromuscular activities. Prerequisite: PHTH 202.

PLAC 502    Placement: Physiotherapy Practice (PT)  16 cr.
This course upgrades student to independent physiotherapists, using problem-solving in reasoning- implement, evaluate and document intervention/treatment. Prerequisite: PHTP 501

Elective courses:

NUTR 407    Management of Nutrition Program (N&DT)  2 cr
The implementation, monitoring and evaluation of nutrition program in its broader development context and its impact on the society to raise the quality of well being of individuals and how they are improving the quality of life.

NUTR 403    Nutrition for Fitness and Athletes (N&DT)  2 cr
T his course is designed to develop an understanding of special nutritional needs for participants in regular physical activity of individual and team sports, focusing on metabolism of exercises and role of diet in athletic performance. Prerequisites: NUTR 301 and NUTR 302

NUTR 502    Management and Leadership in Nutrition (N&DT)  2 cr.
This course offers skills, styles and qualities of leadership for successful impact in nutrition field, providing conceptual and analytical skills, for administrative, ethical and professional leadership in nutrition and health care. Prerequisite: NUTR 501.