

1- Master's Degree in Public Health and Public Health Sciences (Majoring Epidemiology)

Students should fulfill a total of 38 credit hours:

1- Basic requirements: 10 credit hours.

150701, 150702, 150703, 150704, 150706

2- Compulsory courses: 14 credit hours.

1501701, 1501702, 1501703, 1501704, 1501705, 1501706, 1501707

3- Elective courses: 6 credit hours.

1501709, 1501710, 1501711, 1501712, 1501713, 1501714, 1508705, 1502701, 1502702, 1502704, 1502707, 1502709

4- Thesis: 8 credit hours. 1501799

1- Basic requirements: 10 credit hours

Code	Course Title	Theoretical	Practical/ Clinical	Field	Credit Hours	Prerequisites
150701	Epidemiology and Biostatistics الوبائيات والاحصاءات الحيوية	2			2	
150702	Environmental & Occupational Health الصحة البيئية والمهنية	2			2	
150703	Health Administration & Behavioral Sciences الادارة الصحية والعلوم السلوكية	2			2	
150704	Research Methodology طرق البحث	2	2		3	
150706	Field Studies الدراسات الميدانية	-	-	4	1	
Total		8	2	4	10	

2- Compulsory courses: 14 credit hours

Code	Course Title	Theoretical	Practical/ Clinical	Field	Credit Hours	Prerequisites
1501701	Epidemiologic Research Methods (I) طرق البحث الوبائية (I)	2			2	
1501702	Epidemiology, Prevention and Control of Communicable Diseases وبائية الأمراض المعدية، الوقاية والمكافحة	2			2	
1501703	Cardiovascular Disease Epidemiology وبائية أمراض القلب والأوعية الدموية	2			2	
1501704	Cancer Epidemiology وبائية السرطان	2			2	
1501705	Surveillance and Epidemiological Investigation الترصد والتقصي الوبائي	2			2	
1501706	Infection Control مكافحة العدوى	2			2	
1501707	Epidemiology of Zoonotic Diseases وبائية الأمراض المشتركة	2			2	
Total		14			14	

3- Elective Courses: 6 credit hours

Code	Course Title	Theoretical	Practical/ Clinical	Field	Credit Hours	Prerequisites
1501708	Pharmaco - Epidemiology الوبائيات الصيدلانية	2			2	
1501709	Epidemiology of Dental Diseases and Conditions وبائية أمراض الأسنان	2			2	
1501710	Clinical Course in Infectious Diseases مقرر إكلينيكي في الأمراض المعدية	1	2		2	
1501711	Bioterrorism الإرهاب البيولوجي	2			2	
1501712	Injury Epidemiology وبائية الإصابات	2			2	
1501713	Psychosocial Epidemiology الوبائيات النفسية والاجتماعية	2			2	
1501714	Epidemiologic Intelligence الاستخبارات الوبائية	2			2	
1508705	Ethics and Law for Health Professionals الأخلاقيات والقانون لأفراد الفريق الصحي	2			2	
1502701	Study Design and Sampling نوع الدراسة وطرق المعاينة	2	2		3	
1502702	Statistical Inference in Applied Research الاستدلال الاحصائي في الابحاث التطبيقية	2	2		3	
1502704	Linear Models النماذج الخطية	1	2		2	
1502707	Applied Statistics الاحصاء التطبيقي	1	2		2	
1502709	Survival Analysis تحليل البقاء	1	2		2	

Course Description

Code	Credit Hours	Course Title	Prerequisites
150701	2	Epidemiology and Biostatistics	
<p>Scope & uses of epidemiology. Natural history of the diseases, requisites for perpetuation of infectious diseases, magnitude and risk factors of non communicable diseases. Basic biostatistics concepts, Basic principle of epidemiologic methods. Presentation of grouped and ungrouped data shape of distribution. Probability concepts and Laws of Probability.</p>			

Code	Credit Hours	Course Title	Prerequisites
150702	2	Environmental & Occupational Health	

Definition of environment and environmental health, water sources, water uses and classification, water pollution, point and non-point sources of pollution, types of pollutants, their source and effect, air pollution, types of air pollutants, their source and effect (including climate change, ozone depletion, acid rain, etc), soil pollution, types of soil pollutants, their source and effect, control measures for different types of pollution. Occupational hazards, occupational diseases and their prevention.

Code	Credit Hours	Course Title	Prerequisites
150703	2	Health Administration & Behavioral Sciences	

This course aims at developing students' knowledge regarding basic managerial concepts, processes, skills and techniques and application of such knowledge in the delivery of high quality health care. Managerial processes covered include: planning, decision making, organizing, leadership, supervision, staffing and evaluation. Among the managerial issues and techniques included are: quality health care and problem solving. In addition, certain skills as communication, motivation,... etc. will be covered. It also aims at developing students with knowledge and skills regarding role and application of behavioral sciences in the field of public health.

Code	Credit Hours	Course Title	Prerequisites
150704	4	Research Methodology and Field Studies	

This course is intended to prepare students to design and implement research. It also includes statistical design and analysis as well as proposal writing and report slash thesis writing.

Code	Credit Hours	Course Title	Prerequisites
1501701	2	Epidemiologic Research Methods I	

Screening tests, evaluation of screening tests, measures of association and impact, risk and causality, intervention studies (field trials versus clinical trials), sources of bias in different epidemiologic studies and their control, different sources of confounders and methods of their control and effect modifier versus confounders.

Code	Credit Hours	Course Title	Prerequisites
1501702	2	Epidemiology, Prevention and Control of Communicable Diseases	
Epidemiologic features of the communicable diseases of public health importance, studying communicable diseases of public health importance and national and international programs for elimination and eradication of communicable diseases of public health importance.			

Code	Credit Hours	Course Title	Prerequisites
1501703	2	Cardiovascular Disease Epidemiology	
Non communicable disease epidemiology (definitions, magnitude of the problem, sources of data), CVD Risk factors, Principles of prevention and control of CVD and studying some CVD diseases of public health importance (hypertension, ischemic heart disease, rheumatic heart disease, cerebrovascular disease).			

Code	Credit Hours	Course Title	Prerequisites
1501704	2	Cancer Epidemiology	
Magnitude of the problem of the most prevalent cancer in terms of morbidity and mortality statistics, epidemiology of the most prevalent cancers in terms of (risk factors, staging, grading, clinical manifestations, diagnosis and preventive & control measures), examples of the most prevalent cancers and cancer control programs.			

Code	Credit Hours	Course Title	Prerequisites
1501705	2	Surveillance and Epidemiological Investigation	
Definitions, principles of surveillance, elements of surveillance, limitations of surveillance, surveillance methods, surveillance procedures, monitoring and evaluation of surveillance systems, examples for specific surveillance activities and procedures for epidemiological investigation.			

Code	Credit Hours	Course Title	Prerequisites
1501706	2	Infection Control	
Definitions, sources of spread of infection, general principles of infection control, infection control in institutions and settings and infection control for individuals (health & safety practices).			

Code	Credit Hours	Course Title	Prerequisites
1501707	2	Epidemiology of Zoonotic Diseases	
<p>Definition and classification of zoonotic diseases, epidemiologic features of the zoonotic diseases of public health importance, examples of diseases to be studied e.g. Rabies, Toxoplasmosis, Salmonellosis, Bovine T.B, Anthrax, Brucellosis, Psittacosis, Rift valley fever, Plague, Yellow fever, Listeriosis and prevention and control programs of selected diseases.</p>			

Code	Credit Hours	Course Title	Prerequisites
1501708	2	Pharmacoepidemiology	
<p>History, definitions, importance and uses of pharmacoepidemiology, drug utilization studies, rational versus irrational use of drugs, clinical trials, marketing surveillance, pharmacoepidemiology in pharmacy practice and principles of pharmacoconomics.</p>			

Code	Credit Hours	Course Title	Prerequisites
1501709	2	Epidemiology of Dental Diseases and Conditions	
<p>Magnitude of the problem of dental diseases and conditions and epidemiology of the most common conditions as cavities, gum diseases, periodontal diseases, dental decay and impacted tooth, oral cancer, tempromandibular syndrome and other conditions and guidelines and programs for prevention and control.</p>			

Code	Credit Hours	Course Title	Prerequisites
1501710	2	Clinical Course in Infectious Diseases	
<p>The presenting symptoms, signs and complications of selected infectious diseases, procedures for investigations, effective management, differential diagnosis, prompt and effective control measures of selected infectious diseases of public health importance and examples of diseases to be studied (Meningitis, Typhoid fever, Viral hepatitis, Tetanus, Mumps, Measles, Rubella, Chicken pox and Streptococcal diseases).</p>			

Code	Credit Hours	Course Title	Prerequisites
1501711	2	Bioterrorism	
<p>Definition of bioterrorism, magnitude of the problem, risk factors, terrorist group characteristics, reasons that led terrorists and criminals to become interested in biological agents, sources of biological agent, employing biological agents, impact of bioterrorism, defense against biological warfare, bioterrorism detection, tasks that would be performed at an emergency site if a bioterrorism attack occurred and medical approach to biological warfare attack.</p>			

Code	Credit Hours	Course Title	Prerequisites
1501712	2	Injury Epidemiology	
<p>Definition and magnitude of the problem of injury, epidemiologic features of injuries, causes of injuries, types of injuries as motor vehicle, homicide, suicide, sports and recreation, drowning, poisoning, falls, burns, occupational injuries and asphyxiation, sources of data about injury, study designs in injury research, surveillance of injuries and strategies for prevention and control of injuries</p>			

Code	Credit Hours	Course Title	Prerequisites
1501713	2	Psychosocial Epidemiology	
<p>The course describes the epidemiology of conditions of psychosocial relevance including, but not limited to, domestic violence, drug addiction, juvenile delinquency, maladaptive social patterns and their public health implications. The course also covers psychosocial intervention strategies and approaches and health-related quality of life assessment and measurement.</p>			

Code	Credit Hours	Course Title	Prerequisites
1501714	2	Epidemiologic intelligence	
<p>The course covers principles and methods of epidemiologic intelligence in relation to communicable and non-communicable diseases of public health relevance, role of epidemiologic intelligence in describing health-related social and cultural phenomena, security clearance for access to epidemiologic data and the role of epidemiologic intelligence in maintaining global security and economic stability.</p>			

Code	Credit Hours	Course Title	Prerequisites
150705	2	Ethics and Law for Health Professionals	
<p>Definitions of ethics, law, risk management and public health will be clarified. Major ethical and legal conflicts in public health will be addressed. Justifying public health programs and policies will be discussed. Human rights and public health will be explained. The course will also tackle understanding of the public health profession's roles and professional values.</p>			

Code	Credit Hours	Course Title	Prerequisites
1502701	3	Study Design and Sampling	
<p>The different types of study designs and their appropriate statistics. The concept of sampling, sampling distributions, parameters and statistics, central limit theorem, types of samples and sampling error, complex samples, the normal distribution and estimation of a population parameter from a sample, determination of the minimum required sample size for different designs.</p>			

Code	Credit Hours	Course Title	Prerequisites
1502702	3	Statistical Inference in Applied Research	
<p>Advanced measures of central tendency, Measures of dispersion, Measures of skewness and kurtosis, A single population mean, Difference between 2 population means, Paired comparison, A single population proportion, Difference between 2 population proportions, A single population variance, Chi-squared test and measures of association, Simple Correlation and simple linear Regression.</p>			

Code	Credit Hours	Course Title	Prerequisites
1502704	2	Linear Models	
<p>The key functions of linear models are for describing the relationships between variables and predicting outcomes and so inference methods will be addressed in some detail. Various diagnostic tests on the appropriateness and goodness of fit of various models will be introduced.</p>			

Code	Credit Hours	Course Title	Prerequisites
1502707	2	Applied Statistics	
<p>This is a course to teach students from different specialties of public health how to analyze data and interpret the results. By the end of the course the student should be able to determine the type of analysis (parametric or non parametric), test the relation between variables using comparison of means, test the hypothesis, test the relation between variables, using various measures of association.</p>			

Code	Credit Hours	Course Title	Prerequisites
1502709	2	Survival Analysis	
<p>Life table analysis, Kaplan Meier survival curve estimator, Log rank test, Breslow test, Tarone-Ware, Modeling survival – Cox regression model, Presentation of results, Computer programs illustrating survival analysis.</p>			

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Students should fulfill a total of 38 credit hours

1- Basic requirements: 10 credit hours.

150701, 150702, 150703, 150704, 150706

2- Compulsory courses: 14 credit hours.

1502701, 1502702, 1502703, 1502704, 1502705, 1502706

3- Elective courses: 6 credit hours.

1502707, 1502708, 1502709, 1502710, 1502711, 1502712, 1502713, 1502714, 1502715

4- Thesis: 8 credit hours. 1502799

1- Basic requirements: 10 credit hours

Code	Course Title	Theoretical	Practical/ Clinical	Field	Credit Hours	Prerequisites
150701	Epidemiology and Biostatistics الوبائيات والاحصاءات الحيوية	2			2	
150702	Environmental & Occupational Health الصحة البيئية والمهنية	2			2	
150703	Health Administration & Behavioral Sciences الادارة الصحية والعلوم السلوكية	2			2	
150704	Research Methodology طرق البحث	2	2		3	
150706	Field Studies الدراسات الميدانية	-	-	4	1	
Total		8	2	4	10	

2- Compulsory courses: 10 credit hours

Code	Course Title	Theoretical	Practical/ Clinical	Field	Credit Hours	Prerequisites
1502701	Study Design and Sampling نوع الدراسة وطرق المعاينة	2	2		3	
1502702	Statistical Inference in Applied Research الاستدلال الاحصائي في الابحاث التطبيقية	2	2		3	
1502703	Categorical Data Analysis تحليل البيانات الوصفية	1	2		2	
1502704	Applied regression analysis تحليل الانحدار	1	2		2	
1502705	Statistical Health Information System نظم المعلومات الصحية الإحصائية	1	2		2	
1502706	Vital Statistics إحصاءات الأحداث الحيوية	1	2		2	
Total		8	12		14	

3- Elective Courses: 6 credit hours

Code	Course Title	Theoretical	Practical/ Clinical	Field	Credit Hours	Prerequisites
1502707*	Applied Statistics الإحصاء التطبيقي	1	2		2	
1502708	Forecasting Techniques طرق التنبؤ	1	2		2	
1502709	Mathematical Background for Biostatistics المبادئ الأساسية الرياضية للإحصاءات الحيوية	1	2		2	
1502710*	Introduction to SPSS مقدمة لبرنامج SPSS	1	2		2	Applied statistics 1502707
1502711	Database 1 قواعد البيانات ١	1	2		2	
1502712	Statistical Software Computer Packages (Program 3) البرنامج الثالث من مجموعة برامج الحاسب الآلي الإحصائية	1	2		2	
1502713	Statistical health economics إحصائيات الإقتصاد الصحي	1	2		2	
1502714	Statistical software computer packages (Program 2) البرنامج الثاني من مجموعة برامج الحاسب الآلي الإحصائية	1	2		2	
1502715	Current Topics in statistical methods موضوعات في الطرق الإحصائية	1	2		2	

Course Description

Code	Credit Hours	Course Title	Prerequisites
150701	2	Epidemiology and Biostatistics	
<p>Scope & uses of epidemiology. Natural history of the diseases, requisites for perpetuation of infectious diseases, magnitude and risk factors of non communicable diseases. Basic biostatistics concepts, Basic principle of epidemiologic methods. Presentation of grouped and ungrouped data shape of distribution. Probability concepts and Laws of Probability.</p>			

Code	Credit Hours	Course Title	Prerequisites
150702	2	Environmental and Occupational Health	
<p>Definition of environment and environmental health, water sources, water uses and classification, water pollution, point and non-point sources of pollution, types of pollutants, their source and effect, air pollution, types of air pollutants, their source and effect (including climate change, ozone depletion, acid rain, etc), soil pollution, types of soil pollutants, their source and effect, control measures for different types of pollution. Occupational hazards, occupational diseases and their prevention.</p>			

Code	Credit Hours	Course Title	Prerequisites
150703	2	Health Administration & Behavioral Sciences	
<p>This course aims at developing students' knowledge regarding basic managerial concepts, processes, skills and techniques and application of such knowledge in the delivery of high quality health care. Managerial processes covered include: planning, decision making, organizing, leadership, supervision, staffing and evaluation. Among the managerial issues and techniques included are: quality health care and problem solving. In addition, certain skills as communication, motivation, ... etc. will be covered. It also aims at developing students with knowledge and skills regarding role and application of behavioral sciences in the field of public health.</p>			

Code	Credit Hours	Course Title	Prerequisites
150704 150706	4	Research Methodology Field Studies	
<p>This course is intended to prepare students to design and implement research. It also includes statistical design and analysis as well as proposal writing and report slash thesis writing.</p>			

Code	Credit Hours	Course Title	Prerequisites
1502701	3	Study Design and Sampling	
<p>The different types of study designs and their appropriate statistics. The concept of sampling, sampling distributions, parameters and statistics, central limit theorem, types of samples and sampling error, complex samples, the normal distribution and estimation of a population parameter from a sample, determination of the minimum required sample size for different designs.</p>			

Code	Credit Hours	Course Title	Prerequisites
1502702	3	Statistical Inference in Applied Research	
<p>Advanced measures of central tendency, Measures of dispersion, Measures of skewness and kurtosis, A single population mean, Difference between 2 population means, Paired comparison, A single population proportion, Difference between 2 population proportions, A single population variance, Chi-squared test and measures of association, Simple Correlation and simple linear Regression.</p>			

Code	Credit Hours	Course Title	Prerequisites
1502703	2	Categorical Data Analysis	
<p>Measures of association, Measurement of agreement (Kappa). The Odds ratio, relative risk and confidence interval, Stratified analysis, Logistic regression.</p>			

Code	Credit Hours	Course Title	Prerequisites
1502704	2	Applied regression analysis	

The key functions of linear models: describing the relationships between scale variables and predicting outcomes. Various assumptions and applications on the appropriateness and goodness of fit of various models will be introduced.

Code	Credit Hours	Course Title	Prerequisites
1502705	2	Statistical Health Information System	

Definition of terms, Role of statistics in health information systems, Sources of data, Health status indicators, Indicators for provision of health care (provision of primary health care), Indicators of resources for health, Indicators based on hospital statistics.

Code	Credit Hours	Course Title	Prerequisites
1502706	2	Vital Statistics	

An introduction to population biology including models of simple population growth, demographic rates and life tables and techniques for estimation of demographic parameters. This course surveys population biology topics pertinent to ecology.

Code	Credit Hours	Course Title	Prerequisites
1502707	2	Applied Statistics	

This is a course to teach students from different specialties of public health how to analyze data and interpret the results. By the end of the course the student should be able to determine the type of analysis (parametric or non parametric), test the relation between variables using comparison of means, test the hypothesis, test the relation between variables, using various measures of association.

Code	Credit Hours	Course Title	Prerequisites
1502708	2	Forecasting Techniques	

Advanced analysis of time series, Estimation of trend, Estimation of seasonal variation and seasonal index, Estimation of cyclical variations, Estimation of irregular or random variations, Forecasting, Use of modern statistical models (autoregressive integrated moving average model) to analyze and fit time series data.

Code	Credit Hours	Course Title	Prerequisites
1502709	2	Mathematical background for Biostatistics	
Basic Matrices and determinant analysis. Basic analysis for Different study designs.			

Code	Credit Hours	Course Title	Prerequisites
1502710	2	Introduction to SPSS	
Introduction to computer, Installing SPSS software package, Data definition and access, Data management and modifications, Data presentation: tables and Graphical presentation, Output management and management of files.			

Code	Credit Hours	Course Title	Prerequisites
1502711	2	Database I	
Introduction to computer, Introduction to database, Database Environment, The Relational Model, Database planning and design, Entity Relationship Modeling, Normalization, Database Design Methodology, Worked Examples.			

Code	Credit Hours	Course Title	Prerequisites
1502712	2	Statistical Software Computer Packages (Program 3)	
Additional data entry techniques & using statistical functions, & formatting, Spreadsheet design & Statistical analysis of the data, advanced charts			

Code	Credit Hours	Course Title	Prerequisites
1502713	2	Statistical Health Economics	
Introduction to health economics, Cost minimization analysis, Cost benefit analysis, Cost effectiveness analysis, Examples of the measurement of consequences in an economic evaluation of health care programs.			

Co de	Credit Hours	Course Title	Prerequisites
1502714	2	Statistical Software Computer Packages (Program 2)	
Introduction to computer, Installing Epi Info, Setting up a new database (Make View), Checking and controlling data entry, Data entry using the ENTER program, Data management, presentation and analysis, Exporting and importing files, Analysis of tabulated data – the EPITABLE program, Analysis of tabulated data – the STATCALC program, Calculation of the nutritional indicators using the NutStat program, Using the Epi Map program.			

Code	Credit Hours	Course Title	Prerequisites
1502715	2	Current Topics in Statistical Methods	
This course is designed to cover special topics in theory and methods of Biostatistics that are not covered in regular courses. The topics will depend on the research interest of the instructor and the students. Students will present, defend and discuss the methods used.			

N.B Practical sessions for all courses will include training on suitable statistical soft wares

3- Master's Degree in Public Health and Public Health Sciences (Parasitology and Medical Entomology)

Students should fulfill a total of 38 credit hours

1- Basic requirements: 10 credit hours.

150701, 150702, 150703, 150704

2- Compulsory courses: 14 credit hours.

1503(1)701, 1503(1)702, 1503(1)703, 1503(1)704, 1503(1)705, 1503(1)706, 1503(1)707.

3- Elective courses: 6 credit hours.

1503(1)708, 1503(1)709, 1503(1)710, 1503(1)711, 1503(1)712, 1503(1)713, 1503(1)714, 1503(3)702, 1502707, 1502710, 1507(1)701, 1508(1)730

4- Thesis: 8 credit hours. 1503(1)799

Basic requirements: 10 credit hours

Code	Course Title	Theoretical	Practical/ Clinical	Field	Credit Hours	Prerequisites
150701	Epidemiology and Biostatistics الوبائيات والاحصاءات الحيوية	2			2	
150702	Environmental & Occupational Health الصحة البيئية والمهنية	2			2	
150703	Health Administration & Behavioral Sciences الادارة الصحية والعلوم السلوكية	2			2	
150704	Research Methodology طرق البحث	2	2		3	
150706	Field Studies الدراسات الميدانية	-	-	4	1	
Total		8	2	4	10	

2- Compulsory courses: 14 credit hours

Code	Course Title	Theoretical	Practical/ Clinical	Field	Credit Hours	Prerequisites
1503(1)701	Helminthology علم الديدان الطفيلية	1	2		2	
1503(1)702	Protozoology علم الطفيليات وحيدة الخلية	1	2		2	
1503(1)703	Medical Entomology علم الحشرات الطبية	1	2		2	
1503(1)704	Diagnostic Parasitology تشخيص الطفيليات	1	2		2	
1503(1)705	Immunology of parasitic Infections المناعة للإصابات الطفيلية	2			2	
1503(1)706	Molecular Medical Parasitology علم الطفيليات الجزيئي	1	2		2	
1503(1)707	Skills for Field Projects in Parasitic Infections مهارات المشاريع الحقلية فى الإصابة بالطفيليات	1		4	2	
Total		8	10	4	14	

3- Elective Courses: 6 credit hours

Code	Course Title	Theoretical	Practical/ Clinical	Field	Credit Hours	Prerequisites
1503(1)708	Parasitic zoonosis الطفيليات المشتركة	2			2	
1503(1)709	Epidemiology, Surveillance and Management of Arthropod-borne Parasitic Infection الوبائيات والترصد وإدارة الإصابات الطفيلية المنقولة عن طريق ناقل للمرض	2		2		
1503(1)710	Parasite and vector Ecology. الطفيليات وإيكولوجية ناقل المرض	2		2		
1503(1)711	Vector sampling, Identification & Incrimination أخذ عينات تاقل المرض والتعرف عليه وعلى إصابته بالمرض	1	2	2		
1503(1)712	Advanced Diagnostic Parasitology التشخيص المتقدم للطفيليات	1	2		2	1503(1)704
1503(1)713	Skills for clinical Parasitology المهارات الاكلينيكية فى الطفيليات	1			1	
1503(1)714	Global Parasitic Infections of Public Health Importance and Their Control الاصابات الطفيلية العالمية ذات الاهمية للصحة العامة وطرق التحكم فيها	2		2		
1503(3)702	Comprehensive Vector Control. المكافحة الشاملة لناقلات الأمراض	2			2	
1502707	Applied Statistics الإحصاء التطبيقي	1	2		2	
1502710	Statistical Software Computer Packages (Program 1) البرنامج الأول من مجموعة برامج الحاسب الآلى الإحصائية	1	2		2	Applied statistics 1502707
1507(1)701	Basics of Human Nutrition أسس تغذية الإنسان	2			2	
150705	Ethics and Law for Health Professionals الأخلاقيات والقانون لأفراد الفريق الصحى	1			1	

Course Description

Code	Credit Hours	Course Title	Prerequisites
150701	2	Epidemiology & Biostatistics	
<p>Scope & uses of epidemiology. Natural history of the diseases, requisites for perpetuation of infectious diseases, magnitude and risk factors of non communicable diseases. Basic biostatistics concepts, Basic principle of epidemiologic methods. Presentation of grouped and ungrouped data shape of distribution. Probability concepts and Laws of Probability.</p>			

Code	Credit Hours	Course Title	Prerequisites
150702	2	Environmental and Occupational Health	

Definition of environment and environmental health, water sources, water uses and classification, water pollution, point and non-point sources of pollution, types of pollutants, their source and effect, air pollution, types of air pollutants, their source and effect (including climate change, ozone depletion, acid rain, etc), soil pollution, types of soil pollutants, their source and effect, control measures for different types of pollution. Occupational hazards, occupational diseases and their prevention.

Code	Credit Hours	Course Title	Prerequisites
150703	2	Health Administration & Behavioral Sciences	

This course aims at developing students' knowledge regarding basic managerial concepts, processes, skills and techniques and application of such knowledge in the delivery of high quality health care. Managerial processes covered include: planning, decision making, organizing, leadership, supervision, staffing and evaluation. Among the managerial issues and techniques included are: quality health care and problem solving. In addition, certain skills as communication, motivation, ... etc. will be covered. It also aims at developing students with knowledge and skills regarding role and application of behavioral sciences in the field of public health.

Code	Credit Hours	Course Title	Prerequisites
150704	4	Research Methodology and Field Studies	

This course is intended to prepare students to design and implement research. It also includes statistical design and analysis as well as proposal writing and report slash thesis writing.

Code	Credit Hours	Course Title	Prerequisites
1503(1)701	2	Helminthology	

In depth understanding of parasitology terms, classification of medically important helminths. Geographical distribution, morphological features, life cycles, transmission routes, pathogenesis, clinical manifestations, diagnosis, treatment, prevention and control of intestinal, tissue and blood trematodes; intestinal and tissue cestodes; intestinal and tissue nematodes.

Code	Credit Hours	Course Title	Prerequisites
1503(1)702	2	Protozoology	

Classification of protozoa that infect humans. In depth understanding of the public health importance, the geographical distribution, morphological features, life cycles, methods of transmission, host-parasite interactions, immunological aspects, pathogenesis, clinical manifestations, diagnosis, treatment, and the appropriate intervention programs for their prevention and control.

Code	Credit Hours	Course Title	Prerequisites
1503(1)703	2	Medical Entomology	

In depth knowledge of taxonomy, anatomy and morphology of arthropods of medical importance, mechanisms of pathogen transmission, life cycles, ecology, behavior, and disease transmission, the different methods used for their prevention and control.

Code	Credit Hours	Course Title	Prerequisites
1503(1)704	2	Diagnostic Parasitology	1503(1)801

Comprehensive understanding of parasitological sample collections and preservation, macroscopic as well as microscopical examination of stool, urine, sputum, aspirates, biopsy specimens and blood samples using different diagnostic techniques for identification of diagnostic stages, and quantitative estimation of worm burden. In addition the common serological diagnosis and the quality control of parasitological tests are encompassed.

Code	Credit Hours	Course Title	Prerequisites
1503(1)705	2	Immunology of Parasitic Infections	

In depth understanding the nature of the interaction between parasites and the host immune response, the different types of immune responses elicited by parasites, the mechanisms used by parasites to avoid/ exploit the immune response and the outcomes of the interaction as immunopathology and immunity to infection/disease. The immunological features relating to the major parasitic diseases as immunology of trypanosomatids, toxoplasma, malaria, schistosomes, filarial worms, gut protozoa and nematodes are demonstrated.

Code	Credit Hours	Course Title	Prerequisites
1503(1)706	2	Molecular Medical Parasitology	

The course provides an introduction to molecular biology. It is designed for students interested in molecular mechanisms by which cellular processes are controlled in eukaryotic cells. Topics include molecular genetic techniques and genomics, structure of genes and chromosomes, transcriptional and translational control of gene expression, signal transduction pathways and gene regulation of the cell cycle.

Code	Credit Hours	Course Title	Prerequisites
1503(1)707	2	Skills for Field Projects in Parasitic Infections	
<p>This course emphasizes on introducing students to the scope of field research for Parasitic infections and the range of skills required to undertake rigorous, scientifically sound, ethical research. The course enable the students how to design the field study, formulating good research questions, and know which study design is the most appropriate to address the question; make a data recording form; and create a simple database, enter and clean data, and undertaken simple analyses.</p>			

Code	Credit Hours	Course Title	Prerequisites
1503(1)708	2	Parasitic Zoonoses	
<p>In depth knowledge of definitions and classification of parasitic zoonoses, description of the most important groups of zoonotic parasites and their general morphology, route of transmission, epidemiology and the role of animals in transmission of parasitic zoonoses and identification of risk factors, pathogenesis, clinical manifestations, diagnosis and treatment. Basic principles of disease prevention and control measures in relation to the local cultural, religious or dietary habits.</p>			

Code	Credit Hours	Course Title	Prerequisites
1503(1)709	2	Epidemiology, Surveillance and Management of Arthropod-borne Parasitic Infection	
<p>In depth understanding of the epidemiological and surveillance concepts and terms, estimating vector density and capacity, survival and longevity, vector competence, host preference and host feeding patterns, vector incrimination and detection of pathogens from arthropods, host and pathogens related factors, assessment and prediction of disease risk, methods of case diagnosis, confirmation and reporting, methods of vector control and examples of integrated vector management programs for mosquitoes, black flies, tsetse flies, house flies, tse tse and ticks.</p>			

Code	Credit Hours	Course Title	Prerequisites
1503(1)710	2	Parasite and vector Ecology.	
<p>The ecology, parasite populations, dispersal, growth, and regulation. Adaptations for transmission. Habitats and niches. Host location and host-parasite relationships focusing on biological and mechanical parasitic control to save the environment.</p>			

Code	Credit Hours	Course Title	Prerequisites
1503(1)711	2	Vector Sampling, Identification & Incrimination	

The course is to provide students with a practical understanding of the methods for sampling, identification and vector incrimination applicable to the most important arthropod vectors and snail intermediate hosts as mosquitoes; blackflies; phlebotomine sandflies; tsetse flies; triatomine bugs; myiasis agents; blackflies; midges; ticks; lice and fleas. It includes identification of these major groups of insects in relation to disease transmission and control; various sampling methods, application of a range of modern techniques available for the identification, and understanding the principles and the methods of vector incrimination.

Code	Credit Hours	Course Title	Prerequisites
1503(1)712	2	Advanced Diagnostic Parasitology	1503(1)704

The course is to introduce modern methods used for laboratory diagnosis of the important parasitic diseases of man for clinical and epidemiological purposes. It includes laboratory management and good practice, microscopy, immunoassays for antibody and antigen. Western blots, ELISA, dot ELISA, immunofluorescence, other immunoassays. Nucleic acid techniques in diagnosis. Principles of probe and primer design. Polymerase and ligase chain reaction. Culture-based diagnosis and electron microscopical techniques in diagnosis.

Code	Credit Hours	Course Title	Prerequisites
1503(1)713		Skills For Clinical Parasitology	

This course represents knowledge and skills needed for core aspects of using quantitative and qualitative evidence in forming clinical management decisions regarding parasitic diseases. It includes different types of evidence that are relevant to clinical decision-making and their advantages and disadvantages; diagnosis, prognosis, effective decision making, management and evaluation.

Code	Credit Hours	Course Title	Prerequisites
1503(1)714	2	Global Parasitic Infections of Public Health Importance and Their Control	

The course provides in-depth information on the basic pathogenic mechanisms of selected infectious parasitic diseases that continue to be of major public health importance worldwide with an emphasis on underlying problems for development of effective public health interventions. Topics include malaria, schistosomiasis, African sleeping sickness, filariasis, as well as other infectious parasitic diseases. The course emphasized on the biology of these diseases, prospects for their effective management and control at both the individual and public health level, and of basic human immunology and vaccinology.

Code	Credit Hours	Course Title	Prerequisites
1503(3)702	2	Comprehensive Vector Control	
<p>Preliminary Course: Introduction – Vector control interventions including principles and application of biological, environmental, genetic, behavioral, and chemical methods of control to reduce the incidence of vector borne disease.</p>			

Code	Credit Hours	Course Title	Prerequisites
1502707	2	Applied Statistics	
<p>This is a course to teach students from different specialties of public health how to analyze data and interpret the results. By the end of the course the student should be able to determine the type of analysis (parametric or non parametric), test the relation between variables using comparison of means, test the hypothesis, test the relation between variables, using various measures of association.</p>			

Code	Credit Hours	Course Title	Prerequisites
1502710	2	Statistical Software Computer Packages (Program 1)	
<p>Introduction to computer, Installing SPSS software package, Data definition and access, Data management and modifications, Data analysis and presentation, Graphical presentation, Output management, Saving files, Printing files.</p>			

Code	Credit Hours	Course Title	Prerequisites
1507(1)701	2	Basics of Human Nutrition	
<p>The course aims at giving the student the knowledge about the role of proper nutrition in health of human individuals and the required nutrients, their functions, recommended intakes, food sources of nutrients, the nutritive value of foods and the relation of foods to human health.</p>			

Code	Credit Hours	Course Title	Prerequisites
150705	2	Ethics and Law for Health Professionals	
<p>Definitions of ethics, law, risk management and public health will be clarified. Major ethical and legal conflicts in public health will be addressed. Justifying public health programs and policies will be discussed. Human rights and public health will be explained. The course will also tackle understanding of the public health profession's roles and professional values.</p>			

4- Master's Degree in Public Health (Majoring Tropical Health)

Students should fulfill a total of 38 credit hours:

1- Basic requirements: 10 credit hours.

150701, 150702, 150703, 150704

2- Compulsory courses: 14 credit hours.

1503(2)701, 1503(2)702, 1503(2)703, 1503(2)704, 1503(2)705

3- Elective courses: 6 credit hours.

1503(2)706, 1503(2)707, 1503(2)708, 1503(2)709, 1503(2)710, 150705

4- Thesis: 8 credit hours. 1503(2)799

1- Basic requirements: 10 credit hours

Code	Course Title	Theoretical	Practical/ Clinical	Field	Credit Hours	Prerequisites
150701	Epidemiology and Biostatistics الوبائيات والاحصاءات الحيوية	2			2	
150702	Environmental & Occupational Health الصحة البيئية والمهنية	2			2	
150703	Health Administration & Behavioral Sciences الادارة الصحية والعلوم السلوكية	2			2	
150704	Research Methodology طرق البحث	2	2		3	
150706	Field Studies الدراسات الميدانية	-	-	4	1	
Total		8	2	4	10	

2- Compulsory courses: 14 credit hours

Code	Course Title	Theoretical	Practical/ Clinical	Field	Credit Hours	Prerequisites
1503(2)701	Advanced Course in Infectious Diseases مقرر متقدم فى الأمراض المعدية	3	2		4	
1503(2)702	Non-Infectious Health Problems in the Tropics المشكلات الصحية غير المعدية فى المناطق الحارة	3	2		4	
1503(2)703	Vector-Borne Diseases الأمراض التى تنتقل عن طريق ناقلات الأمراض	1	2		2	
1503(2)704	Tropical Zoonoses الأمراض المشتركة بين الإنسان والحيوان فى المناطق الحارة	2			2	
1503(2)705	Travellers' Health صحة المسافرين	2			2	
Total		12	4		14	

3- Elective Courses: 6 credit hours

Code	Course Title	Theoretical	Practical/ Clinical	Field	Credit Hours	Prerequisites
1503(2)706	Basic Immunology and Vaccinology in the Tropics أساسيات المناعة في المناطق الحارة	2			2	
1503(2)707	Basic Hepatology أساسيات علم الكبد	1	2		2	
1503(2)708	Sexually Transmitted Infections and HIV in the Tropics العدوى التي تنتقل بالممارسة الجنسية ومرض نقص المناعة المكتسبة في المناطق الحارة	2	2		3	
1503(2)709	System-Oriented Infectious Diseases الأمراض المعدية لأجهزة الجسم المختلفة	2			2	
1503(2)710	Special Studies دراسات خاصة	1	2	4	3	
150705	Ethics and Law for Health Professionals الأخلاقيات والقانون لأفراد الفريق الصحي	2			2	

Course Description

Code	Credit Hours	Course Title	Prerequisites
150701	2	Epidemiology & Biostatistics	
<p>Scope & uses of epidemiology. Natural history of the diseases, requisites for perpetuation of infectious diseases, magnitude and risk factors of non communicable diseases. Basic biostatistics concepts, Basic principle of epidemiologic methods. Presentation of grouped and ungrouped data shape of distribution. Probability concepts and Laws of Probability.</p>			

Code	Credit Hours	Course Title	Prerequisites
150702	2	Environmental and Occupational Health	
<p>Definition of environment and environmental health, water sources, water uses and classification, water pollution, point and non-point sources of pollution, types of pollutants, their source and effect, air pollution, types of air pollutants, their source and effect (including climate change, ozone depletion, acid rain, etc), soil pollution, types of soil pollutants, their source and effect, control measures for different types of pollution. Occupational hazards, occupational diseases and their prevention.</p>			

Code	Credit Hours	Course Title	Prerequisites
150703	2	Health Administration & Behavioral Sciences	
<p>This course aims at developing students' knowledge regarding basic managerial concepts, processes, skills and techniques and application of such knowledge in the delivery of high quality health care. Managerial processes covered include: planning, decision making, organizing, leadership, supervision, staffing and evaluation. Among the managerial issues and techniques included are: quality health care and problem solving. In addition, certain skills as communication, motivation, ... etc. will be covered. It also aims at developing students with knowledge and skills regarding role and application of behavioral sciences in the field of public health.</p>			

Code	Credit Hours	Course Title	Prerequisites
150704	4	Research Methodology and Field Studies	
<p>This course is intended to prepare students to design and implement research. It also includes statistical design and analysis as well as proposal writing and report slash thesis writing.</p>			

Code	Credit Hours	Course Title	Prerequisites
1503(2)701	4	Advanced Course in Infectious Diseases	
<p>Provide information about general principles of infection. Infectious diseases will be classified according to the causative agents into viral, bacterial, parasitic, fungal and others. Overview and details of the different pathogens especially of those with public health importance and diseases caused by them will be taught. Principles of diagnosis and antimicrobial therapy will be emphasized.</p>			

Code	Credit Hours	Course Title	Prerequisites
1503(2)702	4	Non-Infectious Health Problems in the Tropics	
<p>The non infectious health problems most commonly encountered in the tropics both in children and adults including malnutrition, diabetes mellitus, hypertension, renal dysfunction, neuropsychiatric disorders, anemia, leukemia, cancers of public health importance.</p>			

Code	Credit Hours	Course Title	Prerequisites
1503(2)703	2	Vector-Borne Diseases	

The role of individual vectors in disease occurrence and identifies key methods for their control, identify major vectors of medical importance, detect and manage different vector borne diseases.

Code	Credit Hours	Course Title	Prerequisites
1503(2)704	2	Tropical Zoonoses	

Definition and different classifications, overview of the different zoonotic diseases of public health importance as regards etiologic agents, reservoirs, sources, modes of transmission, clinical picture, diagnosis, and treatment, prevention and control of zoonotic diseases, problem solving and group discussion.

Code	Credit Hours	Course Title	Prerequisites
1503(2)705	2	Travellers' Health	

Importance of travel health, evaluation of travelers before travel, infectious and non infectious conditions occurring during or immediately following travel, conditions associated with infectious agents, environmental factors, threats to personal security, psychocultural issues. Prevention and control methods.

Code	Credit Hours	Course Title	Prerequisites
1503(2)706	2	Basic Immunology and Vaccinology in the Tropics	

Provide information necessary for understanding the immune system. Following a comprehensive consideration of both cellular and humoral immunity and the complement system, attention is given to the role of the immune system in resistance to infection and the pathogenesis of disease.

Code	Credit Hours	Course Title	Prerequisites
1503(2)707	2	Basic Hepatology	

Liver anatomy, physiology, functions. Classification of liver diseases, viral hepatitis, steatosis, cirrhosis, portal hypertension, cholestasis, ascitis and others.

Code	Credit Hours	Course Title	Prerequisites
1503(2)708	3	Sexually Transmitted Infections and HIV in the Tropics	
<p>Classification of STDs, etiology and management of syphilis, gonorrhoea, non-specific urethritis, candidosis (thrush), trichomoniasis, genital herpes infections and genital warts, pubic lice and scabies. Public health importance, etiology, different presentation and management of HIV.</p>			

Code	Credit Hours	Course Title	Prerequisites
1503(2)709	2	System-Oriented Infectious Diseases	
<p>Defense mechanisms specific to each system of the body. Infections relevant to all systems including cardiovascular system (e.g. infective endocarditis), respiratory (e.g. pneumonia), urinary tract infections, soft tissue infections and others.</p>			

Code	Credit Hours	Course Title	Prerequisites
1503(2)710	3	Special Studies	
<p>Information, training and/or skills relevant to specific subject probably related to that of the master thesis.</p>			

Code	Credit Hours	Course Title	Prerequisites
150705	2	Ethics and Law for Health Professionals	
<p>Definitions of ethics, law, risk management and public health will be clarified. Major ethical and legal conflicts in public health will be addressed. Justifying public health programs and policies will be discussed. Human rights and public health will be explained. The course will also tackle understanding of the public health profession's roles and professional values.</p>			

5- Master's Degree in Public Health and Public Health Sciences (Majoring Vector Control & Pesticide Risks)

Students should fulfill a total of 38 credit hours

1- Basic requirements: 10 credit hours.

150701, 150702, 150703, 150704

2- Compulsory courses: 14 credit hours.

1503(3)701, 1503(3)702, 1503(3)703, 1503(3)704, 1503(3)705, 1503(3)706, 1503(3)707

3- Elective courses: 6 credit hours.

1503(3)708, 1503(3)721, 1503(3)722, 1503(3)723, 1503(3)724, 1503(3)725, 1503(3)726, 1503(3)727, 1503(3)728, 1503(3)729.

4- Thesis: 8 credit hours. 1503(3)799

1- Basic requirements: 10 credit hours

Code	Course Title	Theoretical	Practical/ Clinical	Field	Credit Hours	Prerequisites
150701	Epidemiology and Biostatistics الوبائيات والاحصاءات الحيوية	2			2	
150702	Environmental & Occupational Health الصحة البيئية والمهنية	2			2	
150703	Health Administration & Behavioral Sciences الادارة الصحية والعلوم السلوكية	2			2	
150704	Research Methodology طرق البحث	2	2		3	
150706	Field Studies الدراسات الميدانية	-	-	4	1	
Total		8	2	4	10	

2- Compulsory courses: 14 credit hours

Code	Course Title	Theoretical	Practical/ Clinical	Field	Credit Hours	Prerequisites
1503(3)701	Vector Biology and Public Health Importance. حيوية ناقلات الأمراض وأهميتها في الصحة العامة.	1	2		2	
1503(3)702	Comprehensive Vector Control. المكافحة الشاملة لناقلات الأمراض	2			2	
1503(3)703	Chemical Structure, Classification, Formulation and Preparation of Pesticides. التركيب الكيميائي وتصنيف وتجهيز وتحضير المبيدات.	2			2	
1503(3)704	General Toxicology of Pesticides and Their Mode of Action. علم سمية المبيدات العام وطريقة تأثيرها.	1	2		2	
1503(3)705	Pesticide Residues and their Risk Assessment. متبقيات المبيدات وأساسيات تقييم مخاطرها.	2			2	
1503(3)706	Bioassay, Resistance and Selectivity of Pesticides. التقييم الحيوي ومقاومة واختيارية المبيدات.	1	2		2	
1503(3)707	Vector Sampling, Identification & Incrimination and Monitoring & Evaluation of Vector Control Activities. أخذ العينات والتعريف وتجريم ناقلات الأمراض ومراقبة وتقييم أنشطة مكافحة ناقلات الأمراض.	1	2		2	
Total		10	8		14	

3- Elective Courses: 6 credit hours

Code	Course Title	Theoretical	Practical/ Clinical	Field	Credit Hours	Prerequisites
1503(3)720	General Toxicology of Pesticides and Their Mode of Action and Recognition and Management of Pesticide Poisoning علم سمية المبيدات العام وطريقة تأثيرها وتدارك وإدارة السمية بالمبيدات	1	2		2	
1503(3)721	Critical Reading قراءات نقدية	2			2	
1503(3)722	Biopesticides and Genetic Methods in Vector Control المبيدات الحيوية والطرق الوراثية في مكافحة ناقلات الأمراض	2			2	
1503(3)723	Fate of Pesticides and Their Environment Impact. البيئي مصير المبيدات وأثرها	2			2	
1503(3)724	Integrated Vector/Pest Management إداره المكافحة المتكاملة	2			2	
1503(3)725	Vector Ecology and Behavior تبيؤ وسلوك ناقلات الأمراض	2			2	
1503(3)726	Principles of Pesticide Risk Assessment أساسيات تقييم مخاطر المبيدات	2			2	
1503(3)727	Equipments Used in the Field of Vector Control And Their Application المعدات المستخدمة في مجال مكافحة ناقلات الأمراض وتطبيقاتها	1	2		2	
1503(3)728	New Strategies in the Field of Vector Control الاستراتيجيات الحديثة في مجال مكافحة ناقلات الأمراض	2			2	
1503(3)729	Instrumentation and Techniques in Pesticides Laboratories الأجهزة والطرق المعملية في معامل المبيدات	1	2		2	

Course Description

Code	Credit Hours	Course Title	Prerequisites
150701	2	Epidemiology & Biostatistics	
<p>Scope & uses of epidemiology. Natural history of the diseases, requisites for perpetuation of infectious diseases, magnitude and risk factors of non communicable diseases. Basic biostatistics concepts, Basic principle of epidemiologic methods. Presentation of grouped and ungrouped data shape of distribution. Probability concepts and Laws of Probability.</p>			

Code	Credit Hours	Course Title	Prerequisites
150702	2	Environmental and Occupational Health	
<p>Definition of environment and environmental health, water sources, water uses and classification, water pollution, point and non-point sources of pollution, types of pollutants, their source and effect, air pollution, types of air pollutants, their source and effect (including climate change, ozone depletion, acid rain, etc), soil pollution, types of soil pollutants, their source and effect, control measures for different types of pollution. Occupational hazards, occupational diseases and their prevention.</p>			

Code	Credit Hours	Course Title	Prerequisites
150703	2	Health Administration & Behavioral Sciences	
<p>This course aims at developing students' knowledge regarding basic managerial concepts, processes, skills and techniques and application of such knowledge in the delivery of high quality health care. Managerial processes covered include: planning, decision making, organizing, leadership, supervision, staffing and evaluation. Among the managerial issues and techniques included are: quality health care and problem solving. In addition, certain skills as communication, motivation, ... etc. will be covered. It also aims at developing students with knowledge and skills regarding role and application of behavioral sciences in the field of public health.</p>			

Code	Credit Hours	Course Title	Prerequisites
150704	4	Research Methodology and Field Studies	

This course is intended to prepare students to design and implement research. It also includes statistical design and analysis as well as proposal writing and report slash thesis writing.

Code	Credit Hours	Course Title	Prerequisites
1503(3)701	2	Vector Biology and Public Health Importance	

Preliminary Course: Introduction - Definition of vector - (Relation of vectors to other animals – Taxonomy and morphology of vectors of public health importance - Life cycle of important vectors - Role of vectors in public health - Practical laboratory identification and breeding of important vectors of diseases.

Code	Credit Hours	Course Title	Prerequisites
1503(3)702	2	Comprehensive Vector Control	

Preliminary Course: Introduction – Vector control interventions including principles and application of biological, environmental, genetic, behavioral, and chemical methods of control to reduce the incidence of vector borne disease.

Code	Credit Hours	Course Title	Prerequisites
1503(3)703	2	Chemical Structure, Classification, Formulation and Preparation of Pesticides	

Preliminary Course: Introduction - Definition of pesticides - General characteristics of the ideal pesticides - Classification of pesticides according to their chemical structure including, insecticides, molluscicides, herbicides and rodenticides ...etc - Chemical and physical properties of different pesticides - Types of formulations and preparations - Importance of diluents - Demonstration in the laboratory for different formulations and preparations and evaluation of stability of the preparations.

Code	Credit Hours	Course Title	Prerequisites
1503(3)704	2	General Toxicology of Pesticides And Their Mode of Action	
<p>Preliminary Course: Definitions of toxicology – Different fields of toxicology - Classification of different types of pesticides according to their mode of action - Anatomy and biochemistry of the nervous system in both mammals and insects - Modes of actions of different types and classes of pesticides - Pharmacokinetic phase (penetration, distribution, metabolism & excretion) and pharmacodynamic phase of pesticide toxicology by insects, mammals and microorganisms.</p>			

Code	Credit Hours	Course Title	Prerequisites
1503(3)705	2	Pesticide Residues and Their Risk Assessment	
<p>Introduction – Environmental alteration of pesticides residues – Dynamics of pesticides movement in the animal body – Movement of pesticides in the environment – Effects of pesticides on wild life and non-target species – Recent techniques used for determination of pesticides residues – Toxicity – Hazard – Types of risk assessment and their focus – Risk measures and indicators - Hazard identification – Hazard characterization – Dose-response assessment - Exposure assessment – Risk characterization.</p>			

Code	Credit Hours	Course Title	Prerequisites
1503(3)706	2	Bioassay, Resistance and Selectivity of Pesticides	
<p>Preliminary Course: Introduction - Principles of pesticides testing - Standardization of test organisms for bioassay - Demonstration in the laboratory for testing pesticides against different vectors.- Factors influencing pesticide dynamics in animals and insects - Vertebrate selectivity ratios and their significance - Selectivity at species level - Resistance as an acquired character - Types of resistance - Genetics bases of resistance - Cross resistance - Causes of resistance – Different approaches to resistance management - Practical laboratory tests of selectivity and resistance towards pesticides in different species.</p>			

Code	Credit Hours	Course Title	Prerequisites
1503(3)707	2	Vector Sampling, Identification & Incrimination And Monitoring & Evaluation of Vector Control Activities	
<p>Importance of accurate identification of the major groups of vectors – Selection of appropriate sampling methods for the major groups of vectors – Identification of the major groups of vectors – Vector surveillance - Application of techniques for the identification (species complex identification) - Principles and methods of vector incrimination i.e. vector infection and infectivity, duration of the genotrophic cycle, identification of blood meal - Monitoring indicators and their relevance: Operational and entomological/vectorial impact indicators – Disease impact indicators – Integrated use of control methods – Cost-effectiveness in vector control.</p>			

Code	Credit Hours	Course Title	Prerequisites
1503(3)720	2	General Toxicology of Pesticides And Their Mode of Action and Recognition and Management of Pesticide Poisoning	
<p>Preliminary Course: Definitions of toxicology – Different fields of toxicology - Classification of different types of pesticides according to their mode of action - Anatomy and biochemistry of the nervous system in both mammals and insects - Modes of actions of different types and classes of pesticides - Pharmacokinetic phase (penetration, distribution, metabolism & excretion) and pharmacodynamic phase of pesticide toxicology by insects, mammals and microorganisms – Emergency methods and treatment of pesticides toxicity in man. Classification of different pesticides according to their modes of action.- Modes of actions of different types and classes of pesticides - Management of acute pesticide poisonings – General Principles in the Management of Acute Pesticide Poisonings – Diagnosis/signs & symptoms of different classes of pesticide poisoning - First aid treatment - Treatment of different classes of pesticides poisoning - Case studies – Prevention of injury by pesticides.</p>			

Code	Credit Hours	Course Title	Prerequisites
1503(3)721	2	Critical Reading	
<p>Provide students with a perspective on the development and use of vector control through discussion of key vector control strategies – development of skills to find, interpret and criticize information in vector control and pesticides risks literature.</p>			

Code	Credit Hours	Course Title	Prerequisites
1503(3)722	2	Biopesticides and Genetic Methods in Vector Control	
<p>Biochemical pesticides i.e Pheromones - Microbial pesticides – Genetically modified plants or microorganisms - Botanical pesticides – Essential oils as pesticides - Principles involved in the control of insect population by the release of sterile insect - Factors to be considered in appraising the feasibility of employing the sterile insect release technique - Basis requirements and factors that determine feasibility of employing the sterile insect release methods - Chemosterilants for insect control - The relation between insect sterility and dominant lethality - Induction of dominant lethal mutations by radiation and chemicals and its cytogenetic basis and dose response curve.</p>			

Code	Credit Hours	Course Title	Prerequisites
1503(3)723	2	Fate of Pesticides and their Environmental Impact.	
<p>Introduction – Definition of environmental risk factors – Factor affecting pesticides fate in the environment: (Physical and chemical properties of pesticides, Bio-Accumulation and Bio-Magnification, Adsorption, Absorption, Volatility.) – Natural processes that affect pesticides fate (surface Run off, leaching, soil erosion.....). Biotransformation of pesticides in water, soil, air, animal bodies, plants and microorganisms – Environmental hazards of pesticide use (pesticides in water, soil and in air) – Hazards of pesticides to man and other non target species – Protection in the environment: protecting fish and other aquatic life, protecting birds, wild life and domestic animals.</p>			

Code	Credit Hours	Course Title	Prerequisites
1503(3)724	2	Integrated Vector/Pest Management.	
<p>Introduction – Identification of the vector-borne diseases problem related to the general health situation and planning of comprehensive vector control activities in the prevailing epidemiological and socio-economic situation and the resources available - Demonstration of basic knowledge and skills in vector-borne disease control - Demonstration of basic knowledge and skills in the planning processes be able to contribute to the development of a plan for implementing comprehensive disease control activities - Understanding of data management and analysis relevant to vector-borne disease surveillance and control.</p>			

Code	Credit Hours	Course Title	Prerequisites
1503(3)725	2	Vector Ecology and Behavior	
<p>Definition of vector ecology – Bionomics - Methods of collecting ecological data on vectors (Surveys, Intensive ecological studies) - Surveillance techniques - Significant ecological variables - The inter-relationship of ecology and surveillance -Role of ecology in vector control.</p>			

Code	Credit Hours	Course Title	Prerequisites
1503(3)726	2	Principles of Pesticide Risk Assessment	
Introduction – Definitions - Toxicity – Hazard – Types of risk assessment and their focus – Risk measures and indicators - Hazard identification – Hazard characterization - Dose-response assessment - Exposure assessment - Risk characterization.			

Code	Credit Hours	Course Title	Prerequisites
1503(3)727	2	Equipments Used in the Field of Vector Control and Their Application	
Introduction - Principal methods of pesticides application - Factors to be considered for effective application of pesticides - Components of application equipment i.e nozzles, pressure regulating devices, pumps for liquids, compressors, blowers, and spray tanks., Ground equipments for the application of sprays, mists, aerosols, thermal fogs and solid materials - Use of aircraft in vector control - Demonstration of different types of equipments and practical field of use such equipments.			

Code	Credit Hours	Course Title	Prerequisites
1503(3)728	2	New Strategies in the Field of Vector Control	
Genomics – Genetics manipulation – Space technology and GIS – Biological control – Environmental management – Community participation and health education – Economics of vector control strategies for controlling tropical disease.			

Code	Credit Hours	Course Title	Prerequisites
1503(3)729	2	Instrumentation and Techniques in Pesticides Laboratories	
Introduction - Experimental Animals: rearing and models. Sample collection – Sample preparation - Extraction, clean up, and concentration - Instrumentation - Separation and detection - Concentration calculation and preparation - Insect and animal treatment - animal scarification - Dissection and organs preparation - Biological parameters determination (Why using bio-indicators/markers - Enzymes - hormones - neurotransmitters - other biological parameters.) - Data handling and reporting - Quality control, quality assurance, and safety.			

6- Master's Degree in Public Health (Majoring Primary Health Care)

Students should fulfill a total of 38 credit hours:

1- Basic requirements: 10 credit hours.

150701, 150702, 150703, 150704

2- Compulsory courses: 14 credit hours.

1503(4)701, 1503(4)702, 1503(4)703, 1503(4)704, 1503(4)705

3- Elective courses: 6 credit hours.

1503(4)711, 1503(4)712, 1503(4)713, 1503(4)714, 1503(4)715, 1503(4)716,
1503(4)717, 1503(4)718, 1503(4)719, 1503(4)720, 1503(4)721, 1503(4)722,
1503(4)723

4- Thesis: 8 credit hours. 1503(4)799

1- Basic requirements: 10 credit hours

Code	Course Title	Theoretical	Practical/ Clinical	Field	Credit Hours	Prerequisites
150701	Epidemiology and Biostatistics الوبائيات والاحصاءات الحيوية	2			2	
150702	Environmental & Occupational Health الصحة البيئية والمهنية	2			2	
150703	Health Administration & Behavioral Sciences الادارة الصحية والعلوم السلوكية	2			2	
150704	Research Methodology طرق البحث	2	2		3	
150706	Field Studies الدراسات الميدانية	-	-	4	1	
Total		8	2	4	10	

2- Compulsory courses: 14 credit hours

Code	Course Title	Theoretical	Practical/ Clinical	Field	Credit Hours	Prerequisites
1503(4)701	Family Medical Consultations استشارات طب الأسرة	2	2		3	
1503(4)702	General Medicine Problems in PHC/FM مشاكل الأمراض الباطنة فى الرعاية الصحية الأولية /طب الأسرة	2	2		3	
1503(4)703	Gynecologic, Obstetric, and Pediatric Problems in PHC/FM مشاكل أمراض النساء والتوليد والأطفال فى الرعاية الصحية الأولية/ طب الأسرة	2	2		3	
1503(4)704	Emergencies and Surgical Problems in PHC/FM الطوارئ والمشاكل الجراحية فى الرعاية الصحية الأولية/ طب الأسرة	1	2		2	
1503(4)705	Eye, ENT, and Dermatological Problems in PHC/FM مشاكل العيون والأنف والأذن والحنجرة الجلدية فى الرعاية الصحية الأولية / طب الأسرة	2	2		3	
Total		9	10		14	

3- Elective Courses: 6 credit hours

Code	Course Title	Theoretical	Practical/ Clinical	Field	Credit Hours	Prerequisites
1503(4)711	Family Health Lifestyle Modification تعديل نمط حياة الأسرة الصحي	1	2		2	
1503(4)712	Evidence Based Family Medicine طب الأسرة المبني على الدليل	1	2		2	
1503(4)713	PHC /FM Quality Management ادارة جودة الرعاية الصحية الأولية/ طب الأسرة	1	2		2	
1503(4)714	Special Need Groups Primary Health Care الرعاية الصحية الأولية للفئات ذات الاحتياجات الخاصة	1	2		2	
1503(4)715	Neuro-psychiatric PHC/FM الرعاية الصحية الأولية/ طب الأسرة النفس عصبي	1	2		2	
1503(4)716	PHC/FM Information System نظام المعلومات للرعاية الصحية الأولية/ طب الاسرة	1	2		2	
1503(4)717	Allergies in PHC/FM الحساسية في الرعاية الصحية الأولية/ طب الأسرة	1	2		2	
1503(4)718	Family Physicians Respiratory Problems Management تعامل أطباء الأسرة مع المشاكل التنفسية	1	2		2	
1503(4)719	Family Physicians Cardiovascular Problems Management تعامل أطباء الأسرة مع مشاكل القلب	1	2		2	
1503(4)720	Family Physicians Renal Problems Management تعامل أطباء الأسرة مع مشاكل الكلى	1	2		2	
1503(4)721	Therapeutic Choices in PHC/FM الخيارات العلاجية في الرعاية الصحية الأولية/ طب الأسرة	1	2		2	
1503(4)722	PHC/FM Preventive Medicine الطب الوقائي للرعاية الصحية الأولية/ طب الأسرة	1	2		2	
1503(4)723	PHC/FM Patient Safety سلامة مريض الرعاية الصحية الأولية/ طب الأسرة	1	2		2	

Course Description

Code	Credit Hours	Course Title	Prerequisites
150701	2	Epidemiology & Biostatistics	
<p>Scope & uses of epidemiology. Natural history of the diseases, requisites for perpetuation of infectious diseases, magnitude and risk factors of non communicable diseases. Basic biostatistics concepts, Basic principle of epidemiologic methods. Presentation of grouped and ungrouped data shape of distribution. Probability concepts and Laws of Probability.</p>			

Code	Credit Hours	Course Title	Prerequisites
150702	2	Environmental and Occupational Health	
<p>Definition of environment and environmental health, water sources, water uses and classification, water pollution, point and non-point sources of pollution, types of pollutants, their source and effect, air pollution, types of air pollutants, their source and effect (including climate change, ozone depletion, acid rain, etc), soil pollution, types of soil pollutants, their source and effect, control measures for different types of pollution. Occupational hazards, occupational diseases and their prevention.</p>			

Code	Credit Hours	Course Title	Prerequisites
150703	2	Health Administration & Behavioral Sciences	
<p>This course aims at developing students' knowledge regarding basic managerial concepts, processes, skills and techniques and application of such knowledge in the delivery of high quality health care. Managerial processes covered include: planning, decision making, organizing, leadership, supervision, staffing and evaluation. Among the managerial issues and techniques included are: quality health care and problem solving. In addition, certain skills as communication, motivation, ... etc. will be covered. It also aims at developing students with knowledge and skills regarding role and application of behavioral sciences in the field of public health.</p>			

Code	Credit Hours	Course Title	Prerequisites
150704	4	Research methodology and field studies	
<p>This course is intended to prepare students to design and implement research. It also includes statistical design and analysis as well as proposal writing and report slash thesis writing.</p>			

Code	Credit Hours	Course Title	Prerequisites
1503(4)701	3	Family Medical Consultations	
<p>Primary health care/ family medicine principles, and scope. The family medicine consultation and counseling session and diagnostic models and skills. Essential health care for different age groups. Problem-based integrated basic health activity packages. Physician communication skills and patient compliance. Health impacts of family cycle, dynamics and dysfunction including violence. Community involvement and behavioural change in primary care.</p>			

Code	Credit Hours	Course Title	Prerequisites
1503(4)702	3	General Medicine Problems in PHC/FM	
<p>Internal medicine clinical diagnosis and treatment regimens of common diseases in family practice. Holistic PHC/FM management. Referral of general and psychiatric cases. First aid and life saving procedures for medical emergencies. Prevention and control of endemic and communicable medical problems and follow up of chronic diseases. Skin manifestations of systemic disorders in PHC/FM</p>			

Code	Credit Hours	Course Title	Prerequisites
1503(4)703	3	Gynecologic, Obstetric and Pediatric Problems in PHC/FM	
<p>Pediatric population group: Application of family practice quality guidelines in: (Breast feeding and weaning practices, Monitoring of health, well being, physical and mental development of the child, Integrated management of childhood illness. Early detection and management of acute and chronic pediatric diseases, and handicapping conditions). Pediatric accidents and emergencies. Female population group: Application of family practice quality guidelines in: (Antenatal, natal and postnatal care. Early detection and management of high risk problems. Family planning methods and counseling. Early detection and management of common gynecological problems). Women accidents and emergencies.</p>			

Code	Credit Hours	Course Title	Prerequisites
1503(4)704	2	Emergencies and Surgical Problems in PHC/FM	
<p>Emergency life saving procedures and cardiopulmonary resuscitation skills. Diagnosis, management and/or referral of acute surgical conditions, traumatic emergencies; burn and fracture first aid, Poisoning. Home accidents and injuries.</p>			

Code	Credit Hours	Course Title	Prerequisites
1503(4)705	3	Eye, ENT and Dermatologic Problems in PHC/FM.	
<p>Clinical evaluation of complaints related to the eyes, ENT and dermatologic diseases commonly found in Egypt. Holistic primary management of common ophthalmological, ENT and dermatologic disorders and/or appropriate referral. Prevention and control of common eye, ENT and dermatologic health problems in context of PHC/FM.</p>			

Code	Credit Hours	Course Title	Prerequisites
1503(4)711	2	Family Health Lifestyle Modification	
<p>Lifestyle related diseases and modifiable risk factors (Cardiovascular diseases, stress, obesity, gastrointestinal problems, cancer, smoking, sedentary life and nutritional habits...etc). Diseases management through lifestyle modification. Counseling and behavioral modification in family practice.</p>			

Code	Credit Hours	Course Title	Prerequisites
1503(4)712	2	Evidence Based Family Medicine	
<p>Introduction to Evidence-Based Medicine (EBM). Introduction to Evidence based family medicine. Practical critical reading and evidence based problem solving.</p>			

Code	Credit Hours	Course Title	Prerequisites
1503(4)713	2	PHC/FM Quality Management	
<p>Management of PHC/family practice activities, and identification and solving of PHC/FM management problems (management audit) PHC/FM information system. Total quality management in PHC/FM.</p>			

Code	Credit Hours	Course Title	Prerequisites
1503(4)714	2	Special Need Groups Primary Health Care	
<p>Identification of special need groups in family practice. Management and rehabilitation of special need groups in family practice. Family and social support and community involvement in management of special need groups. Home care of special need groups. Care of terminally ill patients.</p>			

Code	Credit Hours	Course Title	Prerequisites
1503(4)715	2	Neuro-psychiatric PHC/FM	
Behavioral and psychological problems commonly encountered in family practice. Counseling models in family practice. Early diagnosis and management of behavioral and psychological problems in family practice. Breaking bad news and family support in family practice. Early diagnosis and management of neurological problems in family practice. Appropriate and timely referral of neurological problems in family practice. First aid management of neurological emergencies.			

Code	Credit Hours	Course Title	Prerequisites
1503(4)716	2	PHC/FM Information System	
PHC/FM resources. PHC/FM information system. Traditional family files versus electronic family file. Incorporation of information technologies in family practice. Referral agreements in PHC/FM. Data quality management in PHC/FM.			

Code	Credit Hours	Course Title	Prerequisites
1503(4)717	2	Allergies in PHC/FM	
Common allergic conditions encountered in PHC/FM. Guidelines for diagnosis and management of allergic conditions in PHC/FM. Referral and follow up.			

Code	Credit Hours	Course Title	Prerequisites
1503(4)718	2	Family Physicians Respiratory Problems Management	
Common respiratory problems in family practice and their differential diagnosis. Guideline for management of chest infections in family practice. Guidelines for management of wheezy chest in family practice. Tuberculosis DOTS strategy. Management of respiratory cases in family practice.			

Code	Credit Hours	Course Title	Prerequisites
1503(4)719	2	Family Physicians Cardiovascular Problems Management	
Cardiovascular Complaints commonly encountered in family practice. Cardiovascular risk assessment, scoring and management in family practice. Hypertension management in family practice. Guidelines for hypertension and cardiovascular diseases management in PHC/FM level. Cardiovascular emergencies and first aid measures Referral and consultation.			

Code	Credit Hours	Course Title	Prerequisites
1503(4)720	2	Family Physicians Renal Problems Management	
Common renal problems in family practice and their differential diagnosis. Guidelines for management of urinary tract infections in family practice. Guideline for diagnosis and management of renal stones in PHC/FM. Referral and follow up.			

Code	Credit Hours	Course Title	Prerequisites
1503(4)721	2	Therapeutic Choices in PHC/FM	
Evidence-based therapeutic choices in PHC/FM. PC prophylactic management of some medical conditions. Medication use and prohibitions in pregnancy. Herbal medicine. Alternative and complementary medicine in PHC/FM. Drug resistance management.			

Code	Credit Hours	Course Title	Prerequisites
1503(4)722	2	PHC/FM Preventive Medicine	
Evidence-based primary health care preventive practices. Health maintenance and promotion in PHC/FM.			

Code	Credit Hours	Course Title	Prerequisites
1503(4)723	2	PHC/FM Patient Safety	
Development of core competencies for patient safety practice in PHC/FM. Promoting patient safety in practice in PHC/FM. PHC/FM patient safety indicators. Communicating and collaborating to promote continuous quality improvement. Institutionalizing a culture of patient safety in PHC/FM. Encouraging the use of standardized protocols. Using informatics and technology to improve PHC/FM safety. Emphasizing a systems approach to safe and quality care. Considering human factors and safety design to prevent patient safety incidents. Handling patient safety-related incidents in a timely and open manner. Medical ethics and prevention of malpractice as a base to patient safety. Infection control PHC/FM practice.			

7- Master's Degree in Public Health and Public Health Sciences (Majoring Microbiology)

Students should fulfill a total of 38 credit hours:

1- Basic requirements: 10 credit hours.

150701, 150702, 150703, 150704, 150706

2- Compulsory courses: 14 credit hours.

1504701, 1504702, 1504703, 1504704, 1504705, 1504706, 1504707

3- Elective courses: 6 credit hours.

1504708, 1504709, 1504710, 1504711, 15047612, 15047613, 1504714, 1504715, 1504716, 1504717, 150705

4- Thesis: 8 credit hours. 1504799

1- Basic requirements: 10 credit hours

Code	Course Title	Theoretical	Practical/ Clinical	Field	Credit Hours	Prerequisites
150701	Epidemiology and Biostatistics الوبائيات والاحصاءات الحيوية	2			2	
150702	Environmental & Occupational Health الصحة البيئية والمهنية	2			2	
150703	Health Administration & Behavioral Sciences الادارة الصحية والعلوم السلوكية	2			2	
150704	Research Methodology طرق البحث	2	2		3	
150706	Field Studies الدراسات الميدانية	-	-	4	1	
Total		8	2	4	10	

2- Compulsory courses: 14 credit hours

Code	Course Title	Theoretical	Practical/ Clinical	Field	Credit Hours	Prerequisites
1504701	Introductory Microbiology مقدمة في الميكروبيولوجي	1	2		2	
1504702	Immunology المناعة	1	2		2	
1504703	Basic Mycology and Virology مبادئ علم الفطريات والفيروسات	1	2		2	
1504704	Basic Sanitary Microbiology مبادئ الميكروبيولوجيا الصحية	1	2		2	
1504705	Systematic Bacteriology البكتريولوجيا الجهازية	1	2		2	
1504706	Bacteriology in Clinical Practice البكتريولوجيا في الممارسات الإكلينيكية	1	2		2	
1504707	Medical Virology الفيروسات الطبية	1	2		2	
Total		7	14		14	

3- Elective Courses: 6 credit hours

Code	Course Title	Theoretical	Practical/ Clinical	Field	Credit Hours	Prerequisites
1504708	Diagnostic Virology الفيروسات التشخيصية	2	0		2	
1504709	Zoonotic Mycotic Infections العدوى الفطرية الحيوانية	2			2	
1504710	Sanitary Mycology الفطريات الصحية	1	2		2	
1504711	Microbiological Analysis of Food التحليل الميكروبي للأغذية	1	2		2	
1504712	Emerging Infectious Diseases الأمراض المعدية المستجدة	2			2	
1504713	Standard Operating Procedures for Microbiology إجراءات التشغيل النموذجية في الميكروبيولوجي	2			2	
1504714	Biosafety in Microbiological Laboratory الأمان الحيوي في معمل الميكروبيولوجي	2			2	
1504715	Health care Associated Infections العدوى المصاحبة للرعاية الصحية	2			2	
1504716	Biotechnology التقنية الحيوية	1	2		2	
1504717	Antimicrobial Chemotherapeutics العلاجات الكيميائية المضادة للميكروبات	1	2		2	
150705	Ethics and Law for Health Professionals الآخلاقيات والقانون لأفراد الفريق الصحي	1			1	

مقرر تكميلي لخريجي كلية العلوم كشرط أساسي قبل التسجيل لدرجة الماجستير

Code	Course Title	Theoretical	Practical	Credit Hours	Prerequisites
1504718	Anatomy and Physiology of Human Body تشريح ووظائف جسم الإنسان	2		2	

Course Description

Code	Credit Hours	Course Title	Prerequisites
150701	2	Epidemiology & Biostatistics	
<p>Scope & uses of epidemiology. Natural history of the diseases, requisites for perpetuation of infectious diseases, magnitude and risk factors of non communicable diseases. Basic biostatistics concepts, Basic principle of epidemiologic methods. Presentation of grouped and ungrouped data shape of distribution. Probability concepts and Laws of Probability.</p>			

Code	Credit Hours	Course Title	Prerequisites
150702	2	Environmental and Occupational Health	
<p>Definition of environment and environmental health, water sources, water uses and classification, water pollution, point and non-point sources of pollution, types of pollutants, their source and effect, air pollution, types of air pollutants, their source and effect (including climate change, ozone depletion, acid rain, etc), soil pollution, types of soil pollutants, their source and effect, control measures for different types of pollution. Occupational hazards, occupational diseases and their prevention.</p>			

Code	Credit Hours	Course Title	Prerequisites
150703	2	Health Administration & Behavioral Sciences	
<p>This course aims at developing students' knowledge regarding basic managerial concepts, processes, skills and techniques and application of such knowledge in the delivery of high quality health care. Managerial processes covered include: planning, decision making, organizing, leadership, supervision, staffing and evaluation. Among the managerial issues and techniques included are: quality health care and problem solving. In addition, certain skills as communication, motivation, ... etc. will be covered. It also aims at developing students with knowledge and skills regarding role and application of behavioral sciences in the field of public health.</p>			

Code	Credit Hours	Course Title	Prerequisites
150704 150706	4	Research Methodology Field Studies	
<p>This course is intended to prepare students to design and implement research. It also includes statistical design and analysis as well as proposal writing and report slash thesis writing.</p>			

Code	Credit Hours	Course Title	Prerequisites
1504701	2	Introductory Microbiology	
<p>Introductory Microbiology aims to broaden the knowledge, intellectual activity and practical experience of students regarding microorganisms (bacteria). Students will acquire information about how bacterial structure, replication, function, nutrition and resistance enable such minute creatures to survive in the different types of the surrounding environment. It will also include the physical and chemical antimicrobial means of controlling such microorganisms. In addition to the laboratory sessions which will provide detailed practical experience regarding growth, staining microscopic examination, performance of different biochemical tests to identify, and examine the activities of microbes.</p>			

Code	Credit Hours	Course Title	Prerequisites
1504702	2	Immunology	
<p>This is course will cover the molecular, cellular, and anatomic bases for innate and adaptive immune responses; T and B lymphocytes, helper and killer cells, macrophages, their interactions and significance; immune effector mechanisms including complement and cytokines in immunity to infectious disease, allergy, and autoimmunity, and manipulation of the immune response. In addition laboratory sessions on different serologic techniques will be covered.</p>			

Code	Credit Hours	Course Title	Prerequisites
1504703	2	Basic Mycology and Virology	
<p>This is a course on human fungal diseases and their corresponding organisms. Emphasis will be on recognition and identification of representative of the pathogens. An overview of the filamentous “higher” bacteria (Actinomycetes & Nocardia) will be covered, as per tradition. Also this course will cover the description, classification, and replication of human viruses as well as the processes of viral infections, viral genetics, laboratory diagnosis, and prevention and treatment of viral infections.</p>			

Code	Credit Hours	Course Title	Prerequisites
1504704	2	Basic Sanitary Microbiology	
<p>This course deals with the standard methods used for determining the sanitary quality of water, food, and milk (suitability for use and degree of contamination). The course also emphasizes the different diseases transmitted through the above common sources.</p>			

Code	Credit Hours	Course Title	Prerequisites
1504705	2	Systematic Bacteriology	
<p>This course deals with human pathogenic bacteria from both theoretical and practical aspects. Students will be acquainted with principles of bacterial pathogenicity, host-parasite interactions, diagnosis, and prevention of infections. In addition to the macroscopic and microscopic characters of such organisms their biochemical reactions and antimicrobial resistance profile. At the end of the course students will be able to identify different unknown pathogenic bacteria.</p>			

Code	Credit Hours	Course Title	Prerequisites
1504706	2	Bacteriology in Clinical Practice	
<p>In this course the students will learn the art of proper diagnosis of different bacterial infections. They will acquire knowledge about anatomy and symptoms of infections related to different anatomical sites, and most probable pathogens causing such infections. In addition to different methods of collection and manipulation of clinical specimens till reaching the final proper diagnosis. Moreover, the intellectual activity of students will be challenged through different case studies.</p>			

Code	Credit Hours	Course Title	Prerequisites
1504707	2	Medical Virology	
<p>This is course will cover the clinical aspects, pathogenesis, epidemiology, prevention and strategies for diagnosis, follow-up and monitoring of viral diseases. The module will deal with the study of major clinical syndromes caused by viruses.</p>			

Code	Credit Hours	Course Title	Prerequisites
1504708	2	Diagnostic Virology	
<p>This course will cover the clinical aspects, important laboratory methods used for isolation of viruses, namely, tissue culture techniques. The direct and indirect means for diagnosis of viral infections will be discussed in details.</p>			

Code	Credit Hours	Course Title	Prerequisites
1504709	2	Zoonotic Mycotic Infections	
<p>This course is concerned with the major mycotic zoonotic infections transmitted mainly by farm animals and pets.</p>			

Code	Credit Hours	Course Title	Prerequisites
1504710	2	Sanitary Mycology	

This course deals with the standard methods used for determining the sanitary quality of water, food, and milk (suitability for use and degree of contamination). The course also emphasizes the different diseases transmitted through the above common sources.

Code	Credit Hours	Course Title	Prerequisites
1504711	2	Microbiological Analysis of Food	

This course provides practical and theoretical knowledge on methods for enumeration, detection and identification of spoilage and pathogenic microorganisms in food, milk and milk products. Rapid and novel techniques will be compared to conventional methods used for microbiologic analysis of food.

Code	Credit Hours	Course Title	Prerequisites
1504712	2	Emerging Infectious Diseases	

This course provides students with an introduction to the emerging infectious diseases and pathogens causing them. The course will deal with the predisposing factors leading to emergence of such diseases, their public health importance and their methods of diagnosis.

Code	Credit Hours	Course Title	Prerequisites
1504713	2	Standard Operating Procedures for Microbiology	

This is course will provide guidelines on the use of conventional procedures used in a microbiological laboratory including the organization and functions of laboratories, collection and transportation of clinical specimens, sterilization, staining techniques, bacteriological media, cultivation of bacteria on laboratory media, antimicrobial susceptibility testing, safety in laboratories, and quality assurance.

Code	Credit Hours	Course Title	Prerequisites
1504714	2	Biosafety in Microbiological Laboratory	

In this course students will be able to identify different types of hazards they could meet at the microbiology laboratory. Describes the levels of biosafety and the standard microbiological practices, safety equipment, and facilities needed for each level.

Code	Credit Hours	Course Title	Prerequisites
1504715	2	Health care Associated Infections	

This course takes the students into a tour to the hospital environment with its associated infections. They will know detailed information about history, epidemiology, and the most important factors influencing health care associated infections. They will gather information about the emerging pathogens causing such infection, their antibiotic resistance profile and complications. Students will also identify the role of laboratory in combating such infections.

Code	Credit Hours	Course Title	Prerequisites
1504716	2	Biotechnology	

This course provides students with an introduction to the structure and function of nucleic acids. Methods used for extraction, amplification and detection of nucleic acids will be fully demonstrated. Further identification techniques as sequencing and typing will be shed light on. Students will be acquainted with cloning and its applications.

Code	Credit Hours	Course Title	Prerequisites
1504717	2	Antimicrobial Chemotherapeutics	

This course aims at introducing students to the world of antimicrobials. Their history, classification, and mode of action. In addition to the mechanisms of the transfer of antimicrobial resistance among bacterial strains, and different standard methods used for testing the susceptibility to antimicrobials. Students will perform all tests using standard bacterial strains and precautions.

Code	Credit Hours	Course Title	Prerequisites
1504718	2	Anatomy and Physiology of Human Body	

This course aims at introducing students to the different organs of the human body, their functions and the different medical terms used in description of diseases.

Code	Credit Hours	Course Title	Prerequisites
150705	1	Ethics and Law for Health Professionals	

Definitions of ethics, law, risk management and public health will be clarified. Major ethical and legal conflicts in public health will be addressed. Justifying public health programs and policies will be discussed. Human rights and public health will be explained. The course will also tackle understanding of the public health profession's roles and professional values.

8- Master's Degree in Public Health(Majoring Occupational Health and Industrial Medicine)

Students should fulfill a total of 38 credit hours:

1- Basic requirements: 10 credit hours.

150701, 150702, 150703, 150704

2- Compulsory courses: 14 credit hours.

1505(1)701, 1505(1)702, 1505(1)703, 1505(1)704, 1505(1)705, 1505(1)706, 1505(1)707

3- Elective courses: 6 credit hours.

1505(1)708, 1505(1)709, 1505(1)710, 1505(1)711, 1505(1)712, 1502603, 1502602

4- Thesis: 8 credit hours. 1505(1)799

1- Basic requirements: 10 credit hours

Code	Course Title	Theoretical	Practical/ Clinical	Field	Credit Hours	Prerequisites
150701	Epidemiology and Biostatistics الوبائيات والاحصاءات الحيوية	2			2	
150702	Environmental & Occupational Health الصحة البيئية والمهنية	2			2	
150703	Health Administration & Behavioral Sciences الإدارة الصحية والعلوم السلوكية	2			2	
150704	Research Methodology طرق البحث	2	2		3	
150706	Field Studies الدراسات الميدانية	-	-	4	1	
Total		8	2	4	10	

2-Compulsory courses: 14 credit hours

Code	Course Title	Theoretical	Practical/ Clinical	Field	Credit Hours	Prerequisites
1505(1)701	Occupational Physiology الفسيولوجيا المهنية	2			2	
1505(1)702	Occupational Toxicology and Biomarkers of Occupational Toxins علم السموم المهنية والدلالات الحيوية للسموم المهنية	1	2		2	
1505(1)703	Occupational Diseases الأمراض المهنية	1	2		2	
1505(1)704	Work Stress الضغوط النفسية بالعمل	2			2	
1505(1)705	Evaluation of Disabilities and Basics of Rehabilitation تقييم العجز وأساسيات التأهيل	1	2		2	
1505(1)706	Work Organization & Legislation تشريعات وتنظيمات العمل	2			2	
1505(1)707	Assessment and Control of Indoor & Outdoor Work Environmental Factors التقييم والتحكم في العوامل البيئية داخل وخارج العمل	1	2		2	
Total		10	8		14	

3- Elective Courses: 6 credit hours

Code	Course Title	Theoretical	Practical/ Clinical	Field	Credit Hours	Prerequisites
1505(1)708	Occupational Health Problems in Chemical Industry مشاكل الصحة المهنية في الصناعات الكيماوية	2			2	
1505(1)709	Occupational health problems in Petroleum Industry مشاكل الصحة المهنية في الصناعات البترولية	2			2	
1505(1)710	Maritime and Aviation Medicine طب الأعماق والطيران	1	2		2	
1505(1)711	Diagnostic Testing for Occupational Diseases الاختبارات التشخيصية للأمراض المهنية	1	2		2	
1505(1)712	Occupational Rehabilitation and Vocational therapy إعادة التأهيل المهني و العلاج التوصيفي	1	2		2	
1502603	Analytical Statistics الإحصاء التحليلي	2	2		3	
1502602	Sampling Techniques تقنيات جمع العينات	2	2		3	

Course Description

Code	Credit Hours	Course Title	Prerequisites
150701	2	Epidemiology & Biostatistics	
<p>Scope & uses of epidemiology. Natural history of the diseases, requisites for perpetuation of infectious diseases, magnitude and risk factors of non communicable diseases. Basic biostatistics concepts, Basic principle of epidemiologic methods. Presentation of grouped and ungrouped data shape of distribution. Probability concepts and Laws of Probability.</p>			

Code	Credit Hours	Course Title	Prerequisites
150702	2	Environmental and Occupational Health	
<p>Definition of environment & environmental health; water sources, uses and classification, water pollution, point and non-point sources of pollution, types, sources and effects of pollutants; air pollution, types, sources and effects of air pollutants; climate change, ozone depletion, acid rain, etc; soil pollution, types, sources and effects of soil pollutants, control measures for different types of pollution. Occupational hazards, occupational diseases and their prevention.</p>			

Code	Credit Hours	Course Title	Prerequisites
150703	2	Health Administration & Behavioral Sciences	
<p>This course aims at developing students' knowledge regarding basic managerial concepts, processes, skills and techniques and application of such knowledge in the delivery of high quality health care. Managerial processes covered include: planning, decision making, organizing, leadership, supervision, staffing and evaluation. Among the managerial issues and techniques included are: quality health care and problem solving. In addition, certain skills as communication, motivation, ... etc. will be covered. It also aims at developing students with knowledge and skills regarding role and application of behavioral sciences in the field of public health.</p>			

Code	Credit Hours	Course Title	Prerequisites
150704	4	Research Methodology and Field Studies	
<p>This course is intended to prepare students to design and implement research. It also includes statistical design and analysis as well as proposal writing and report slash thesis writing.</p>			

Code	Credit Hours	Course Title	Prerequisites
1505(1)701	2	Occupational Physiology	
<p>This course provides students with necessary knowledge in the field of occupational physiology. This will be focusing on Environmental factors including: Abnormal heat (high & low) and its physiological effect on human body and work production. Definition of noise, effects on production and health, occupational deafness from acute or chronic noise exposure, its prevention and control. Abnormal pressure: (high & low) and its Effects and management of its health risks. Lightning, Vibration, Electricity including their physical laws, their effects on human health and preventive measures. Also, this course will provide the essential basics for pathophysiologic effects of exposure to radiation. Fatigue and its management in a way enhancing worker's adaptation and productivity.</p>			

Code	Credit Hours	Course Title	Prerequisites
1505(1)702	2	Occupational Toxicology and Biomarkers of Occupational toxins.	
<p>This course provides the candidate with the needed knowledge in the field of toxicology for occupational health practitioners. This will be focusing in particular on toxicokinetics including: absorption, transportation, distribution, biotransformation and excretion of occupational toxicants. Toxicodynamics including acute and chronic effects will be defined generally with nomination of early detection biomarkers of occupational exposure to common occupational toxicants. Also it will include knowledge about chemical carcinogens, teratogens, genetic toxicology, pesticides, heavy metals and organic solvents. Finally, an overall systematic classification of occupational toxins will be given such as hepatotoxins, nephrotoxins, cardiotoxins and toxicity of blood forming organs.</p>			

Code	Credit Hours	Course Title	Prerequisites
1505(1)703	2	Occupational Diseases	
<p>This course provides students with necessary knowledge in the field of occupational diseases. This will be focusing on specific etiological factors for occupational diseases defined by law including physical, chemical, mechanical, biological and psychosocial hazards. Particular stress will be given for the different types of occupational diseases related to adverse chemical exposures in work environment such as gases, vapors, heavy metals, particulates ... etc. Pathogenesis, clinical presentation, diagnostic tests, treatment strategies and management will be discussed for each item. Differential diagnosis according to international criteria will be highlighted. Models of prevention and health surveillance programs of common occupational diseases will be given such as control of silicosis, occupational asthma, occupational dermatoses and occupational cancer.</p>			

Code	Credit Hours	Course Title	Prerequisites
1505(1)704	2	Work Stress	
<p>This course provides students with the necessary knowledge in the field of occupational psychology and work stress. This will be focusing on introduction on occupational psychology, occupational mental stress and general environmental stressors. The influence of physical, chemical, mechanical and biological factors on work stress reaction will be discussed. Psychosocial stressors influencing job strain will be defined, models for their measurement, stress coping strategies, organizational stress management and prevention will be elucidated. Neurotoxicity and different occupational exposures with possible risk will be defined.</p>			

Code	Credit Hours	Course Title	Prerequisites
1505(1)705	2	Evaluation of Disabilities and Basics of Rehabilitation	
<p>This course provides students with necessary knowledge in the field of occupational disabilities and rehabilitation. This will be focusing on evaluation of musculoskeletal disabilities whether partial or total. Evaluation of visual disabilities, evaluation of hearing disabilities and methods of rehabilitation. Also, to enable the occupational health physician to determine the presence, etiology and the degree of disability. Also, techniques for disability assessment and rehabilitation of the different body systems will be discussed such as cardiovascular, renal and hepatic cases. Candidates will be introduced to methods for assessment of disabled workers to decide whether they can return safely to work and complete required job tasks or to change their occupation. In addition to this, to provide guidance to the employee and the employer when there is need for integration of an employee with a disability into the workplace, suggesting the required rehabilitation modalities.</p>			

Code	Credit Hours	Course Title	Prerequisites
1505(1)706	2	Work Organization & Legislation	
<p>Candidates will gain the important knowledge related to work organization and legislation of occupational health. This will be focusing on the ideal laws for worker's health considering their conditions, occupational exposures and work organizational factors. National laws for occupational health prevention, social welfare of workers, legislation for employee employer relationship and organizational regulation for workers duties and rights will be discussed, with comparisons for future improvement. Programs of training, health services, social support, environmental development and organizational modification will be highlighted. Also this course will entail the current problems related to working environment in general and the Egyptian workers' health.</p>			

Code	Credit Hours	Course Title	Prerequisites
1505(1)707	2	Assessment and Control of Indoor & Outdoor Work Environmental Factors	
<p>Indoor environmental factors include chemical, physical and mechanical hazard Methods of chemical physical and mechanical hazards determination and their control, main outdoor environmental factors are air pollutants. Air pollutants monitoring and technologies of air pollution control.</p>			

Code	Credit Hours	Course Title	Prerequisites
1505(1)708	2	Occupational Health Problems in Chemical Industry	
<p>This course has been specifically designed to develop knowledge and skills required for workers in the field of chemical, electronic and metallurgic industry. This will be focusing on principle of industrial processes in the field of chemical industry. Also it will discuss in details the important problems presented during the industrial process, whether physical, chemical, mechanical, biological or psychosocial hazards, with the resultant health effects. The course will provide the knowledge about environmental assessment of hazards, and design of medical preventive and control measures for all possible problems faced in chemical industry.</p>			

Code	Credit Hours	Course Title	Prerequisites
1505(1)709	2	Occupational Health Problems in Petroleum Industry	

This course will give a detailed information for those working in the field of petroleum industry about the global impact of petroleum industry, the detailed industrial processes with a broad scope on all possible hazards facing the worker whether it is physical, chemical, mechanical, biological or psychosocial. Petrochemical industries with its particular exposures such as exposure to vinyl chloride will be discussed. Finally this course will give an idea about the management and preventive measures for all petroleum industry related health effects in order to provide a better working and environmental conditions for better productivity.

Code	Credit Hours	Course Title	Prerequisites
1505(1)710	2	Maritime and Aviation Medicine	

This course will provide the definition of marine and aviation medicine, with emphasis on their importance in military, occupational and recreational activities. It will introduce candidates to basics of physics of atmospheric pressure, changes in human physiologic functions in relation to barometric pressure changes and possible health hazards. Also, it describes the general and specific parameters for fitness assessment before engagement in such exposures. Periodic medical examination and health surveillance standards of jobs entailing such exposures will be explained. Physicians engaged in this course will be introduced clinically and practically in the management modalities necessary in these fields such as decompression chambers, hyperbaric oxygen therapy and treatment with ozone.

Code	Credit Hours	Course Title	Prerequisites
1505(1)711	2	Diagnostic Testing for Occupational Diseases	

This course introduces a specific knowledge about the available diagnostic testing for occupational diseases including: pulmonary function tests and its importance in the differential diagnosis between obstructive and restrictive lung diseases. Chest radiographic examination and techniques for diagnosis of pneumoconiosis according to standard classification will be discussed. ECG testing including resting ECG and stress testing for assessment of cardiovascular fitness and diagnosis will be discussed with candidates providing examples. Also, it includes the important information about the specific laboratory tests for each occupational diseases to identify the susceptible workers or those who have the established occupational disease.

Code	Credit Hours	Course Title	Prerequisites
1505(1)712	2	Occupational Rehabilitation and Vocational Therapy	
<p>This course provides students with necessary knowledge in the field of occupational rehabilitation and vocational therapy. This will be focusing on basics of rehabilitation that can minimize disabilities resulting from work hazards. Musculoskeletal rehabilitative methods to optimize performance according to the residual capacities after injuries will be explained for students. Ophthalmological assesment and visual rehabilitation for aging workers or after injuries will be illustrated. Basics of ergonomics as tools in occupational rehabilitation will be stressed. Candidates will be introduced also for techniques of vocational and occupational therapy.</p>			

Code	Credit Hours	Course Title	Prerequisites
1502603	3	Analytical Statistics	
<p>Measures of central tendency, Measures of dispersion, Measures of skeweness and kurtosis, A single population mean, Difference between 2 population means, Paired comparison, A single population proportion, Difference between 2 population proportions, A single population variance, Chi-squared test and measures of association, Simple Correlation and simple linear Regression.</p>			

Code	Credit Hours	Course Title	Prerequisites
1502602	3	Sampling Techniques	
<p>The concept of sampling, sampling distributions, parameters and statistics, central limit theorem, types of samples and sampling error, complex samples, the normal distribution and estimation of a population parameter from a sample, determination of the minimum required sample size.</p>			

9- Master's Degree in Public Health and Public Health Sciences (Majoring Occupational Hygiene and Air Pollution)

Students should fulfill a total of 38 credit hours:

1- Basic requirements: 10 credit hours.

150701, 150702, 150703, 150704

2- Compulsory courses: 14 credit hours.

1505(2)701, 1505(2)702, 1505(2)703, 1505(2)704, 1505(2)705, 1505(2)706, 1505(2)707.

3- Elective courses: 6 credit hours.

1505(2)708, 1505(2)709, 1505(2)710, 1505(2)711, 1505(2)712, 1505(2)713, 1505(2)714, 1505(2)715, 1505(2)716, 1505(2)717, 1505(2)718, 1505(2)719, 1505(2)720, 1502603, 1502602.

4- Thesis: 8 credit hours. 1505(2)799

1- Basic requirements: 10 credit hours

Code	Course Title	Theoretical	Practical/ Clinical	Field	Credit Hours	Prerequisites
150701	Epidemiology and Biostatistics الوبائيات والاحصاءات الحيوية	2			2	
150702	Environmental & Occupational Health الصحة البيئية والمهنية	2			2	
150703	Health Administration & Behavioral Sciences الادارة الصحية والعلوم السلوكية	2			2	
150704	Research Methodology طرق البحث	2	2		3	
150706	Field Studies الدراسات الميدانية	-	-	4	1	
Total		8	2	4	10	

2- Compulsory courses: 14 credit hours

Code	Course Title	Theoretical	Practical/ Clinical	Field	Credit Hours	Prerequisites
1505(2)701	Health Effects of Occupational Exposures التأثيرات الصحية للتعرضات المهنية	2			2	
1505(2)702	Physical Hazards in Workplace المخاطر الطبيعية في بيئة العمل	1	2		2	
1505(2)703	Chemical and Biological Hazards in Workplace المخاطر الكيميائية والبيولوجية في بيئة العمل	1	2		2	
1505(2)704	Occupational Safety السلامة المهنية	2			2	
1505(2)705	Occupational Health Survey المسح الصحى المهني	1		4	2	
1505(2)706	Air Pollution Sciences علوم تلوث الهواء	1	2		2	
1505(2)707	National and International Legislations in Occupational Health التشريعات المحلية والدولية في الصحة المهنية	2			2	
Total		10	6	4	14	

3- Elective courses: 6 credit hours.

Code	Course Title	Theoretical	Practical / Clinical	Field	Credit Hours	Prerequisites
1505(2)708	Quality Management in Occupational and Air Pollution Laboratory إدارة الجودة في معامل الصحة المهنية وتلوث الهواء	2	2		3	
1505(2)709	Occupational Risk Management Systems نظم إدارة الخطر المهني	3			3	
1505(2)710	Early Detection of Toxins الكشف المبكر للسموم	1	2		2	
1505(2)711	Assessment and Control of Physical Hazards التقييم والتحكم في المخاطر الطبيعية	2	2		3	
1505(2)712	Assessment and Control of Chemical Hazards التقييم والتحكم في المخاطر الكيميائية	2	2		3	
1505(2)713	Air Pollution Control Program برنامج التحكم في تلوث الهواء	2			2	
1505(2)714	Occupational Hygiene and Safety Program برنامج صحة بيئة العمل والسلامة المهنية	2			2	
1505(2)715	Occupational Hazards in Selected Industries المخاطر المهنية في بعض الصناعات	2			2	
1505(2)716	Aerosol Technology تكنولوجيا الرزاز	1	2		2	
1505(2)717	Emergency Response Planning التخطيط الإستجابي للطوارئ	2			2	
1505(2)718	Health and Safety Problems in Agricultural Work المشاكل الصحية والأمان بالأعمال الزراعية	2			2	
1505(2)719	Health Care Workers Safety سلامة العاملين بالرعاية الصحية	2			2	
1505(2)720	Special Studies دراسات خاصة	2			2	
1502603	Analytical statistics الإحصاء التحليلي	2	2		3	
1502602	Sampling Technique تقنيات جمع العينات	2	2		3	

Course Description

Code	Credit Hours	Course Title	Prerequisites
150701	2	Epidemiology & Biostatistics	
<p>Scope & uses of epidemiology. Natural history of the diseases, requisites for perpetuation of infectious diseases, magnitude and risk factors of non communicable diseases. Basic biostatistics concepts, Basic principle of epidemiologic methods. Presentation of grouped and ungrouped data shape of distribution. Probability concepts and Laws of Probability.</p>			

Code	Credit Hours	Course Title	Prerequisites
150702	2	Environmental and Occupational Health	
<p>Definition of environment & environmental health; water sources, uses and classification, water pollution, point and non-point sources of pollution, types, sources and effects of pollutants; air pollution, types, sources and effects of air pollutants; climate change, ozone depletion, acid rain, etc; soil pollution, types, sources and effects of soil pollutants, control measures for different types of pollution. Occupational hazards, occupational diseases and their prevention.</p>			

Code	Credit Hours	Course Title	Prerequisites
150703	2	Health Administration & Behavioral Sciences	
<p>This course aims at developing students' knowledge regarding basic managerial concepts, processes, skills and techniques and application of such knowledge in the delivery of high quality health care. Managerial processes covered include: planning, decision making, organizing, leadership, supervision, staffing and evaluation. Among the managerial issues and techniques included are: quality health care and problem solving. In addition, certain skills as communication, motivation, ... etc. will be covered. It also aims at developing students with knowledge and skills regarding role and application of behavioral sciences in the field of public health.</p>			

Code	Credit Hours	Course Title	Prerequisites
150704	4	Research Methodology and Field Studies	
<p>This course is intended to prepare students to design and implement research. It also includes statistical design and analysis as well as proposal writing and report slash thesis writing.</p>			

Code	Credit Hours	Course Title	Prerequisites
1505(2)701	2	Health Effects of Occupational Exposures	

This course is directed to explain the health effects of the different physical, chemical, biological, psychosocial and mechanical exposures Also, it provides candidate with the main preventive strategies in the respect.

Code	Credit Hours	Course Title	Prerequisites
1505(2)702	2	Physical Hazards in Workplace	

The course focuses on sources & types of physical hazards in the workplace (heat, noise, lighting and radiation); principles of adverse effects of the different physical hazards; evaluation of physical hazards in work place; laws& regulations, including national and international TLVs.

Code	Credit Hours	Course Title	Prerequisites
1505(2)703	2	Chemical and Biological Hazards in Workplace	

The course emphasizes on: sources and classification of chemical and biological hazards in workplace, behavior of air contaminants in air, interaction of air contaminants with human body, national and international recommended exposure limits, in addition to evaluation and control of chemical and biological hazards. The course focuses also on safe handling and storage of hazardous chemicals.

Code	Credit Hours	Course Title	Prerequisites
1505(2)704	2	Occupational Safety	

The course focuses on safety management system, accident and their contributing factors, accident costs, accident investigation and analysis, appraising safety performance (reactive and proactive measures), job safety analysis, basis of risk assessment and types of personal protective equipments in addition to emergency preparedness.

Code	Credit Hours	Course Title	Prerequisites
1505(2)705	2	Occupational Health Survey	

Candidates will be familiar with different types of hazards which can be found in different types of industries, field visits to various to factories or establishments, inspection of occupational hazards; physical, chemical, biological mechanical, occupational safety, emergency care in the workplace, health education in industrial setting, personal protective equipment, fire protection, housekeeping, general ventilation and lighting, engineering control, welfare facilities, others, report - writing to include, main hazards available, protective measures available, safety precautions, injury rates, appraising safety performance, recommendations for control measures and accident prevention techniques.

Code	Credit Hours	Course Title	Prerequisites
1505(2)706	2	Air Pollution Sciences	
<p>The course gives ideas about air pollution, sources and types of air pollutants, meteorology and dispersion, classification and sources of air contaminants, atmospheric sampling and analysis (methods and calibration, source sampling and analysis), air resources management program, and ambient air quality standards and their application. The course also defines the concepts of land use planning, environmental impact assessment, and emission inventories.</p>			

Code	Credit Hours	Course Title	Prerequisites
1505(2)707	2	National and International Legislations in Occupational Health	
<p>The course focuses on safety, health & welfare at work acts, compliance strategies, national & international regulations and laws concerned with occupational hygiene, safety & air pollution, Minister of Labor Force And Migration Decision No. 211 for 2003, Egyptian Environmental Law No. 4 for 1994 and its decree no. 338 for 1995. American and European Occupational Health and safety laws and regulations.</p>			

Code	Credit Hours	Course Title	Prerequisites
1505(2)708	3	Occupational Risk Management Systems	
<p>Scope & benefits of assessing risks, definitions & terminology, hazard identification, dose / response evaluation, risk identification, risk assessment techniques, safety check lists, job safety analysis, qualitative and quantitative risk assessment, risk matrix & risk characterization, and reporting, in addition to risk management techniques.</p>			

Code	Credit Hours	Course Title	Prerequisites
1505(2)709	3	Quality Management in Occupational and Air Pollution Laboratory	
<p>The course emphasizes on standard operating procedures for sampling and analytical techniques, quality control, preventive maintenance of sampling and analytical tools to achieve good data, sample collection, handling, and analysis, data collection and handling, statistical terms and data quality indicators, audits, and corrective actions.</p>			

Code	Credit Hours	Course Title	Prerequisites
1505(2)710	2	Early Detection of Toxins	
<p>The course focuses on principal and objectives of early detection, biotransformation and pathway of environmental chemicals in human body, biological analysis and their interpretation with environmental assessment data, evaluation of indices of exposure and that of effect (body burden), interrelation of air assessment with biological assessment, advances in B.M. Metabolism and early detection of some chemical (heavy metals, organic solvents), quality assurance in early detection, interpretation and of role biological markers in occupational and environmental health, and the use of biological monitoring in management of health and environmental exposures.</p>			

Code	Credit Hours	Course Title	Prerequisites
1505(2)711	3	Assessment and Control of Physical Hazards	
<p>The course focuses on sources and types of physical hazards in the work environment, Adverse effects of the different types of physical hazards, Measurement methods. It includes Legislations & regulation; including national & international recommended threshold limit values (TLVS), Compare measured exposure to reference exposure levels to assess risks to employee health, Interpretation of data, and control techniques for various physical hazards.</p>			

Code	Credit Hours	Course Title	Prerequisites
1505(2)712	3	Assessment and Control of Chemical Hazards	
<p>The course emphasizes on sources of chemical hazards inside the work place, general sampling techniques (sampling techniques of particulate matter and of gases & vapors), and evaluation changes in exposure levels resulting from changes in process operations, work products or modifications in engineering controls. Moreover, the course focuses also on principles of control techniques.</p>			

Code	Credit Hours	Course Title	Prerequisites
1505(2)713	2	Air Pollution Control Program	
<p>Mean items of air pollutants. Determination of main sources of air pollution source pollution emission inventories Environmentally friend Green Industries ambient air quality standards and their application, selection of proper control measures.</p>			

Code	Credit Hours	Course Title	Prerequisites
1505(2)714	2	Occupational Hygiene and Safety Program	

The course focuses on functions of occupational hygiene & safety program, the relation between occupational hygiene program and risk assessment, risk, management, risk education; In addition to seven basic concepts, program participation, financial responsibility, and provisions evaluation of occupational hygiene program.

Code	Credit Hours	Course Title	Prerequisites
1505(2)715	2	Occupational Hazards in Selected Industries	

The course is directed to students that their research points are not fulfilled in the previous elective courses. The course is focused on definition and scope of occupational hazards in industries, problems of occupational health in developing countries, role of industries in raising the national income, small industries as a mean to solve the problem of unemployment, industries in developing countries, specially Egypt, small industries: the past, the present and the future, health hazards in industries, control of health hazards in the and safety provisions.

Code	Credit Hours	Course Title	Prerequisites
1505(2)716	2	Aerosol Technology	

The course focuses on aerosol fundamentals (physics and chemistry), types of Aerosols, Sources of Aerosols, Aerosol characterization, Indoor Air and outdoor particulate air pollution, Health aspects, bio-aerosol & bio-defense, aerosol sampling instrumentation and procedures for sampling, analysis techniques of aerosols, aerosol remote sensing techniques, radioactive and nuclear aerosol, aerosol and climate change.

Code	Credit Hours	Course Title	Prerequisites
1505(2)717	2	Emergency Response Planning	

The course focuses on definition of emergency situations, recognition of imminent disasters, special foreseeable and unforeseeable accidents, man-made and natural disasters, hazardous substances & exposures in industry, preventive measures & safety policy, general emergency procedures, specific emergency procedures, expectations from emergency preparedness.

Code	Credit Hours	Course Title	Prerequisites
1505(2)718	2	Health and Safety Problems in Agricultural Work	
<p>The course emphasizes on general safety rules, agricultural activities of vegetables, nuts, etc., occupational hazards in Agricultural work: Physical, Chemical, Biological hazards (Infectious microbes, and parasites), ergonomic hazards (unsafe use of human body), mechanical hazards, psychological hazards; in addition to development of occupational health and safety program, purpose, scope and application of the program, identification of problem tasks, control of workplace risk factor exposures, training of agricultural workers, medical management, record keeping.</p>			

Code	Credit Hours	Course Title	Prerequisites
1505(2)719	2	Health Care Workers Safety	
<p>The course focuses on chemical, physical, biological Hazards, occupational injuries & diseases, ergonomic, and psychosocial Hazards; In addition to hazards in the dental profession, safety inspection in health care facilities, general safety precautions in health care facilities, and hospital safety Design program.</p>			

Code	Credit Hours	Course Title	Prerequisites
1505(2)720	2	Special Studies	
<p>The subjects and items in this course will be identified according to the interest of each candidate and the probable research points that will be taken into consideration. The candidate will collect and represent information about the selected point /or points by the aid of his academic supervisor.</p>			

Code	Credit Hours	Course Title	Prerequisites
1502603	3	Analytical Statistics	
<p>Measures of central tendency, Measures of dispersion, Measures of skeweness and kurtosis, A single population mean, Difference between 2 population means, Paired comparison, A single population proportion, Difference between 2 population proportions, A single population variance, Chi-squared test and measures of association, Simple Correlation and simple linear Regression.</p>			

Code	Credit Hours	Course Title	Prerequisites
1502602	3	Sampling Techniques	
<p>The concept of sampling, sampling distributions, parameters and statistics, central limit theorem, types of samples and sampling error, complex samples, the normal distribution and estimation of a population parameter from a sample, determination of the minimum required sample size.</p>			

10- Master's Degree in Public Health Sciences (Majoring Environmental Chemistry and Biology)

Students should fulfill a total of 38 credit hours:

1- Basic requirements: 10 credit hours.

150701, 150702, 150703, 150704

2- Compulsory courses: 14 credit hours.

1506701, 1506702, 1506(1)701, 1506(1)702, 1506(1)703, 1506(1)704, 1506(1)705

3- Elective courses: 6 credit hours.

1506(1)710, 1506(1)711, 1506(1)712, 1506(1)713, 1506(1)714, 1506(1)715, 150705

4- Thesis: 8 credit hours. 1506(1)799

1- Basic requirements: 10 credit hours

Code	Course Title	Theoretical	Practical/ Clinical	Field	Credit Hours	Prerequisites
150701	Epidemiology and Biostatistics الوبائيات والاحصاءات الحيوية	2			2	
150702	Environmental & Occupational Health الصحة البيئية والمهنية	2			2	
150703	Health Administration & Behavioral Sciences الادارة الصحية والعلوم السلوكية	2			2	
150704	Research Methodology طرق البحث	2	2		3	
150706	Field Studies الدراسات الميدانية	-	-	4	1	
Total		8	2	4	10	

2- Compulsory courses: 14 credit hours

Code	Course Title	Theoretical	Practical/ Clinical	Field	Credit Hours	Prerequisites
1506701	Water and Wastewater Treatment معالجة المياه والمخلفات السائلة	2			2	
1506702	Solid and Hazardous Waste Management إدارة المخلفات الصلبة والخطرة	2			2	
1506(1)701	Industrial Cleaner Production الإنتاج الصناعي الأنظف	2			2	
1506(1)702	Water and Wastewater Analysis for Environmental Monitoring تحليل المياه والمخلفات السائلة للرصد البيئي	2	2		3	
1506(1)703	Biological Indicators of Environmental Pollution الدلائل البيولوجية للتلوث البيئي	1	2		2	
1506(1)704	Principles of Chemical and Biological Modeling مبادئ النمذجة الكيميائية والبيولوجية	1	2		2	
1506(1)705	Field visits زيارات ميدانية			4	1	
Total		10	6	4	14	

3- Elective Courses: 6 credit hours

Code	Course Title	Theoretical	Practical/ Clinical	Field	Credit Hours	Prerequisites
1506(1)710	Critical Reading in Environmental Chemistry and Biology قراءات نقدية في كيمياء وبيولوجيا البيئة	2			2	
1506(1)711	Environmental Chemistry كيمياء البيئة	2			2	
1506(1)712	Environmental Impact Assessment تقييم الأثر البيئي	2			2	
1506(1)713	Hazardous Waste Management إدارة المخلفات الخطرة	2			2	
1506(1)714	Environmental Laboratories and Instrumental Analysis المعامل البيئية والتحليل باستخدام الأجهزة	2			2	
1506(1)715	Current Topics in Environmental Chemistry and Biology موضوعات راهنة في كيمياء وبيولوجيا البيئة	2			2	
150705	Ethics and Law for Health Professionals الأخلاقيات والقانون لأفراد الفريق الصحي	2			2	

Course Description

Code	Credit Hours	Course Title	Prerequisites
150701	2	Epidemiology & Biostatistics	
<p>Scope & uses of epidemiology. Natural history of the diseases, requisites for perpetuation of infectious diseases, magnitude and risk factors of non communicable diseases. Basic biostatistics concepts, Basic principle of epidemiologic methods. Presentation of grouped and ungrouped data shape of distribution. Probability concepts and Laws of Probability.</p>			

Code	Credit Hours	Course Title	Prerequisites
150702	2	Environmental and Occupational Health	
<p>Definition of environment & environmental health; water sources, uses and classification, water pollution, point and non-point sources of pollution, types, sources and effects of pollutants; air pollution, types, sources and effects of air pollutants; climate change, ozone depletion, acid rain, etc; soil pollution, types, sources and effects of soil pollutants, control measures for different types of pollution. Occupational hazards, occupational diseases and their prevention.</p>			

Code	Credit Hours	Course Title	Prerequisites
150703	2	Health Administration & Behavioral Sciences	
<p>This course aims at developing students' knowledge regarding basic managerial concepts, processes, skills and techniques and application of such knowledge in the delivery of high quality health care. Managerial processes covered include: planning, decision making, organizing, leadership, supervision, staffing and evaluation. Among the managerial issues and techniques included are: quality health care and problem solving. In addition, certain skills as communication, motivation... etc. will be covered. It also aims at developing students with knowledge and skills regarding role and application of behavioral sciences in the field of public health.</p>			

Code	Credit Hours	Course Title	Prerequisites
150704	4	Research Methodology and Field Studies	
<p>This course is intended to prepare students to design and implement research. It also includes statistical design and analysis as well as proposal writing and report/ thesis writing.</p>			

Code	Credit Hours	Course Title	Prerequisites
1506701	2	Water and Wastewater Treatment	
<p>Types of water resources, selection and protection of water intake, water quality requirements, steps of water treatment including coagulation, sedimentation, filtration, disinfection and desalination. Types of wastewater and their impacts on the environment, methods of wastewater treatment including primary, secondary and tertiary treatment.</p>			

Code	Credit Hours	Course Title	Prerequisites
1506702	2	Solid and Hazardous Waste Management	
<p>Definition and sources of solid and hazardous waste, public health impacts of solid and hazardous waste, solid and hazardous waste management hierarchy including source reduction, collection and transport, composting, recycling treatment and disposal.</p>			

Code	Credit Hours	Course Title	Prerequisites
1506(1)701	2	Industrial Cleaner Production	
<p>Industrial emissions and their environmental impacts, cleaner production concept including pollution prevention, pollution reduction, waste treatment and disposal or reuse. Case studies from some industrial sectors.</p>			

Code	Credit Hours	Course Title	Prerequisites
1506(1)702	3	Water and Wastewater Analysis for Environmental Monitoring	
<p>Sample collection and preservation, definition, environmental significance, principle and method of determination of the important parameters involved in the characterization of water and wastewater including solids, BOD, COD, oil and grease, etc, interpretation of the results of the analyses carried out.</p>			

Code	Credit Hours	Course Title	Prerequisites
1506(1)703	2	Biological Indicators of Environmental Pollution	
<p>Ecological systems, environmental pollution & ecological processes, microorganisms of importance in the environment, role of microorganisms in wastewater & solid waste management, marine ecology, water-related diseases, soil-related diseases, bathing beaches microbiological standards.</p>			

Code	Credit Hours	Course Title	Prerequisites
1506(1)704	2	Principles of Chemical and Biological Modeling	
<p>The course introduces students to the definition and scope of environmental modeling; the uses and principles of modeling; generation of chemical and biological models; models evaluation and validation.</p>			

Code	Credit Hours	Course Title	Prerequisites
1506(1)705	1	Field Visits	
<p>This course includes visits to water purification plants, wastewater treatment plants, solid waste composting plants, sanitary landfill, selected industrial plants.</p>			

Code	Credit Hours	Course Title	Prerequisites
1506(1)710	2	Critical Reading in Environmental Chemistry and Biology	
<p>Titles, language, punctuation marks, style, consistency, clarity, missing parts, repetition, connection between different parts, accuracy, translation, transliteration, abbreviations, references.</p>			

Code	Credit Hours	Course Title	Prerequisites
1506(1)711	2	Environmental Chemistry	
Chemical equilibrium in the environment, impacts of human activities on biogeochemical cycles, corrosion, colloid chemistry.			

Code	Credit Hours	Course Title	Prerequisites
1506 (1)712	2	Environmental Impact Assessment	
Definition and purposes of EIA, steps of EIA, requirements of an EIA system, approaches to EIA, EIA as an integrated approach to project appraisal, methodology, group work for preparing an EIA study.			

Code	Credit Hours	Course Title	Prerequisites
1506 (1)713	2	Hazardous Waste Management	
Classification of hazardous materials and wastes, international symbols of hazardous materials and wastes, health and safety precautions in hazardous materials and wastes manufacturing; handling; storage; transportation; use; treatment; and disposal, role of health safety and environmental manager			

Code	Credit Hours	Course Title	Prerequisites
1506(1)714	2	Environmental Laboratories and Instrumental Analysis	
Quality control and assurance, parameters used in environmental laboratories, sample collection and preservation, standard substances, laboratory safety, instrumental methods of analysis including optical methods, electrochemical methods and chromatography			

Code	Credit Hours	Course Title	Prerequisites
1506(1)715	2	Current Topics in Environmental Chemistry and Biology	
The course is composed mainly of seminars, assignments and presentations by students on the current topics related to environmental chemistry and biology.			

Code	Credit Hours	Course Title	Prerequisites
150705	2	Ethics and Law for Health Professionals	
Definitions of ethics, law, risk management and public health will be clarified. Major ethical and legal conflicts in public health will be addressed. Justifying public health programs and policies will be discussed. Human rights and public health will be explained. The course will also tackle understanding of the public health profession's roles and professional values.			

11- Master's Degree in Public Health Sciences (Majoring Environmental Engineering)

Students should fulfill a total of 38 credit hours:

- 1- Basic requirements: 10 credit hours.**
150701, 150702, 150703, 150704
- 2- Compulsory courses: 14 credit hours.**
1506701, 1506702, 1506(1)701, 1506(1)705, 1506(2)701, 1506(2)702, 1506(2)703
- 3- Elective courses: 6 credit hours.**
1506(2)710, 1506(2)711, 1506(2)712, 1506(2)713, 1506(2)714, 150705
- 4- Thesis: 8 credit hours.** 1506(2)799

1- Basic requirements: 10 credit hours

Code	Course Title	Theoretical	Practical/ Clinical	Field	Credit Hours	Prerequisites
150701	Epidemiology and Biostatistics الوبائيات والاحصاءات الحيوية	2			2	
150702	Environmental & Occupational Health الصحة البيئية والمهنية	2			2	
150703	Health Administration & Behavioral Sciences الادارة الصحية والعلوم السلوكية	2			2	
150704	Research Methodology طرق البحث	2	2		3	
150706	Field Studies الدراسات الميدانية	-	-	4	1	
Total		8	2	4	10	

2- Compulsory courses: 14 credit hours

Code	Course Title	Theoretical	Practical/ Clinical	Field	Credit Hours	Prerequisites
1506701	Water and Wastewater Treatment معالجة المياه والمخلفات السائلة	2			2	
1506702	Solid and Hazardous Waste Management إدارة المخلفات الصلبة والخطرة	2			2	
1506(1)701	Industrial Cleaner Production الانتاج الصناعى الأنظف	2			2	
1506(1)705	Field Visits زيارات ميدانية			4	1	
1506(2)701	Chemistry & Biology for Environmental Engineers كيمياء وبيولوجيا البيئة للمهندسين	1	2		2	
1506(2)702	Design of Water and Wastewater Works تصميم أشغال المياه والمخلفات السائلة	2	2		3	
1506(2)703	Special Studies in Environmental Engineering دراسات خاصة فى الهندسة البيئية	2			2	
Total		11	4	4	14	

3- Elective Courses: 6 credit hours

Code	Course Title	Theoretical	Practical/ Clinical	Field	Credit Hours	Prerequisites
1506(2)710	Environment & Sustainable Development البيئة والتنمية المستدامة	2			2	
1506(2)711	Planning of Human Settlements التخطيط للمستوطنات البشرية	2			2	
1506(2)712	Stream Sanitation إصحاح المجارى المائية	2			2	
1506(2)713	Energy and the Environment الطاقة والبيئة	2			2	
1506(2)714	Housing and Institutional Sanitation إصحاح الإسكان والمؤسسات	2			2	
150705	Ethics and Law for Health Professionals الأخلاقيات والقانون لأفراد الفريق الصحي	2			2	

Course Description

Code	Credit Hours	Course Title	Prerequisites
150701	2	Epidemiology & Biostatistics	
<p>Scope & uses of epidemiology. Natural history of the diseases, requisites for perpetuation of infectious diseases, magnitude and risk factors of non communicable diseases. Basic biostatistics concepts, Basic principle of epidemiologic methods. Presentation of grouped and ungrouped data shape of distribution. Probability concepts and Laws of Probability.</p>			

Code	Credit Hours	Course Title	Prerequisites
150702	2	Environmental and Occupational Health	
<p>Definition of environment & environmental health; water sources, uses and classification, water pollution, point and non-point sources of pollution, types, sources and effects of pollutants; air pollution, types, sources and effects of air pollutants; climate change, ozone depletion, acid rain, etc; soil pollution, types, sources and effects of soil pollutants, control measures for different types of pollution. Occupational hazards, occupational diseases and their prevention.</p>			

Code	Credit Hours	Course Title	Prerequisites
150703	2	Health Administration & Behavioral Sciences	
<p>This course aims at developing students' knowledge regarding basic managerial concepts, processes, skills and techniques and application of such knowledge in the delivery of high quality health care. Managerial processes covered include: planning, decision making, organizing, leadership, supervision, staffing and evaluation. Among the managerial issues and techniques included are: quality health care and problem solving. In addition, certain skills as communication, motivation... etc. will be covered. It also aims at developing students with knowledge and skills regarding role and application of behavioral sciences in the field of public health.</p>			

Code	Credit Hours	Course Title	Prerequisites
150704	4	Research Methodology and Field Studies	
<p>This course is intended to prepare students to design and implement research. It also includes statistical design and analysis as well as proposal writing and report/ thesis writing.</p>			

Code	Credit Hours	Course Title	Prerequisites
1506701	2	Water and Wastewater Treatment	
<p>Types of water resources, selection and protection of water intake, water quality requirements, steps of water treatment including coagulation, sedimentation, filtration, disinfection and desalination. Types of wastewater and their impacts on the environment, methods of wastewater treatment including primary, secondary and tertiary treatment.</p>			

Code	Credit Hours	Course Title	Prerequisites
1506702	2	Solid and Hazardous Waste Management	
<p>Definition and sources of solid and hazardous waste, public health impacts of solid and hazardous waste, solid and hazardous waste management hierarchy including source reduction, collection and transport, composting, recycling treatment and disposal.</p>			

Code	Credit Hours	Course Title	Prerequisites
1506(1)701	2	Industrial Cleaner Production	
<p>Industrial emissions and their environmental impacts, cleaner production concept including pollution prevention, pollution reduction, waste treatment and disposal or reuse. Case studies from some industrial sectors.</p>			

Code	Credit Hours	Course Title	Prerequisites
1506(1)705	1	Field Visits	

8 hours field visits fortnightly, to water purification plants, wastewater treatment plants, solid waste composting plants, sanitary landfill, selected industrial plants.

Code	Credit Hours	Course Title	Prerequisites
1506(2)701	2	Chemistry & Biology for Environmental Engineers	

The course introduces students to principles of measurement of water and wastewaters quality indicators and their environmental and public health significance.

Code	Credit Hours	Course Title	Prerequisites
1506(2)702	3	Design of Water and Wastewater Works	

Water supply engineering, ground water engineering, water treatment plant design, advanced physico-chemical treatment systems, water disinfection techniques, water distribution, wastewater treatment plant design, advanced biological treatment processes, sludge treatment and disposal.

Code	Credit Hours	Course Title	Prerequisites
1506(2)703	2	Special Studies in Environmental Engineering	

The course entails writing seminars and making attractive presentations by students in relation to special topics in environmental engineering.

Code	Credit Hours	Course Title	Prerequisites
1506(2)710	2	Environment & Sustainable Development	

Environmental impacts and mitigation measures of Industry, agriculture, tourism & recreation, households, environmental injustices, new issues.

Code	Credit Hours	Course Title	Prerequisites
1506(2)711	2	Planning of Human Settlements	

History of human settlements planning, legal foundations of planning, constraints on human settlements form, principles of designing & laying out of human settlements, ornamentation of human settlements.

Code	Credit Hours	Course Title	Prerequisites
1506(2)712	2	Stream Sanitation	
Sources of stream pollution, stream survey, methods of stream analysis, stream monitoring, mathematical analysis of stream self-purification capacity, mathematics of BOD, mathematics of oxygen sag curve, restoration of water bodies.			

Code	Credit Hours	Course Title	Prerequisites
1506(2)713	2	Energy and the Environment	
Environmental effects of energy development using fossil and fissile fuels, geothermic; photosynthetic; and other sources, relationship of fuel cycles with polluting emissions, sources of environmental pollution and electrical power plants, energy conservation and control management.			

Code	Credit Hours	Course Title	Prerequisites
1506(2)714	2	Housing and Institutional Sanitation	
Environmental and sanitation standards on housing, governmental and public institutions such as hospitals, schools, universities and hotels.			

Code	Credit Hours	Course Title	Prerequisites
150705	2	Ethics and Law for Health Professionals	
Definitions of ethics, law, risk management and public health will be clarified. Major ethical and legal conflicts in public health will be addressed. Justifying public health programs and policies will be discussed. Human rights and public health will be explained. The course will also tackle understanding of the public health profession's roles and professional values.			

12- Master's Degree in Public Health and Public Health Sciences (Majoring Environmental Health)

Students should fulfill a total of 38 credit hours:

1- Basic requirements: 10 credit hours.

150701, 150702, 150703, 150704

2- Compulsory courses: 14 credit hours.

1506701, 1506702, 1506(1)703, 1506(3)701, 1506(3)702, 1506(3)703, 1506(3)704

3- Elective courses: 6 credit hours.

1506(3)710, 1506(3)711, 1506(3)712, 1506(3)713, 1506(3)714, 1506(3)715, 150705

4- Thesis: 8 credit hours. 1506(3)799

1- Basic requirements: 10 credit hours

Code	Course Title	Theoretical	Practical/ Clinical	Field	Credit Hours	Prerequisites
150701	Epidemiology and Biostatistics الوبائيات والاحصاءات الحيوية	2			2	
150702	Environmental & Occupational Health الصحة البيئية والمهنية	2			2	
150703	Health Administration & Behavioral Sciences الادارة الصحية والعلوم السلوكية	2			2	
150704	Research Methodology طرق البحث	2	2		3	
150706	Field Studies الدراسات الميدانية	-	-	4	1	
Total		8	2	4	10	

2- Compulsory courses: 14 credit hours

Code	Course Title	Theoretical	Practical/ Clinical	Field	Credit Hours	Prerequisites
1506701	Water & Wastewater Treatment معالجة المياه والمخلفات السائلة	2			2	
1506702	Solid & Hazardous Waste Management إدارة المخلفات الصلبة والخطرة	2			2	
1506(1)703	Biological Indicators of Environmental Pollution الدلائل البيولوجية للتلوث البيئي	1	2		2	
1506(3)701	Environmental Diseases الأمراض البيئية	2			2	
1506(3)702	Environmental Toxicology & Health Risk Assessment علم السموم البيئية وتقييم المخاطر الصحية	2			2	
1506(3)703	Integrated Environmental Management in Health-Care Facilities الإدارة البيئية المتكاملة في مرافق الرعاية الصحية	2			2	
1506(3)704	Critical Reading in Environmental Health قراءات نقدية في الصحة البيئية	2			2	
Total		13	2		14	

3- Elective Courses: 6 credit hours

Code	Course Title	Theoretical	Practical/ Clinical	Field	Credit Hours	Prerequisites
1506(3)710	Children's Environmental Health الصحة البيئية للأطفال	2			2	
1506(3)711	Health & Environment Policies in Global Problems سياسات الصحة والبيئة في المشاكل العالمية	2			2	
1506(3)712	Environmental Health Promotion & Public Participation تعزيز الصحة البيئية والمشاركة المجتمعية	2			2	
1506(3)713	Environmental Health Aspects of International Traveling أوجه الصحة البيئية في السفر الدولي	2			2	
1506(3)714	Environmental Health Management in Disasters & Biological, Chemical, and Radio-nuclear Threats إدارة الصحة البيئية في الكوارث والتحديات البيولوجية والكيميائية والنووية	2			2	
1506(3)715	Current Topics in Environmental Health موضوعات راهنة في الصحة البيئية	2			2	
150705	Ethics and Law for Health Professionals الأخلاقيات والقانون لأفراد الفريق الصحي	2			2	

Course Description

Code	Credit Hours	Course Title	Prerequisites
150701	2	Epidemiology & Biostatistics	
<p>Scope & uses of epidemiology. Natural history of the diseases, requisites for perpetuation of infectious diseases, magnitude and risk factors of non communicable diseases. Basic biostatistics concepts, Basic principle of epidemiologic methods. Presentation of grouped and ungrouped data shape of distribution. Probability concepts and Laws of Probability.</p>			

Code	Credit Hours	Course Title	Prerequisites
150702	2	Environmental and Occupational Health	
<p>Definition of environment & environmental health; water sources, uses and classification, water pollution, point and non-point sources of pollution, types, sources and effects of pollutants; air pollution, types, sources and effects of air pollutants; climate change, ozone depletion, acid rain, etc; soil pollution, types, sources and effects of soil pollutants, control measures for different types of pollution. Occupational hazards, occupational diseases and their prevention.</p>			

Code	Credit Hours	Course Title	Prerequisites
150703	2	Health Administration & Behavioral Sciences	
<p>This course aims at developing students' knowledge regarding basic managerial concepts, processes, skills and techniques and application of such knowledge in the delivery of high quality health care. Managerial processes covered include: planning, decision making, organizing, leadership, supervision, staffing and evaluation. Among the managerial issues and techniques included are: quality health care and problem solving. In addition, certain skills as communication, motivation... etc. will be covered. It also aims at developing students with knowledge and skills regarding role and application of behavioral sciences in the field of public health.</p>			

Code	Credit Hours	Course Title	Prerequisites
150704	4	Research Methodology and Field Studies	
<p>This course is intended to prepare students to design and implement research. It also includes statistical design and analysis as well as proposal writing and report/ thesis writing.</p>			

Code	Credit Hours	Course Title	Prerequisites
1506701	2	Water & Wastewater Treatment	
<p>Types of water resources, selection and protection of water intake, water quality requirements, steps of water treatment including coagulation, sedimentation, filtration, disinfection and desalination. Types of wastewater and their impacts on the environment, methods of wastewater treatment including primary, secondary and tertiary treatment</p>			

Code	Credit Hours	Course Title	Prerequisites
1506702	2	Solid & Hazardous Waste Management	
<p>Definition and sources of solid and hazardous waste, public health impacts of solid and hazardous waste, solid and hazardous waste management hierarchy including source reduction, collection and transport, composting, recycling treatment and disposal</p>			

Code	Credit Hours	Course Title	Prerequisites
1506(1)703	2	Biological Indicators of Environmental Pollution	
<p>Ecological systems, environmental pollution & ecological processes, microorganisms of importance in the environment, role of microorganisms in wastewater & solid waste management, marine ecology, water-related diseases, soil-related diseases, bathing beaches microbiological standards</p>			

Code	Credit Hours	Course Title	Prerequisites
1506(3)701	2	Environmental Diseases	
<p>The interaction between environmental risk factors and human health, methods of assessing and evaluating this relationship; some of the major environmental diseases, their causes, detection methods, and control and prevention measures, epidemiology of environmental diseases, case studies</p>			

Code	Credit Hours	Course Title	Prerequisites
1506(3)702	2	Environmental Toxicology & Health Risk Assessment	
<p>Types and occurrence of environmental toxins, exposure routes, metabolism, assessment of exposure & measurement techniques, dose-effect & dose-response, effects of toxins on man & the environment, health risk assessment principles, risk management strategies, analyzing strategies to achieve environmental goals, implementation and monitoring of strategies.</p>			

Code	Credit Hours	Course Title	Prerequisites
1506(3)703	2	Integrated Environmental Management of Health-Care Facilities	
<p>Concepts of integrated environmental management covering the infection control, occupational health and safety of health care providers, hospital wastes management, and resources conservation. Hospitals' and health care facilities' indoor and outdoor environments, determinants controlling the quality of health care services and the efficiency of infection control programs, exposure of health care providers to occupational risks, incidence of nosocomial infections, antimicrobial resistance and delayed wound healing, design and management criteria for effective & high quality services, adoption of integrated environmental management as a basic tool for quality assurance & accreditation of hospitals.</p>			

Code	Credit Hours	Course Title	Prerequisites
1506(3)704	2	Critical Reading in Environmental Health	
<p>Finding relevant information using electronic and other means, critical assessment of evidence presented in research, critical appraisal of research design & methodology, development of skills to find, interpret and criticize information, titles, language, punctuation marks, style, consistency, clarity, missing parts, repetition, connection between different parts, accuracy, references, etc.</p>			

Code	Credit Hours	Course Title	Prerequisites
1506(3)710	2	Children's Environmental Health	
Environmental risk factors and burden of disease in children; susceptibility of children; reproductive and developmental toxicology; epidemiology of children's environmental diseases; children's environmental health indicators; developing and implementing health action plans.			

Code	Credit Hours	Course Title	Prerequisites
1506(3)711	2	Health & Environment Policies in Global Problems	
Definitions & examples for global problems: climate change; ozone depletion; deforestation; desertification; water shortage; loss of biodiversity; coastal zone threats; population over-growth; impacts on environmental health, emergence and spread of diseases; control measures, global policies for prevention & control of environmental deterioration; case studies			

Code	Credit Hours	Course Title	Prerequisites
1506(3)712	2	Environmental Health Promotion & Public Participation	
Relation between man and his environment, environmental legislation, principles of health promotion and public participation applicable in the field of environmental health, communication methods suitable for environmental health messages, case studies			

Code	Credit Hours	Course Title	Prerequisites
1506(3)713	2	Environmental Health Aspects of International Traveling	
Environmental factors associated with international traveling, types and characteristics of ports, infectious and non-infectious diseases, pandemics, quarantine measures, international health regulations, international public health threats and control measures.			

Code	Credit Hours	Course Title	Prerequisites
1506(3)714	2	Environmental Health Management in Disasters & Biological, Chemical, and Radio-nuclear Threats	
Types of disasters, disaster management cycle, environmental emergency response, pre- and post-disaster activities, technical aspects of disaster management, chemical accidents, radiation emergencies; types of threats, impacts on environmental and human health, environmental health in areas of conflict and refugee camps, emergency preparedness for both intentional and natural disasters; methods for mitigating the severity of emergencies or threats; health education and community participation			

Code	Credit Hours	Course Title	Prerequisites
1506(3)715	2	Current Topics in Environmental Health	
<p>Most recent topics in environmental health, relationship between environmental changes, various exposures and diseases, e.g. SARS, avian flu; impacts of climate change, air pollution; etc.</p>			

Code	Credit Hours	Course Title	Prerequisites
150705	2	Ethics and Law for Health Professionals	
<p>Definitions of ethics, law, risk management and public health will be clarified. Major ethical and legal conflicts in public health will be addressed. Justifying public health programs and policies will be discussed. Human rights and public health will be explained. The course will also tackle understanding of the public health profession's roles and professional values.</p>			

13- Master's Degree in Public Health and Public Health Sciences (Majoring Nutrition)

Students should fulfill a total of 38 credit hours:

1- Basic requirements: 10 credit hours.

150701, 150702, 150703, 150704

2- Compulsory courses: 14 credit hours.

1507(1)701, 1507(1)702, 1507(1)703, 1507(1)704, 1507(1)705, 1507(1)706, 1507(1)707.

3- Elective courses: 6 credit hours.

1507(1)708, 1507(1)709, 1507(1)710, 1507(1)711, 1507(2)710, 1502707

4- Thesis: 8 credit hours. 1507(1)799

1- Basic requirements: 10 credit hours

Code	Course Title	Theoretical	Practical/ Clinical	Field	Credit Hours	Prerequisites
150701	Epidemiology and Biostatistics الوبائيات والاحصاءات الحيوية	2			2	
150702	Environmental & Occupational Health الصحة البيئية والمهنية	2			2	
150703	Health Administration & Behavioral Sciences الادارة الصحية والعلوم السلوكية	2			2	
150704	Research Methodology طرق البحث	2	2		3	
150706	Field Studies الدراسات الميدانية	-	-	4	1	
Total		8	2	4	10	

2- Compulsory courses: 14 credit hours

Code	Course Title	Theoretical	Practical/ Clinical	Field	Credit Hours	Prerequisites
1507(1)701	Basics of Human Nutrition أسس تغذية الإنسان	2			2	
1507(1)702	Nutritional Biochemistry الكيمياء الحيوية التغذوية	2			2	
1507(1)703	Nutritional Surveys المسوح التغذوية	1	2		2	
1507(1)704	Nutritional Disorders الإضطرابات التغذوية	2			2	
1507(1)705	Nutrition Intervention التدخل الغذائي	2			2	
1507(1)706	Therapeutic Nutrition I التغذية العلاجية I	1	2		2	1507(1)701
1507(1)707	Nutritional Requirements of Different Age Groups المتطلبات التغذوية للمجاميع العمرية	2			2	
Total		13	2		14	

3- Elective Courses: 6 credit hours

Code	Course Title	Theoretical	Practical/ Clinical	Field	Credit Hours	Prerequisites
1507(1)708	Diet Evaluation تقييم النظام الغذائي	1	2		2	
1507(1)709	Recent Researches in Nutrition الابحاث الحديثة في التغذية	1	2		2	
1507(1)710	Special Studies in Nutrition دراسات خاصة في التغذية	2			2	
1507(1)711	Nutrition & Food Technology التغذية و تكنولوجيا الغذاء	2			2	
1507(2)710	Principles of Food Hygiene أساسيات صحة الأغذية	2			2	
1502707	Applied Statistics الإحصاء التطبيقي	1	2		2	

Course Description

Code	Credit Hours	Course Title	Prerequisites
150701	2	Epidemiology & Biostatistics	
<p>Scope & uses of epidemiology. Natural history of the diseases, requisites for perpetuation of infectious diseases, magnitude and risk factors of non communicable diseases. Basic biostatistics concepts, Basic principle of epidemiologic methods. Presentation of grouped and ungrouped data shape of distribution. Probability concepts and Laws of Probability.</p>			

Code	Credit Hours	Course Title	Prerequisites
150702	2	Environmental and Occupational Health	
<p>Definition of environment and environmental health, water sources, water uses and classification, water pollution, point and non-point sources of pollution, types of pollutants, their source and effect, air pollution, types of air pollutants, their source and effect (including climate change, ozone depletion, acid rain, etc), soil pollution, types of soil pollutants, their source and effect, control measures for different types of pollution. Occupational hazards, occupational diseases and their prevention.</p>			

Code	Credit Hours	Course Title	Prerequisites
150703	2	Health Administration & Behavioral Sciences	
<p>This course aims at developing students' knowledge regarding basic managerial concepts, processes, skills and techniques and application of such knowledge in the delivery of high quality health care. Managerial processes covered include: planning, decision making, organizing, leadership, supervision, staffing and evaluation. Among the managerial issues and techniques included are: quality health care and problem solving. In addition, certain skills as communication, motivation, ... etc. will be covered. It also aims at developing students with knowledge and skills regarding role and application of behavioral sciences in the field of public health.</p>			

Code	Credit Hours	Course Title	Prerequisites
150704	4	Research Methodology and Field Studies	
<p>This course is intended to prepare students to design and implement research. It also includes statistical design and analysis as well as proposal writing and report slash thesis writing.</p>			

Code	Credit Hours	Course Title	Prerequisites
1507(1)701	2	Basics of Human Nutrition	
<p>The course aims at giving the student the knowledge about the role of proper nutrition in health of human individuals and the required nutrients, their functions, recommended intakes and food sources of nutrients.</p>			

Code	Credit Hours	Course Title	Prerequisites
1507(1)702	2	Nutritional Biochemistry	
<p>The course aims at acquiring a sound knowledge in the relationship between nutrition and metabolism of the human body through understanding the various biochemical mechanisms occurring in the living organism at the cellular level. Students will explore the fundamental roles of nutrients in biological systems. Special emphasis will be placed on the function of nutrients as defined by their chemistry, interrelationships between nutrient function, and nutrient-disease relationships.</p>			

Code	Credit Hours	Course Title	Prerequisites
1507(1)703	2	Nutritional Surveys	
<p>The course aims at giving the student the scientific knowledge in planning, organizing, and conducting a nutrition survey and surveillance in order to assess the nutritional status of the community. Students will learn practical methods of the survey determinants in researches and evaluate their strengths and limitations.</p>			

Code	Credit Hours	Course Title	Prerequisites
1507(1)704	2	Nutritional Disorders	
<p>The main focus of the course is on the impact of the nutritional disorders including both nutritional deficiencies and over nutrition on the health and well being of the body and mind of individuals and the community. The emphasis is on the role of nutrition and lifestyle in the development of chronic conditions such as obesity, cardiovascular, type 2 diabetes mellitus, hypertension and different types of cancers. The emerging epidemic and global challenge of nutritional disorders as an underlying cause of these chronic diseases and their management and control.</p>			

Code	Credit Hours	Course Title	Prerequisites
1507(1)705	2	Nutrition Intervention	
<p>The course aims at providing the student with the knowledge required to identify the situations where it is essential to apply a nutrition intervention measure to combat the nutrition problem prevailing in the community. The criteria used for the selection and application of different intervention measures will be discussed. Examples of common nutrition intervention programs previously applied in Egypt as well as other countries will be presented discussed and evaluated.</p>			

Code	Credit Hours	Course Title	Prerequisites
1507(1)706	2	Therapeutic Nutrition I	
<p>The course aims at giving the student the knowledge and skills in constructing diets for management of gastrointestinal tract, cardiovascular, renal disorders, diabetes mellitus, and obesity. The course will cover the relationship between the diet and the occurrence of these disorders.</p>			

Code	Credit Hours	Course Title	Prerequisites
1507(1)707	2	Nutritional Requirements of Different Age Groups	
<p>The course aims at acquiring the sound knowledge about the nutritional requirements and nutrition problems of age groups; and evaluates the impact of these problems on the nutritional status of each age group during the life stages.</p>			

Code	Credit Hours	Course Title	Prerequisites
1507(1)708	2	Diet Evaluation	
<p>The course aims at giving the student the knowledge of the basics and practice of the art of dietetics, across its entire spectrum from health promotion to disease prevention. It concentrates also on the essentials of healthy eating and healthy lifestyle.</p>			

Code	Credit Hours	Course Title	Prerequisites
1507(1)709	2	Recent Researches in Nutrition	

The course aiming at gaining knowledge of advanced researches in nutrition. Assignments and discussions of recent contemporary issues in nutrition will be conducted by the student.

Code	Credit Hours	Course Title	Prerequisites
1507(1)710	2	Special Studies in Nutrition	

The course aiming at gaining knowledge of the special topics in nutrition researches and studies that are of public health importance.

Code	Credit Hours	Course Title	Prerequisites
1507(1)711	2	Nutrition & Food Technology	

The course aims at acquiring the sound knowledge about the principles of food sciences and technology in order to study the relationship between nutrition and nutritional value of foods with the technological methods used in food manufacturing.

Code	Credit Hours	Course Title	Prerequisites
1507(2)710	2	Principles of Food Hygiene	

This course provides students with the principles of food hygiene and safe handling of foods and their importance in preventing the occurrence of foodborne diseases. Among topics included in this course are; food contamination, factors affecting microbial growth in foods, foodborne diseases, safe food handling in the home, in food processing and foodservice establishments, and food additives, their types and purpose of addition as well as their health impact.

Code	Credit Hours	Course Title	Prerequisites
1502707	2	Applied Statistics	

This is a course to teach students from different specialties of public health how to analyze data and interpret the results. By the end of the course the student should be able to determine the type of analysis (parametric or non parametric), test the relation between variables using comparison of means, test the hypothesis, test the relation between variables, using various measures of association.

14- Master's Degree in Public Health and Public Health Sciences (Majoring Food Hygiene and Control)

Students should fulfill a total of 38 credit hours:

1- Basic requirements: 10 credit hours.

150701, 150702, 150703, 150704

2- Compulsory courses: 14 credit hours.

1507(2)701, 1507(2)702, 1507(2)703, 1507(2)704, 1507(2)705, 1507(2)706, 1507(2)707

3- Elective courses: 6 credit hours.

1507(2)708, 1507(2)709, 1507(2)710, 1507(2)711, 1507(2)712, 1507(2)713

4- Thesis: 8 credit hours. 1507(2)799

1- Basic requirements: 10 credit hours

Code	Course Title	Theoretical	Practical/ Clinical	Field	Credit Hours	Prerequisites
150701	Epidemiology and Biostatistics الوبائيات والاحصاءات الحيوية	2			2	
150702	Environmental & Occupational Health الصحة البيئية والمهنية	2			2	
150703	Health Administration & Behavioral Sciences الادارة الصحية والعلوم السلوكية	2			2	
150704	Research Methodology طرق البحث	2	2		3	
150706	Field Studies الدراسات الميدانية	-	-	4	1	
Total		8	2	4	10	

2- Compulsory courses: 14 credit hours

Code	Course Title	Theoretical	Practical/ Clinical	Field	Credit Hours	Prerequisites
1507(2)701	Control of Milk and Dairy Products الرقابة الصحية علي الألبان ومنتجاتها	1	2		2	
1507(2)702	Meat Safety and Quality سلامة وجودة اللحوم	1	2		2	
1507(2)703	Microbiological Safety of Food الامان الميكروبيولوجي للأغذية	1	2		2	
1507(2)704	Food Hygiene Management إدارة صحة الأغذية	2			2	
1507(2)705	Health Aspects of Food Additives and Contaminants المظاهر الصحية لمضافات وملوثات الغذاء	2			2	
1507(2)706	Food Standards and Legislation المواصفات القياسية وتشريعات الأغذية	2			2	
1507(2)707	Foodborne Diseases الأمراض التي تنتقل عن طريق الغذاء	2			2	
Total		11	6		14	

3- Elective Courses: 6 credit hours

Code	Course Title	Theoretical	Practical/ Clinical	Field	Credit Hours	Prerequisites
1507(2)708	Introduction to Veterinary Public Health مقدمة فى الصحة العامة البيطرية	1	2		2	
1507(2)709	Food Processing and Technology تصنيع وتكنولوجيا الأغذية	1	2		2	
1507(2)710	Principles of Food Hygiene أساسيات صحة الأغذية	2			2	
1507(2)711	Mass Catering تغذية الجماعات	2			2	
1507(2)712	Critical Reading قراءات موجة	2			2	
1507(2)713	Food Sanitation إصحاح الغذاء	1		4	2	

Course Description

Code	Credit Hours	Course Title	Prerequisites
150701	2	Epidemiology & Biostatistics	
<p>Scope & uses of epidemiology. Natural history of the diseases, requisites for perpetuation of infectious diseases, magnitude and risk factors of non communicable diseases. Basic biostatistics concepts, Basic principle of epidemiologic methods. Presentation of grouped and ungrouped data shape of distribution. Probability concepts and Laws of Probability.</p>			

Code	Credit Hours	Course Title	Prerequisites
150702	2	Environmental and Occupational Health	
<p>Definition of environment and environmental health, water sources, water uses and classification, water pollution, point and non-point sources of pollution, types of pollutants, their source and effect, air pollution, types of air pollutants, their source and effect (including climate change, ozone depletion, acid rain, etc), soil pollution, types of soil pollutants, their source and effect, control measures for different types of pollution. Occupational hazards, occupational diseases and their prevention.</p>			

Code	Credit Hours	Course Title	Prerequisites
150703	2	Health Administration & Behavioral Sciences	

This course aims at developing students' knowledge regarding basic managerial concepts, processes, skills and techniques and application of such knowledge in the delivery of high quality health care. Managerial processes covered include: planning, decision making, organizing, leadership, supervision, staffing and evaluation. Among the managerial issues and techniques included are: quality health care and problem solving. In addition, certain skills as communication, motivation, ... etc. will be covered. It also aims at developing students with knowledge and skills regarding role and application of behavioral sciences in the field of public health.

Code	Credit Hours	Course Title	Prerequisites
150704	4	Research Methodology and Field Studies	

This course is intended to prepare students to design and implement research. It also includes statistical design and analysis as well as proposal writing and report slash thesis writing.

Code	Credit Hours	Course Title	Prerequisites
1507(2)701	2	Control of Milk and Dairy Products	

By the end of this course, the student will be able to understand the different aspects of producing and processing milk and dairy products under hygienic conditions. Topics include physical properties of milk, chemical properties of milk, sources of milk contamination, keeping quality of milk, heat treatment of milk, diseases transmitted through milk and dairy products, dairy products, probiotics and functional dairy products.

Code	Credit Hours	Course Title	Prerequisites
1507(2)702	2	Meat Safety and Quality	

Understand the safety aspects of meat processing and preservation including the microbes involved in disease and meat spoilage, how to minimize contamination of raw meat and To understand the concept of meat quality, the principle factors influencing it, how to measure its major characteristics, and its biochemical basis.

Code	Credit Hours	Course Title	Prerequisites
1507(2)703	2	Microbiological Safety of Food	

This course will focus on the relationship between microorganisms, foods and animal hosts in relation to foodborne disease and food safety. Spoilage of different food commodities will be discussed in details. The role of 'Hazard Analysis Critical Control Point' (HACCP) and the Microbial Risk Assessment (MRA) concepts will be highlighted.

Code	Credit Hours	Course Title	Prerequisites
1507(2)704	2	Food Hygiene Management	
<p>This course highlights the importance of food hygiene and quality management for supporting safe food production and enhancing market competitiveness of food products. This course will cover different quality management systems, principles of HACCP, plans and carries out of HACCP study, and application of HACCP to food processing and catering.</p>			

Code	Credit Hours	Course Title	Prerequisites
1507(2)705	2	Health Aspects of Food Additives and Contaminants	
<p>This course discusses the public health aspects of the diverse food additives and contaminants and their legal meaning as defined by the FDA and Cosmetic act. Also to discuss the benefits and the hazards associated with the use of these chemicals in food production, processing, packaging and storage.</p>			

Code	Credit Hours	Course Title	Prerequisites
1507(2)706	2	Food Standards and Legislation	
<p>This course explains that production; processing, distribution, retail, packaging and labeling of food stuffs are governed by a mass of laws, regulations, codes of practice and guidance. It also explains that Food Standards Agency is concerned not only with the food we eat but with what it is sold in and how that is labeled and is responsible for making sure that the rules on the safety of materials that come into contact with food are enforced.</p>			

Code	Credit Hours	Course Title	Prerequisites
1507(2)707	2	Food Borne Diseases	
<p>This course will introduce public health students to the food system and diseases transmitted by food. Topics include sources of contaminants, the function of processing in food safety, the concepts and practices related to the surveillance of foodborne diseases and how surveillance forms the basis for prevention and control activities and the investigation of food borne outbreaks.</p>			

Code	Credit Hours	Course Title	Prerequisites
1507(2)708	2	Introduction to Veterinary Public Health	
<p>This course provides students with the history of veterinary public health, the purposes and scope of veterinary public health, fields of activity of public health veterinarians, organization and administration of veterinary public health services and programs, international and regional aspects, contribution of veterinarian to food safety, contamination of food of animal origin: hazards and risk management, public health and socioeconomic aspects of zoonosis, role of the private sector and nongovernmental organizations in prevention and control of zoonosis, intersectional cooperation between public health and veterinary services, public health education and community involvement in health development and the development of veterinary medicine.</p>			

Code	Credit Hours	Course Title	Prerequisites
1507(2)709	2	Food Processing and Technology	
<p>In this course focuses on the principles of food manufacture and technology, and its topics include Food technology and public health, ambient-temperature processing technology (Raw material preparation, Size reduction, mixing and forming, food irradiation, high pressure technology, ohmic heating, pulsed light, infrared and microwave), processing by application of heat (canning, pasteurisation, aseptic processing), processing by the removal of Heat (chilling and freezing) chemical food additives and food contaminants.</p>			

Code	Credit Hours	Course Title	Prerequisites
1507(2)710	2	Principles of Food Hygiene	
<p>This course provides students with the principles of food hygiene and safe handling of foods and their importance in preventing the occurrence of foodborne diseases. Among topics included in this course are; food contamination, factors affecting microbial growth in foods, foodborne diseases, safe food handling in the home, in food processing and foodservice establishments, and food additives, their types and purpose of addition as well as their health impact.</p>			

Code	Credit Hours	Course Title	Prerequisites
1507(2)711	2	Mass Catering	
<p>This course provides information on premises contamination, control of ingredients and of personnel hygiene, recent catering technology, training of food handlers as well as the different catering systems including commercial, welfare and hotels catering.</p>			

Code	Credit Hours	Course Title	Prerequisites
1507(2)712	2	Critical Reading	
<p>The students will select a subject area with related to food safety and the emerging problems that may compromise the food safety and its suitability for consumption. The selection of the subject will be with the aid of the supervisors which will be subjected for further detailed study.</p>			

Code	Credit Hours	Course Title	Prerequisites
1507(2)713	2	Food Sanitation	
<p>This course analyses the solution to the problem of safe food in three parts. First is the food: how to obtain safe food. Second are the people: how to train employees to learn and apply hygienic food handling practices. Third is the facility: how to build in sanitation, and how to choose equipment with sanitation features.</p>			

15- Master's Degree in Public Health and Public Health Sciences (Majoring Food Analysis)

Students should fulfill a total of 38 credit hours:

1- Basic requirements: 10 credit hours.

150701, 150702, 150703, 150704

2- Compulsory courses: 14 credit hours.

1507(3)701, 1507(3)702, 1507(3)703, 1507(3)704, 1507(3)705, 1507(3)706

3- Elective courses: 6 credit hours.

1507 (3) 707, 1507 (3) 708, 1507 (3) 709.1507(3)710, 1507(3)711

4- Thesis: 8 credit hours. 1507(3)799

1- Basic requirements: 10 credit hours

Code	Course Title	Theoretical	Practical/ Clinical	Field	Credit Hours	Prerequisites
150701	Epidemiology and Biostatistics الوبائيات والاحصاءات الحيوية	2			2	
150702	Environmental & Occupational Health الصحة البيئية والمهنية	2			2	
150703	Health Administration & Behavioral Sciences الادارة الصحية والعلوم السلوكية	2			2	
150704	Research Methodology طرق البحث	2	2		3	
150706	Field Studies الدراسات الميدانية	-	-	4	1	
Total		8	2	4	10	

2- Compulsory courses: 14 credit hours

Code	Course Title	Theoretical	Practical/ Clinical	Field	Credit Hours	Prerequisites
1507(3)701	Food Analysis تحليل الأغذية	2	2		3	
1507(3)702	Analysis of Food Products تحليل المنتجات الغذائية	1	2		2	
1507(3)703	Instrumental Techniques in Food Analysis طرق تحليل الأغذية باستخدام الأجهزة العملية	2	2		3	
1507(3)704	Food Chemistry كيمياء الأغذية	1	2		2	
1507(3)705	Quality Management in Laboratories ادارة الجودة في المعامل	2			2	
1507(3)706	Food Toxicology علم سموم الأغذية	2			2	
Total		10	8		14	

3- Elective Courses: 6 credit hours

Code	Course Title	Theoretical	Practical/ Clinical	Field	Credit Hours	Prerequisites
1507(3)707	Analytical Chemistry الكيمياء التحليلية	1	2		2	
1507(3)708	Sensory Evaluation of Food التقييم الحسي للأغذية	1	2		2	
1507(3)709	Mycotoxins السموم الفطرية	1	2		2	
1507(3)710	Food Biotechnology التكنولوجيا الحيوية للغذاء	1	2		2	
1507(3)711	Introduction to the Science and Technology of Food مقدمة في علوم و تكنولوجيا الأغذية	2	0		2	

Course Description

Code	Credit Hours	Course Title	Prerequisites
150701	2	Epidemiology & Biostatistics	
<p>Scope & uses of epidemiology. Natural history of the diseases, requisites for perpetuation of infectious diseases, magnitude and risk factors of non communicable diseases. Basic biostatistics concepts, Basic principle of epidemiologic methods. Presentation of grouped and ungrouped data shape of distribution. Probability concepts and Laws of Probability.</p>			

Code	Credit Hours	Course Title	Prerequisites
150702	2	Environmental and Occupational Health	
<p>Definition of environment and environmental health, water sources, water uses and classification, water pollution, point and non-point sources of pollution, types of pollutants, their source and effect, air pollution, types of air pollutants, their source and effect (including climate change, ozone depletion, acid rain, etc), soil pollution, types of soil pollutants, their source and effect, control measures for different types of pollution. Occupational hazards, occupational diseases and their prevention.</p>			

Code	Credit Hours	Course Title	Prerequisites
150703	2	Health Administration & Behavioral Sciences	

This course aims at developing students' knowledge regarding basic managerial concepts, processes, skills and techniques and application of such knowledge in the delivery of high quality health care. Managerial processes covered include: planning, decision making, organizing, leadership, supervision, staffing and evaluation. Among the managerial issues and techniques included are: quality health care and problem solving. In addition, certain skills as communication, motivation, ... etc. will be covered. It also aims at developing students with knowledge and skills regarding role and application of behavioral sciences in the field of public health.

Code	Credit Hours	Course Title	Prerequisites
150704	4	Research Methodology and Field Studies	

This course is intended to prepare students to design and implement research. It also includes statistical design and analysis as well as proposal writing and report slash thesis writing.

Code	Credit Hours	Course Title	Prerequisites
1507(3)701	3	Food Analysis	

This course includes the basic principles of food analysis by giving knowledge about the determination of macro and micronutrients of food components. The topics of this course include principles of sampling and sample preparation as well as sample clean up. It also gives knowledge of proximate and physicochemical analysis of food components.

Code	Credit Hours	Course Title	Prerequisites
1507(3)702	2	Analysis of Food Products	

This course highlights the food standards and regulations in Egypt. It also includes chemical analysis of specific food products in the Egyptian markets including fruit and vegetable products, meat, poultry and fish products, dairy products, fat and oil products, chemical additives and functional foods.

Code	Credit Hours	Course Title	Prerequisites
1507(3)703	3	Instrumental Techniques in Food Analysis	

This course provides the students with the principles and applications of instrumental techniques used in food analysis. The topics include refractometric, spectroscopic and colorimetric techniques. Chromatography and chromatographic techniques are also included in this course.

Code	Credit Hours	Course Title	Prerequisites
1507(3)704	2	Food Chemistry	

This course highlights the importance of studying chemistry of food components and chemical reactions that take place in the biological system. This course covers different topics including: water in biological system, proteins and amino acids, carbohydrates and sugars and volatile compounds. Chemical reactions that take place in the biological systems include: enzymic and nonenzymic reactions, oxidation of food and flavour reactions.

Code	Credit Hours	Course Title	Prerequisites
1507(3)705	2	Quality Management in Laboratories	

This course includes a definition of quality management. It provide the students with the principles of quality control in laboratory management, human system development in laboratory and current issues in laboratory business administration.

Code	Credit Hours	Course Title	Prerequisites
1507(3)706	2	Food Toxicology	

This course aims at understanding the food toxicity and toxicology. The topics of this course include: principles of food toxicology, origin of chemical toxins in food, mycotoxins, pesticide residue in food and occurrence of plasticizers in food. This course also covers the pathway entry of toxins into the body as well as the chronic and acute food toxicity.

Code	Credit Hours	Course Title	Prerequisites
1507(3)707	2	Analytical Chemistry	

This course highlights the basics and principles of analytical chemistry and its relation to food analysis. The topics of this course include: basic units used to express concentration of compounds in food system, principles of error detection by measuring accuracy, precision and reproducibility of food analyst. This course also covers the principles of oxidation-reduction reactions in food analysis.

Code	Credit Hours	Course Title	Prerequisites
1507(3)708	2	Sensory Evaluation of Food	

This course focuses on the principles of sensory evaluation as a method to assess food quality. Topics of this course include basic theories for the assessment of odour, colour, taste and texture in relation to food quality. Practical sensory evaluation is also used as a tool to assess food quality.

Code	Credit Hours	Course Title	Prerequisites
1507(3)709	2	Mycotoxins	
<p>This course provides students with the principles of mycotoxins including: types of mycotoxins, food contamination with mycotoxins, methods of analysis of mycotoxins in food, identification and decontamination of mycotoxins as well as toxicity of mycotoxins. Different types of Mycotoxins will be studied including: aflatoxins B1,B2,G1,G2,M1, and M2.Ocratoxins A1,A2, Zearalenone.</p>			

Code	Credit Hours	Course Title	Prerequisites
1507(3)710	2	Food Biotechnology	
<p>This course highlights the current use, research and impending development of foods produced through modern biotechnology, and their significance for human health and development. It also focuses on risk assessments of present and future products of modern biotechnology in relation to food safety, human nutrition and environmental health. The impact of modern food biotechnology on civil society, considering social and ethical concerns is also covered.</p>			

Code	Credit Hours	Course Title	Prerequisites
1507(3)711	2	Introduction to the Science and Technology of Food	
<p>This course gives an introduction to the chemical, physical and microbiological nature of food and how these factors are manipulated to produce food that is safe and of high quality. It also gives a brief overview of food processing operations.</p>			

16- Master's Degree in Public Health and Public Health Sciences (Majoring Health Management, Planning and Policy)

Students should fulfill a total of 38 credit hours:

1- Basic requirements: 10 credit hours.

150701, 150702, 150703, 150704

2- Compulsory courses: 14 credit hours.

1508(1)701, 1508(1)702, 1508(1)7013, 1508(1)704, 1508(1)705, 1508(1)706, 1508(1)707

3- Elective courses: 6 credit hours.

1508(1)606, 1508(1)607, 1508(1)609, 1508(1)610, 1508(1)710, 1508(1)711, 1508(1)712, 1508(1)713, 1508(1)713, 150705

4- Thesis: 8 credit hours. 1508(1)799

1- Basic requirements: 10 credit hours

Code	Course Title	Theoretical	Practical/ Clinical	Field	Credit Hours	Prerequisites
150701	Epidemiology and Biostatistics الوبائيات والاحصاءات الحيوية	2			2	
150702	Environmental & Occupational Health الصحة البيئية والمهنية	2			2	
150703	Health Administration & Behavioral Sciences الادارة الصحية والعلوم السلوكية	2			2	
150704	Research Methodology طرق البحث	2	2		3	
150706	Field Studies الدراسات الميدانية	-	-	4	1	
Total		8		2	10	

2- Compulsory courses: 14 credit hours

Code	Course Title	Theoretical	Practical/ Clinical	Field	Credit Hours	Prerequisites
1508(1)701	Health Planning التخطيط الصحي	2			2	
1508(1)702	Quality in Health Care الجودة في مجال الرعاية الصحية	2			2	
1508(1)703	Concepts & Issues in Health Management and Policy مفاهيم واعتبارات في مجال الإدارة والسياسة الصحية	2			2	
1508(1)704	Human resources management إدارة الموارد البشرية في منظمات الرعاية الصحية	2			2	
1508(1)705	Leadership in Health: Conceptual issues and Skills القيادة في المجال الصحي: مفاهيم ومهارات	2			2	
1508(1)706	Problem Solving and Decision Making: Concepts and Techniques حل المشاكل واتخاذ القرار: المفاهيم والأساليب	2			2	
1508(1)707	Conceptual & Application Approaches to Health Program Evaluation المفاهيم والتطبيق في مجال تقييم البرامج الصحية	2			2	

3- Elective Courses: 6 credit hours

Code	Course Title	Theoretical	Practical/ Clinical	Field	Credit Hours	Prerequisites
1508(1)606	Economics of Health and Medical Care الاقتصاد في المجال الصحى والرعاية الطبية	2			2	
1508(1)607	Financial Management of Health Care Institutions الإدارة المالية فى المؤسسات الصحية	2			2	
1508(1)609	Local Health Administration الإدارة الصحية المحلية	2			2	
1508(1)610	Advances in Health Management, Planning and Policy حلقات دراسية فى الإدارة والتخطيط والسياسة الصحية	2			2	
1508(1)710	Organization of Health Services Institutions تنظيم ومؤسسات الخدمات الصحية	2			2	
1508(1)711	Strategic Management of Health Care Organizations الإدارة الإستراتيجية للمنظمات الصحية	2			2	
1508(1)712	Accreditation, Licensure and ISO in Health Care الاعتماد والترخيص ونظام الأيزو فى المنظمات الصحية	2			2	
1508(1)713	Management of Change in Health Care Organizations إدارة التغير التنظيمى	2			2	
1508(1)714	Financial Analysis in Health Care التحليل المالى فى مجال الرعاية الصحية	2			2	
150705	Ethics and Law for Health Professionals الأخلاقيات والقانون لأفراد الفريق الصحى	1			1	

Course Description

Code	Credit Hours	Course Title	Prerequisites
150701	2	Epidemiology & Biostatistics	
<p>Scope & uses of epidemiology. Natural history of the diseases, requisites for perpetuation of infectious diseases, magnitude and risk factors of non communicable diseases. Basic biostatistics concepts, Basic principle of epidemiologic methods. Presentation of grouped and ungrouped data shape of distribution. Probability concepts and Laws of Probability.</p>			

Code	Credit Hours	Course Title	Prerequisites
150702	2	Environmental and Occupational Health	
<p>Definition of environment and environmental health, water sources, water uses and classification, water pollution, point and non-point sources of pollution, types of pollutants, their source and effect, air pollution, types of air pollutants, their source and effect (including climate change, ozone depletion, acid rain, etc), soil pollution, types of soil pollutants, their source and effect, control measures for different types of pollution. Occupational hazards, occupational diseases and their prevention.</p>			

Code	Credit Hours	Course Title	Prerequisites
150703	2	Health Administration & Behavioural Sciences	
<p>This course aims at developing students' knowledge regarding basic managerial concepts, processes, skills and techniques and application of such knowledge in the delivery of high quality health care. Managerial processes covered include: planning, decision making, organizing, leadership, supervision, staffing and evaluation. Among the managerial issues and techniques included are: quality health care and problem solving. In addition, certain skills as communication, motivation ... etc. will be covered. It also aims at developing students with knowledge and skills regarding role and application of behavioral sciences in the field of public health.</p>			

Code	Credit Hours	Course Title	Prerequisites
150704	4	Research methodology and field studies	
<p>This course is intended to prepare students to design and implement research. It also includes statistical design and analysis as well as proposal writing and report slash thesis writing.</p>			

Code	Credit Hours	Course Title	Prerequisites
1508(1)701	2	Health Planning	
<p>This course provides students with the knowledge and skills required for successful planning for different health organizations and systems with special emphasis on strategic planning. It covers areas related to development of Health Service Organization (HSO) missions, objectives, programs, policies & procedures. Differentiates between types of plans e.g. strategic versus operational, single use versus standing plans.....etc. Contemporary issues in planning e.g. criticism of planning and how to plan in a dynamic environment. Components of HSO strategic planning as discussed in detail i.e. I) Formulating objectives. II) Strategic assessment (including SWOT analysis). III) Strategy Choice. Moreover, introduction of planning tools and techniques which will help students in health planning results are include e.g. forecasting, benchmarking, budgeting & scheduling, as well as contemporary planning techniques e.g. project management and scenario planning.</p>			

Code	Credit Hours	Course Title	Prerequisites
1508 (1) 702	2	Quality in Health Care	
<p>This course provides students with the most recent concepts and issues related to quality health management. It introduces students to the philosophy of total quality management, to accreditation and licensure activities as well as the role of ISO standards in health care. It also provides students with the required skills needed for the development and use of indicators and thresholds as well as skills needed for the use of some tools and techniques required for improving quality performance.</p>			

Code	Credit Hours	Course Title	Prerequisites
1508(1)703	2	Concepts & Issues in Health Management and Policy	
<p>This course helps the graduates in identifying the state of health care system in Egypt and understanding the role of different players in the arena of health care delivery. It focuses on the comparison between different health care systems, and discusses the Egyptian health sector reform approach. In addition the course outlines trends in health manpower supply, demand, distribution and development in different settings. It helps graduates to recognize the different dimensions of accessibility and availability of health care services. In addition, ethical issues related to health care delivery will be discussed.</p>			

Code	Credit Hours	Course Title	Prerequisites
1508(1)704	2	Human resources management	
<p>This course provides students with an overview of the human resources management in health care organizations. It focuses on the different staffing activities .It helps students in writing an accurate description of each job, performing recruitment activities so that they can choose from a well-qualified pool of applicants and use interviewing, testing and references to ensure hiring the best available personnel. It provides the students with a fundamental understanding of performance appraisal. It also provides the skills to design, implement, and evaluate training programs. In addition, employee movement within the organization through promotion and transfer, demotion, separation and discipline of employees will be studied. Principles of human resources motivation and job satisfaction and human resources standards required by accreditation agencies will be covered.</p>			

Code	Credit Hours	Course Title	Prerequisites
1508(1)705	2	Leadership in Health: Conceptual issues and Skills	
<p>This course is composed of two basic parts. Part (1) Focuses on leadership concepts, issues & theories clarifying the process leading to effective leadership. This part includes definitions, sources of power and influence strategies, role of leaders as change agents, leadership theories, emotional intelligence as well as contemporary leadership approaches. Part (2) Focuses on skills required for the development of successful, influential leaders including</p> <ul style="list-style-type: none"> i) Personal skills e.g. developing self awareness, managing stressetc. ii) Interpersonal skills e.g. supportive communication, motivation.....etc. iii) Group skills e.g. empowering and delegating, team building. 			

Code	Credit Hours	Course Title	Prerequisites
1508(1)706	2	Problem Solving and Decision Making: Concepts and Techniques	
<p>This course aims at developing graduates trained in adequately solving organizational health problems based on objective non- biased decisions. The course follows the workshop approach where students are required to apply each step of the framework of problem solving in the classroom situation. Students are also required to present a problem solving assignment at the end of the course. The course content includes decision-making definition, types of decisions and problems, relation between decision making and problem solving, phases and steps of the "systematic framework for problem solving" as well as the various factors influencing problem solving and decision making.</p>			

Code	Credit Hours	Course Title	Prerequisites
1508(1)707	2	Conceptual & Application Approaches to Health Program Evaluation	
<p>This course provides students with an overview of concepts and methods of program evaluation in health care organizations. It focuses on understanding different types of evaluation approaches using appropriate standards needed for effective program evaluation including role of economic skills in program evaluation. It also provides the skills required to design, and implement program evaluation, and how to integrate evaluation with routine program implementation.</p>			

Code	Credit Hours	Course Title	Prerequisites
1508(1)606	2	Economics of Health and Medical Care	
<p>This course provides students with an overview of the application of the economics theory and concepts in managing health and medical care services. It focuses on the macro-economics and micro-economics concepts. It helps students in acquiring skills in applying concepts of micro-economics in health management (particularly the marginal value, fixed & variable costs and elasticity of demand) and develops skills in cost analysis (cost benefit & cost effectiveness). It helps students to develop positive attitudes towards incentives which influence optimum demand and which avoid over utilization.</p>			

Code	Credit Hours	Course Title	Prerequisites
1508(1)607	2	Financial Management of Health Care Institutions	
<p>This course provides students with an overview of basic concepts and skills required for adequate financial decision making. It focuses on all important issues related to financial management. It helps students to explain and set budgets and differentiate between cost types, cost containment and cost volume analysis.</p>			

Code	Credit Hours	Course Title	Prerequisites
1508(1)609	2	Local Health Administration	
<p>This course provides graduates with a fundamental understanding of the local health facilities responsible for the provision of health services to the public as well as those facilities responsible for their administration. It helps graduates in determining the relation between the local, intermediate and central administrative levels in the MOHP and their impact on the functioning of local health services, and determining the relation between NGO's and local health facilities. In addition the role of local council in relation to local health facilities will be studied.</p>			

Code	Credit Hours	Course Title	Prerequisites
1508(1)610	2	Advances in Health Management, Planning and Policy	
<p>This course focuses on developing skills required by students to be able to write and present a scientific review paper on up-to-date topics of priority importance in health management, planning and policy using internet, library and other valid sources.</p>			

Code	Credit Hours	Course Title	Prerequisites
1508(1)710	2	Organization of Health Services Institutions	

This course helps students to understand the structure and principles of organization of health services organizations. It makes students differentiate between centralization and decentralization and between formal and informal organizations. In addition, types, uses and importance of organizational charts will be studied.

Code	Credit Hours	Course Title	Prerequisites
1508(1)711	2	Strategic Management of Health Care Organizations	

This course helps students to understand the structure and principles of organization of health services organizations. It makes students differentiate between centralization and decentralization and between formal and informal organizations. In addition, types, uses and importance of organizational charts will be studied.

Code	Credit Hours	Course Title	Prerequisites
1508(1)712	2	Accreditation, Licensure and ISO in Health Care	

This course focuses on developing graduates knowledgeable about the importance of accreditation and licensure activities to the quality of care in the health field. The course discusses the meaning of accreditation and types of accrediting bodies as well as their evolution, functions and the benefits of having an accrediting system. The Egyptian accreditation and licensure system will be discussed as well as similar systems in other countries. The purpose, definition and history of ISO will be tackled as well as its benefits and application in the health care field.

Code	Credit Hours	Course Title	Prerequisites
1508(1)713	2	Management of Change in Health Care Organizations	

This course will help the graduates to understand the nature and need as well as the process of change in health care organizations. It provides the graduates with a fundamental understanding of pressures leading to organizational change. It helps the graduate to evaluate organizational change and to explain the role of change in health care organizations. In addition, human resources changes will be discussed.

Code	Credit Hours	Course Title	Prerequisites
1508(1)714	2	Financial Analysis in Health Care	
<p>This course provides students with knowledge regarding financing mechanisms, timing of program, expenditures, organizational implications and budget preparation and analysis. It also provides the skills required for usage of performance budget. It helps students to evaluate program budget and indicating items which show deviation in expenditure from the standard expenditure and taking corrective measures and estimating adjusted budget.</p>			

Code	Credit Hours	Course Title	Prerequisites
150705	1	Ethics and Law for Health Professionals	
<p>Definitions of ethics, law, risk management and public health will be clarified. Major ethical and legal conflicts in public health will be addressed. Justifying public health programs and policies will be discussed. Human rights and public health will be explained. The course will also tackle understanding of the public health profession's roles and professional values.</p>			

17- Master's Degree in Public Health and Public Health Sciences (Majoring Hospital Administration)

Students should fulfill a total of 38 credit hours:

1- Basic requirements: 10 credit hours.

150701, 150702, 150703, 150704

2- Compulsory courses: 14 credit hours.

1508(2)720, 1508(2)721, 1508(2)722, 1508(2)723, 1508(2)724, 1508(1)615, 1508(0)752

3- Elective courses: 6 credit hours.

1508(2)725, 1508(2)726, 1508(2)624, 1508(2)625, 1508(2)626, 1508(2)727, 1508(2)728, 1508(1)605, 1508(1)602

4- Thesis: 8 credit hours. 1508(2)799

1- Basic requirements: 10 credit hours

Code	Course Title	Theoretical	Practical/ Clinical	Field	Credit Hours	Prerequisites
150701	Epidemiology and Biostatistics الوبائيات والاحصاءات الحيوية	2			2	
150702	Environmental & Occupational Health الصحة البيئية والمهنية	2			2	
150703	Health Administration & Behavioral Sciences الادارة الصحية والعلوم السلوكية	2			2	
150704	Research Methodology طرق البحث	2	2		3	
150706	Field Studies الدراسات الميدانية	-	-	4	1	
Total		8	2	4	10	

2- Compulsory courses: 14 credit hours

Code	Course Title	Theoretical	Practical/ Clinical	Field	Credit Hours	Prerequisites
1508(2)720	Principles of Hospital Management أساسيات إدارة المستشفيات	2			2	
1508(2)721	Quality and Performance Improvement in Hospitals الجودة وتحسين الأداء في المستشفيات	2			2	
1508(2)722	Hospital Strategic Planning and Marketing التخطيط والتسويق الإستراتيجي للمستشفى	2			2	
1508(2)723	Health Information Systems Management إدارة نظم المعلومات الصحية	2			2	
1508(2)724	Financial Management of Hospitals الإدارة المالية للمستشفيات	2			2	
1508(1)615	Human Resources Management إدارة الموارد البشرية	2			2	
1508(0)752	Health System Research بحوث النظم الصحية	2			2	
Total		14			14	

3- Elective Courses: 6 credit hours

Code	Course Title	Theoretical	Practical/ Clinical	Field	Credit Hours	Prerequisites
1508(2)725	Quality Improvement Tools and Techniques in Hospitals تحسين الجودة والتقنيات في المستشفيات	2			2	
1508(2)726	Patient Safety and Risk Management سلامة المرضى وإدارة المخاطر	2			2	
1508(2)624	Hospital Economics اقتصاديات المستشفى	2			2	
1508(2)625	Management of Hospital Departments إدارة أقسام المستشفى	2			2	
1508(2)626	Ethical and Legal Issue in Hospitals القضايا الأخلاقية والقانونية بالمستشفيات	2			2	
1508(2)727	Health Care Organizational Behavior السلوك التنظيمي في الرعاية الصحية	2			2	
1508(2)728	Advances in Hospital Management الحديث في إدارة المستشفيات	2			2	
1508(1)605	Basic Principles of Leadership in Health المبادئ الأساسية للقيادة في الصحة	2			2	
1508(1)602	Introduction to health care quality مقدمة لجودة الرعاية الصحية	2			2	

Course Description

Code	Credit Hours	Course Title	Prerequisites
150701	2	Epidemiology & Biostatistics	
<p>Scope & uses of epidemiology. Natural history of the diseases, requisites for perpetuation of infectious diseases, magnitude and risk factors of non communicable diseases. Basic biostatistics concepts, Basic principle of epidemiologic methods. Presentation of grouped and ungrouped data shape of distribution. Probability concepts and Laws of Probability.</p>			

Code	Credit Hours	Course Title	Prerequisites
150702	2	Environmental and Occupational Health	
<p>Definition of environment and environmental health, water sources, water uses and classification, water pollution, point and non-point sources of pollution, types of pollutants, their source and effect, air pollution, types of air pollutants, their source and effect (including climate change, ozone depletion, acid rain, etc), soil pollution, types of soil pollutants, their source and effect, control measures for different types of pollution. Occupational hazards, occupational diseases and their prevention.</p>			

Code	Credit Hours	Course Title	Prerequisites
150703	2	Health Administration & Behavioral Sciences	

This course aims at developing students' knowledge regarding basic managerial concepts, processes, skills and techniques and application of such knowledge in the delivery of high quality health care. Managerial processes covered include: planning, decision making, organizing, leadership, supervision, staffing and evaluation. Among the managerial issues and techniques included are: quality health care and problem solving. In addition, certain skills as communication, motivation, ... etc. will be covered. It also aims at developing students with knowledge and skills regarding role and application of behavioral sciences in the field of public health.

Code	Credit Hours	Course Title	Prerequisites
150704	4	Research Methodology and Field Studies	

This course is intended to prepare students to design and implement research. It also includes statistical design and analysis as well as proposal writing and report slash thesis writing.

Code	Credit Hours	Course Title	Prerequisites
1508(2)720	2	Principles of Hospital Management	

This course provides students with knowledge and skills related to hospital planning. It also introducing students to classical and modern organizational concepts and their application in hospitals.

Code	Credit Hours	Course Title	Prerequisites
1508(2)721	2	Quality and Performance Improvement in Hospitals	

This course provides students with strong background about steps of planning and implementation quality management in hospitals and different methods for assessment of inappropriate utilization of hospitals

Code	Credit Hours	Course Title	Prerequisites
1508(2)722	2	Hospital Strategic Planning and Marketing	

This course provides students with knowledge and skills related to hospital strategic planning methods and techniques to be able to participate effectively in planning for hospital services. It covers also hospital marketing principles and techniques.

Code	Credit Hours	Course Title	Prerequisites
1508(2)723	2	Health Information Systems Management	
<p>This course is designed to provide students with understanding of the general framework of information systems in various healthcare settings whether manual or computerized. This identifies the clinical and healthcare delivery processes and how they relate to information systems. The intent of the course is to identify the key issues confronting the management of healthcare information systems today, examine their causes, and develop reasonable solutions to these issues.</p>			

Code	Credit Hours	Course Title	Prerequisites
1508(2)724	2	Financial Management of Hospitals	
<p>This course, designed for graduate students of public health management, teaches modern managerial finance theory as applied to health services organizations. The curriculum is based on basic accounting and finance principles, and seeks to convey an understanding of the major financial issues facing hospitals, such as reimbursement protocol, cost allocation, physician-hospital integration analysis and risk sharing.</p>			

Code	Credit Hours	Course Title	Prerequisites
1508(1)615	2	Human Resources Management	
<p>The course covers functions related to management of human resources in the health care system including human resource planning and staffing, training and development, performance appraisal, job analysis, and compensation. The course is oriented toward developing a better understanding of organizational and human behavior and using that knowledge to help people be more productive and satisfied in organizational settings.</p>			

Code	Credit Hours	Course Title	Prerequisites
1508(0)752	2	Health System Research	
<p>Health systems research concepts are introduced and prioritization of research problems is emphasized. The course includes all components of health system research, proposal writing and report writing.</p>			

Code	Credit Hours	Course Title	Prerequisites
1508(2)725	2	Quality Improvement Tools and Techniques in Hospitals	
<p>This course provides students with knowledge and skills necessary to be able to use quality tools for performance improvement in hospitals. Classes of quality improvement tools will be covered and their uses in quality improvement projects will be demonstrated.</p>			

Code	Credit Hours	Course Title	Prerequisites
1508(2)726	2	Patient Safety and Risk Management	

This course provides students with knowledge and skills necessary to be able to participate in designing and implementing patient safety measures/programs in hospitals.

Code	Credit Hours	Course Title	Prerequisites
1508(2)624	2	Hospital Economics	

This course covers principles of microeconomic and macroeconomic and different ways of economic health evaluations: Cost-effectiveness analysis, Cost-utility analysis and Cost-benefit analysis with practical application for hospital.

Code	Credit Hours	Course Title	Prerequisites
1508(2)625	2	Management of Hospital Departments	

This course provides students with knowledge and skills necessary to be able to manage different hospital departments. The course illustrate the use of a framework for management of hospital department and apply the framework for management of clinical, ancillary and administrative department.

Code	Credit Hours	Course Title	Prerequisites
1508(2)626	2	Ethical and Legal Issue in Hospitals	

This course introduces students to the legal system and applicable health legislation. The course outline various important ethical issues related to health care management, their implications and how organizations respond to ethical problems and improve ethical behaviour.

Code	Credit Hours	Course Title	Prerequisites
1508(2)727	2	Health Care Organizational Behaviour	

The course is oriented toward developing a better understanding of organizational and human behavior and using that knowledge to help people be more productive and satisfied in organizational settings.

Code	Credit Hours	Course Title	Prerequisites
1508(2)728	2	Advances in Hospital Management	

This course helps the student to be able to write and present a scientific review paper on an up-to-date topic in hospital administration, using the internet, library, and other valid sources.

Code	Credit Hours	Course Title	Prerequisites
1508(1)605	2	Basic Principles of Leadership in Health	

This course demonstrates basic principles required for the development of effective leaders of health care organizations. It includes definitions, sources of power and influence strategies, role of leaders as change agents, leadership theories, emotional intelligence as well as contemporary leadership approaches.

Code	Credit Hours	Course Title	Prerequisites
1508(1)602	2	Introduction to Health Care Quality	

This course provides students with the basics concepts and issues related to quality health management. It introduces students to the philosophy of total quality management. Students are introduced to the basic skills needed for the development and use of indicators and thresholds as well as the basic tools and techniques required for improving quality in health care organization.

18- Master's Degree in Public Health and Public Health Sciences (Majoring Health Education and Behavioral Sciences)

Students should fulfill a total of 38 credit hours:

- 1- Basic requirements: 10 credit hours.**
150701, 150702, 150703, 150704
- 2- Compulsory courses: 14 credit hours.**
1508(3)701, 1508(3)702, 1508(3)703, 1508(3)704, 1508(3)705
- 3- Elective courses: 6 credit hours.**
1508(3)706, 1508(3)707, 1508(3)708, 1508(3)709, 1508(3)710, 1508(3)711
- 4- Thesis: 8 credit hours.** 1508(3)799

1- Basic requirements: 10 credit hours

Code	Course Title	Theoretical	Practical/ Clinical	Field	Credit Hours	Prerequisites
150701	Epidemiology and Biostatistics الوبائيات والإحصاءات الحيوية	2			2	
150702	Environmental & Occupational Health الصحة البيئية والمهنية	2			2	
150703	Health Administration & Behavioral Sciences الإدارة الصحية والعلوم السلوكية	2			2	
150704	Research Methodology طرق البحث	2	2		3	
150706	Field Studies الدراسات الميدانية	-	-	4	1	
Total		8	2	4	10	

2- Compulsory courses: 14 credit hours

Code	Course Title	Theoretical	Practical/ Clinical	Field	Credit Hours	Prerequisites
1508(3)701	Health Behavior Change; Theory and Application تغيير السلوك الصحي، النظرية والتطبيق	2			2	
1508(3)702	Planning and Research in Health Promotion التخطيط والبحث في تعزيز الصحة	2			2	
1508(3)703	Communication Strategies for Health Education and Promotion استراتيجيات الاتصال في التثقيف الصحي وتعزيز الصحة	4			4	
1508(3)704	Critical Reading Seminars in Health Education قراءات نقدية في مجال التثقيف الصحي	4			4	
1508(3)705	Field studies in Health Education الدراسات الحقلية في التثقيف الصحي	1		4	2	
Total		13		4	14	

3- Elective Courses: 6 credit hours

Code	Course Title	Theoretical	Practical/ Clinical	Field	Credit Hours	Prerequisites
1508(3)706	Nutrition Education التثقيف الصحي	2			2	
1508(3)707	Caner Education التثقيف الصحي في مجال السرطان	2			2	
1508(3)708	Social Psychology علم النفس الاجتماعي	2			2	
1508(3)709	Health Education Programs for Family Life Education برامج التثقيف الصحي للحياة الأسرية	2			2	
1508(3)710	Health Education Approaches and Strategies in Drug Education طرق واستراتيجيات التثقيف الصحي في مجال الإدمان	2			2	
1508(3)711	Special Topics in Health Education موضوعات خاصة في التثقيف الصحي	2			2	

Course Description

Code	Credit Hours	Course Title	Prerequisites
150701	2	Epidemiology & Biostatistics	
<p>Scope & uses of epidemiology. Natural history of the diseases, requisites for perpetuation of infectious diseases, magnitude and risk factors of non communicable diseases. Basic biostatistics concepts, Basic principle of epidemiologic methods. Presentation of grouped and ungrouped data shape of distribution. Probability concepts and Laws of Probability.</p>			

Code	Credit Hours	Course Title	Prerequisites
150702	2	Environmental and Occupational Health	
<p>Definition of environment and environmental health, water sources, water uses and classification, water pollution, point and non-point sources of pollution, types of pollutants, their source and effect, air pollution, types of air pollutants, their source and effect (including climate change, ozone depletion, acid rain, etc), soil pollution, types of soil pollutants, their source and effect, control measures for different types of pollution. Occupational hazards, occupational diseases and their prevention.</p>			

Code	Credit Hours	Course Title	Prerequisites
150703	2	Health Administration & Behavioral Science	
<p>This course aims at developing student's knowledge regarding basic managerial concepts, processes, skills and techniques and application of such knowledge in the delivery of high quality health care. Managerial processes covered include: planning, decision making, organizing, leadership, supervision, staffing and evaluation. Among the managerial issues and techniques included are: quality health care and problem solving. In addition, certain skills as communication, motivation, .. etc. will be covered. It also aims at developing students with knowledge and skills regarding role and application of behavioral sciences in the field of public health.</p>			

Code	Credit Hours	Course Title	Prerequisites
150704	4	Research Methodology and Field Studies	
<p>This course is intended to prepare students to design and implement research. It also includes statistical design and analysis as well as proposal writing and report slash thesis writing.</p>			

Code	Credit Hours	Course Title	Prerequisites
1508(3)701	2	Health Behavior Change; theory and Application	
<p>This course will provide students with the rhetorical basis and skills to facilitate behavior change and conduct health education programs in the community, behavior change theories, evaluation of behavior change interventions. Different behavioral theories will be discussed within the course and the students shall learn to apply these theories to motivate health behavior enhancement. Students will learn to discriminate between different health behavioral theories, select the appropriate theory to apply in health education and promotion programs addressing particular behavior.</p>			

Code	Credit Hours	Course Title	Prerequisites
1508(3)702	2	Planning and Research in Health Promotion	
<p>Topics in this course identify the basis of program planning and development, goal setting, developing objectives, program design. The importance of research, data collection, analysis and interpretation will be illustrated. The skills for handling data and identification of research points needed to enhance the effectiveness of health promotion programs shall be demonstrated by the course.</p>			

Code	Credit Hours	Course Title	Prerequisites
1508(3)703	2	Communication Strategies for Health Education and Promotion	
<p>This course will Present a variety of educational strategies designed to enhance the health of individuals and community. Theoretical framework for evaluation of health communication and social marketing will be established by this course. It provides necessary communication skills required for effective message, communication methods, and communication barriers.</p>			

Code	Credit Hours	Course Title	Prerequisites
1508(3)704	2	Critical Readings in Health Education	
<p>This course is designed to expose students to different readings in health education. The course will allow students to read critically published material and identity health education points for further research.</p>			

Code	Credit Hours	Course Title	Prerequisites
1508(3)705	2	Field Studies in Health Education	
<p>This course will provide students with knowledge and skills to prioritize health problems and behaviors necessary for health modification, set health, objective and educational objectives to plan health education programs and recall the methods of evaluating health education programs at different levels. The course is designed to provide students with field training experiences in different settings such as schools, clubs, non-governmental organizations, health settings... etc. that complement the students' interests and career goals</p>			

Code	Credit Hours	Course Title	Prerequisites
1508(3)706	2	Nutrition Education	
<p>The course provides students with necessary skills to design implement and evaluate nutrition programs. The course will focus also on applying behavioral assessment and apply behavioral theories and models in nutrition education programs and use effective health education strategies for nutrition education programs appropriate to population and situations.</p>			

Code	Credit Hours	Course Title	Prerequisites
1508(3)707	2	Cancer Education	
<p>This course provides students with knowledge and skills for designing, implementing and evaluating cancer education programs for cancer prevention and control. The courses will focus also on health behavior and prevention of cancer, cancer warning signs, psychological and social aspects of cancer, cigarette smoking and cancer, environmental pollution and cancer, communication strategies for cancer education, community action for cancer prevention, and personal skills for cancer prevention.</p>			

Code	Credit Hours	Course Title	Prerequisites
1508(3)708	2	Social Psychology	
<p>The course will provide students with knowledge and skills about social psychology principles to understand the interaction between people and apply these principles in health education intervention.</p>			

Code	Credit Hours	Course Title	Prerequisites
1508(3)709	2	Health Education Programs for Family Life Education	
<p>This course will provide students with knowledge and skills for family life health education. This will focus on course knowledge of health education strategies for improving or maintaining personal, family and community health, skills for interpersonal communication, strategies for overcoming barriers when communicating information ideas, feling on health issues, decision making steps for health related issues, promoting healthy life styles and reducing risk behavior of diseases, health education programs for family planning.</p>			

Code	Credit Hours	Course Title	Prerequisites
1508(3)710	2	Health Education Approaches and Strategies in Drug Education	

The course provides necessary skills to design implement and evaluate health education intervention in drug education. It provides students with a fundamental understanding of drug taking behavior, factors that promote positive relationship, communication skills, cigarette smoking and youth, community based health education interventions for drug education, peer programs, decision making models, communication strategies for drug education programs.

Code	Credit Hours	Course Title	Prerequisites
1508(3)711	2	Special Topics in Health Education	

The course provides students with knowledge and skills about topics in health education. It also provides knowledge about issues facing health educators: cultural, communication. policy, resources and training.

19- Master's Degree in Public Health (Majoring Maternal & Child Health)

Students should fulfill a total of 38 credit hours:

1- Basic requirements: 10 credit hours.

150701, 150702, 150703, 150704, 150706

2- Compulsory courses: 14 credit hours.

1509(1)701, 1509(1)702, 1509(1)703, 1509(1)704, 1509(1)705, 1509(1)706, 1502707, 1509(1)709

3- Elective courses: 6 credit hours.

1509(1)707, 1509(1)708, 1509(1)709, 1509(1)710, 150705, 1508(3)603.

4- Thesis: 8 credit hours. 1509(1)799

1- Basic requirements: 10 credit hours

Code	Course Title	Theoretical	Practical/ Clinical	Field	Credit Hours	Prerequisites
150701	Epidemiology and Biostatistics الوبائيات والاحصاءات الحيوية	2			2	
150702	Environmental & Occupational Health الصحة البيئية والمهنية	2			2	
150703	Health Administration & Behavioral Sciences الادارة الصحية والعلوم السلوكية	2			2	
150704	Research Methodology طرق البحث	2	2		3	
150706	Field Studies الدراسات الميدانية	-	-	4	1	
Total		8	2	4	10	

2- Compulsory courses: 14 credit hours

Code	Course Title	Theoretical	Practical/ Clinical	Field	Credit Hours	Prerequisites
1509(1)701	Human Genetics. الوراثة الإنسانية	2			2	
1509(1)702	Child Growth and Development نمو وتطور الطفل	2			2	
1509(1)703	Reproductive Health الصحة الإنجابية	2			2	
1509(1)704	Preventive Pediatrics طب الأطفال الوقائي	2			2	
1509(1)705	Demography علم دراسة السكان	1			1	
1509(1)706	Family Health صحة الأسرة	2			2	
1502707	Applied Statistics الاحصاء التطبيقى	1	2		2	
1509(1)709	Care of Children with Special Needs رعاية الأطفال ذوي الاحتياجات الخاصة	1			1	
Total		13	2		14	

3- Elective Courses: 6 credit hours

Code	Course Title	Theoretical	Practical/ Clinical	Field	Credit Hours	Prerequisites
1509(1)707	Clinical Reproductive Health Care الصحة الإنجابية الإكلينيكية	2	2		3	
1509(1)708	Pediatrics of Neonates and Under – five Children طب الأطفال حديثي الولادة وأطفال ما دون الخامسة	2	2		3	
1509(1)710	Evidence- Based Care in the Field of MCH الممارسات المبنية على البرهان العلمي في مجال صحة الأم والطفل	1			1	
150705	Ethics and Law for Health Professionals الأخلاقيات والقانون للأفراد الفريق الصحي	2			2	
1508(3)603	Planning and Evaluation of Health Education Programs تخطيط و تقييم برامج التثقيف الصحي	2			2	

Course Description

Code	Credit Hours	Course Title	Prerequisites
150701	2	Epidemiology & Biostatistics	
<p>Scope & uses of epidemiology. Natural history of the diseases, requisites for perpetuation of infectious diseases, magnitude and risk factors of non communicable diseases. Basic biostatistics concepts, Basic principle of epidemiologic methods. Presentation of grouped and ungrouped data shape of distribution. Probability concepts and Laws of Probability.</p>			

Code	Credit Hours	Course Title	Prerequisites
150702	2	Environmental and Occupational Health	
<p>Definition of environment and environmental health, water sources, water uses and classification, water pollution, point and non-point sources of pollution, types of pollutants, their source and effect, air pollution, types of air pollutants, their source and effect (including climate change, ozone depletion, acid rain, etc), soil pollution, types of soil pollutants, their source and effect, control measures for different types of pollution. Occupational hazards, occupational diseases and their prevention.</p>			

Code	Credit Hours	Course Title	Prerequisites
150703	2	Health Administration & Behavioral Sciences	
<p>This course aims at developing students' knowledge regarding basic managerial concepts, processes, skills and techniques and application of such knowledge in the delivery of high quality health care. Managerial processes covered include: planning, decision making, organizing, leadership, supervision, staffing and evaluation. Among the managerial issues and techniques included are: quality health care and problem solving. In addition, certain skills as communication, motivation, ... etc. will be covered. It also aims at developing students with knowledge and skills regarding role and application of behavioral sciences in the field of public health.</p>			

Code	Credit Hours	Course Title	Prerequisites
150704 150706	4	Research Methodology Field Studies	
<p>This course is intended to prepare students to design and implement research. It also includes statistical design and analysis as well as proposal writing and report slash thesis writing.</p>			

Code	Credit Hours	Course Title	Prerequisites
1509(1)701	2	Human Genetics	
<p>This course will highlight the importance of human genetics in public health and human development. It will provide the students with the basic tools of counseling and screening for genetic problems required in their practice. Furthermore, the different techniques used in DNA analysis and the different modes of inheritance and genetic mutations will be discussed.</p>			

Code	Credit Hours	Course Title	Prerequisites
1509(1)702	2	Child Growth and Development	
<p>The course is meant to provide the students with the scientific basis needed to assess the growth and development of children. By the end of the course students would be able to detect deviations from normal using different tools such as growth curves and growth charts. Subsequent management and referral to the appropriate referral level would be the ultimate goal.</p>			

Code	Credit Hours	Course Title	Prerequisites
1509(1)703	2	Reproductive Health	
<p>This course is designed to acquaint the students with the basic concepts of reproductive health and reproductive health problems of women in the different stages of their lives. The students will be able to recognize the factors underlying these problems in order to be able to participate in their management using the various services available.</p>			

Code	Credit Hours	Course Title	Prerequisites
1509(1)704	2	Preventive Pediatrics	
<p>This course helps health providers to manage the major health problems encountered by under-five children in developing countries. Knowledge related to the key health problems will be addressed in terms of magnitude, determinants, impact and prevention. Student will develop the skills required to manage the main U-5 health problems using the Standard Case Management Guidelines for care of children at the primary level.</p>			

Code	Credit Hours	Course Title	Prerequisites
1509(1)705	1	Demography	
<p>This course provides the students with knowledge and skills required to understand and analyze the key demographic problems globally. They will be especially familiar with the problems that Egypt faces and the effect of the population problem on health. The role of birth control strategies in the control of population problems will be emphasized also.</p>			

Code	Credit Hours	Course Title	Prerequisites
1509(1)706	2	Family Health	
<p>This course is designed to provide the students with the knowledge and skills required to understanding the concept of family health and the major social, cultural, biological and environmental factors influencing it. Students will be able to understand stages of family evolution. Student will require knowledge on the services available to all family members relevant to their ages and their main health problems.</p>			

Code	Credit Hours	Course Title	Prerequisites
1502707	2	Applied Statistics	
<p>This is a course to teach students from different specialties of public health how to analyze data and interpret the results. By the end of the course the student should be able to determine the type of analysis (parametric or non parametric), test the relation between variables using comparison of means, test the hypothesis, test the relation between variables, using various measures of association.</p>			

Code	Credit Hours	Course Title	Prerequisites
1509(1)709	1	Care of Children with Special Needs	

This course will provide the student with the fundamental understanding of the concepts related to handicapping as well as the common disabilities in children globally and in developing countries. The course will shed light on the different etiological factors leading to the handicapping conditions and the impact of these conditions on the child, family and society. Besides, the students will be able to outline the various preventive measures at the primary, secondary and tertiary levels. Furthermore, the situation of care in Egypt and the available services will be addressed.

Code	Credit Hours	Course Title	Prerequisites
1509(1)707	3	Clinical Reproductive Health Care	

The course is designed to acquaint the students with the principals of obstetric care at the primary level, covering the ante natal, natal, and post natal periods. By the end of the course students would be able to recognize the danger signs of pregnancy, labor and puerperium and determine when to refer the patient to the appropriate referral level.

Finally they should acquire and apply ethics of obstetric practice.

Code	Credit Hours	Course Title	Prerequisites
1509(1)708	3	Pediatrics of Neonates and Under – five Children	

By the end of the course the learners will gain the theoretical knowledge and clinical skills required for diagnosis, management and follow up of common under-five problems encountered at the primary health care facility. They would be able to carry out pediatric emergency care and timely referral.

Code	Credit Hours	Course Title	Prerequisites
1509(1)710	1	Evidence-based Care in the Field of MCH	

The course is designed to acquaint the students with the concepts of evidence-based medicine to enable them to compare current practices in the field of maternal and child health with the evidence based ones. The different tools used to apply the evidence will be discussed emphasizing on the practice guidelines.

Code	Credit Hours	Course Title	Prerequisites
150705	2	Ethics and Law for Health Professionals	
<p>Definitions of ethics, law, risk management and public health will be clarified. Major ethical and legal conflicts in public health will be addressed. Justifying public health programs and policies will be discussed. Human rights and public health will be explained. The course will also tackle understanding of the public health profession's roles and professional values.</p>			

Code	Credit Hours	Course Title	Prerequisites
1508(3)603	2	Planning and Evaluation of Health Education Programs	
<p>This course provides students with knowledge and skills related to planning, implementation and evaluation of health education programs in general and at different levels, individuals, groups, community and national programs.</p>			

20- Master's Degree in Public Health (Majoring Adolescent and School Health)

Students should fulfill a total of 38 credit hours:

1- Basic requirements: 10 credit hours.

150701, 150702, 150703, 150704

2- Compulsory courses: 14 credit hours.

1509(1)702, 1509 (2)701, 1509(2)702, 1509(2)703, 1509(2)704, 1509(2)711, 1502707

3- Elective courses: 6 credit hours.

1509(2)705, 1509(2)706, 1509(2)707, 1509(2)708, 1509(2)709, 1509(2)710, 1509(1)701, 150705, 1508(1)701, 1508(1)706, 1509(3)702, 1509(3)708, 1509(3)703, 1502701, 1502703, 1502710*

4- Thesis: 8 credit hours. 1509(2)799

1- Basic requirements: 10 credit hours

Code	Course Title	Theoretical	Practical/ Clinical	Field	Credit Hours	Prerequisites
150701	Epidemiology and Biostatistics الوبائيات والاحصاءات الحيوية	2			2	
150702	Environmental & Occupational Health الصحة البيئية والمهنية	2			2	
150703	Health Administration & Behavioral Sciences الادارة الصحية والعلوم السلوكية	2			2	
150704	Research Methodology طرق البحث	2	2		3	
150706	Field Studies الدراسات الميدانية	-	-	4	1	
Total		8	2	4	10	

2- Compulsory courses: 14 credit hours

Code	Course Title	Theoretical	Practical/ Clinical	Field	Credit Hours	Prerequisites
1509(1)702	Child Growth and Development نمو وتطور الطفل	2			2	
1509(2)701	School Health Program برنامج الصحة المدرسية	2			2	
1509(2)702	Preventive Pediatrics طب الأطفال الوقائي	2			2	
1509(2)703	School and University Environment البيئة المدرسية والجامعية	2			2	
1509(2)704	Clinical Pediatrics طب الأطفال الإكلينيكي	2	2		3	
1509(2)711	Care of Adolescent and School Children with Special Needs رعاية المراهقين وأطفال المدارس ذوي الاحتياجات الخاصة	1			1	
1502707	Applied Statistics إحصاء تطبيقي	2			2	
Total		13	2		14	

3- Elective Courses: 6 credit hours

Code	Course Title	Theoretical	Practical/ Clinical	Field	Credit Hours	Prerequisites
1509(2)705	Reproductive Health among Youth الصحة الإنجابية بين المراهقين	2			2	
1509(2)706	Administration of School Health Services إدارة خدمات الصحة المدرسية	2			2	
1509(2)707	Recent Updates in University Health حلقات دراسية في الصحة الجامعية	2			2	
1509(2)708	Health Consequences of Tobacco Smoking among Women and how to Quit المخاطر الصحية للتدخين بين السيدات وكيفية الإقلاع	2			2	
1509(2)709	Departmental Field Training in School Health تدريب حقل في الصحة المدرسية	1		4	2	
1509(2)710	Health Care and Problems of Youth الرعاية الصحية ومشاكل الشباب	2			2	
1509(1)701	Human Genetics الوراثة الإنسانية	2			2	
150705	Ethics and Law for Health Professionals الأخلاقيات والقانون لأفراد الفريق الصحي	1			1	
1508(1)701	Health Planning التخطيط الصحي	2			2	
1508(1)706	Problem Solving and Decision Making: Concepts and Techniques حل المشاكل واتخاذ القرار: المفاهيم والأساليب	2			2	
1509(3)702	Psychological Testing القياسات النفسية	2			2	
1509(3)703	Child & Adolescent Mental Health الصحة النفسية للطفل والمراهق	2			2	
1509(3)708	Evidence Based Approaches for Prevention & Control of Substance Abuse الاتجاهات القائمة علي الدليل في الوقاية والمكافحة لتعاطي المخدرات	2			2	
1502701	Study Design and Sampling نوع الدراسة وطرق المعاينة	2	2		3	
1502703	Categorical Data Analysis تحليل البيانات الوصفية	1	2		2	
1502710	Statistical Software Computer Packages (Program 1) البرنامج الأول من مجموعة برامج الحاسب الآلي الإحصائية	1	2		2	Applied* statistics 1502707

Course Description

Code	Credit Hours	Course Title	Prerequisites
150701	2	Epidemiology & Biostatistics	
<p>Scope & uses of epidemiology. Natural history of the diseases, requisites for perpetuation of infectious diseases, magnitude and risk factors of non communicable diseases. Basic biostatistics concepts, Basic principle of epidemiologic methods. Presentation of grouped and ungrouped data shape of distribution. Probability concepts and Laws of Probability.</p>			

Code	Credit Hours	Course Title	Prerequisites
150702	2	Environmental and Occupational Health	
<p>Definition of environment and environmental health, water sources, water uses and classification, water pollution, point and non-point sources of pollution, types of pollutants, their source and effect, air pollution, types of air pollutants, their source and effect (including climate change, ozone depletion, acid rain, etc), soil pollution, types of soil pollutants, their source and effect, control measures for different types of pollution. Occupational hazards, occupational diseases and their prevention.</p>			

Code	Credit Hours	Course Title	Prerequisites
150703	2	Health Administration & Behavioral Sciences	
<p>This course aims at developing students' knowledge regarding basic managerial concepts, processes, skills and techniques and application of such knowledge in the delivery of high quality health care. Managerial processes covered include: planning, decision making, organizing, leadership, supervision, staffing and evaluation. Among the managerial issues and techniques included are: quality health care and problem solving. In addition, certain skills as communication, motivation, ... etc. will be covered. It also aims at developing students with knowledge and skills regarding role and application of behavioral sciences in the field of public health.</p>			

Code	Credit Hours	Course Title	Prerequisites
150704	4	Research Methodology and Field Studies	
<p>This course is intended to prepare students to design and implement research. It also includes statistical design and analysis as well as proposal writing and report slash thesis writing.</p>			

Code	Credit Hours	Course Title	Prerequisites
1509(1)702	2	Child Growth and Development	
<p>The course is meant to provide the students with scientific basis needed to assess the growth and development of children. By the end of the course students would be able to detect deviations from normal using different tools such as growth curves and growth charts. Subsequent management and referral to the appropriate referral level would be the ultimate goal.</p>			

Code	Credit Hours	Course Title	Prerequisites
1509(2)701	2	School Health Program	
<p>Definition and components of school health program. The utilization of school health services and system of referral. Objectives and components of school health services. Objectives of school health education programs. Methods of communication. Components of health education programs needed for each level of education.</p>			

Code	Credit Hours	Course Title	Prerequisites
1509(2)702	2	Preventive Pediatrics	
<p>This course helps health providers to manage the major health problems encountered by adolescents and school children in developing countries. Knowledge related to the key health problems will be addressed in terms of magnitude, determinants, impact and prevention. Student will develop the skills required to manage the main adolescents and school children using the Standard Case Management Guidelines for care of adolescents and school children at the primary level.</p>			

Code	Credit Hours	Course Title	Prerequisites
1509(2)703	2	School and University Environment	
<p>School environment. Components of physical environment. Factors affecting the social and emotional environment in the classroom. Tools used for evaluation of the school environment. Role of the school doctors in establishing a healthy environment. The university environment. The physical environment and safety measures. The social and emotional environment. Construct a tool for the evaluation of the physical environment and safety measures. Suggest a plan for the promotion of the whole university environment.</p>			

Code	Credit Hours	Course Title	Prerequisites
1509(2)704	3	Clinical Pediatrics	
<p>Health norms of the school-age children. Taking a complete history. Physical examination of the child. Differential diagnosis of some general problems among school age children. Confirmatory investigations. Principles of managements of some chronic diseases</p>			

Code	Credit Hours	Course Title	Prerequisites
1509(2)711	1	Care of School Children and Adolescents with Special Needs	
<p>By the end of this course students will be able to identify definition of handicapped children. Epidemiology of handicapping condition. Etiology and determinants of handicap. Assessment of handicapping condition. Impact of the handicapping condition. Preventive measures and the role of the physician in prevention. Available services of this group in Egypt. Presentation of different handicapping problems. Visits to some institutions.</p>			

Code	Credit Hours	Course Title	Prerequisites
1502707	2	Applied Statistics	
<p>This is a course to teach students from different specialties of public health how to analyze data and interpret the results. By the end of the course the student should be able to determine the type of analysis (parametric or non parametric), test the relation between variables using comparison of means, test the hypothesis, test the relation between variables, using various measures of association.</p>			

Code	Credit Hours	Course Title	Prerequisites
1509(2)705	2	Reproductive Health among Youth	
<p>Definition and general characteristics of adolescents. Stages of adolescent period. Nutritional needs of adolescents. The influence of social environment on adolescent health. Adolescent health related behavior. Definition of reproductive health. Types of reproductive health programs or adolescents.</p>			

Code	Credit Hours	Course Title	Prerequisites
1509(2)706	2	Administration of School Health Services	
<p>School health service delivery units. Role and responsibilities of school health team. Referral system and coordination between schools, polyclinics and hospitals. Provision and utilization of school health services at different levels. Policies of school health insurance program.</p>			

Code	Credit Hours	Course Title	Prerequisites
1509(2)707	2	Recent Updates in University Health	
<p>Directed studies tailored towards the student's needs and interests. It includes emerging issues in the field of university health. The role of college health centers. Health care for risk students...etc.</p>			

Code	Credit Hours	Course Title	Prerequisites
1509(2)708	2	Health Consequences of Tobacco Smoking among Women and how to Quit	
<p>Include tobacco use among women throughout their life span as an adolescent, pregnant, lactating and mothers of young kids. Smoking cessation interventions. Key concepts in smoking cessation counseling.</p>			

Code	Credit Hours	Course Title	Prerequisites
1509(2)709	2	Departmental Field Training in School Health	
<p>During this field training the students will be able to visits different outlets of school health services whether school health units, centers or hospital and /or different schools to acquire the skills of conducting and manipulating a mini-research.</p>			

Code	Credit Hours	Course Title	Prerequisites
1509(2)710	2	Health Care and Problems of Youth	
<p>General characteristics of adolescents and youth. Morbidities and mortalities among youth. Common health problems of youth. Health risk behavior among youth and adolescents. Tobacco, alcohol and other drug use. Sexual behaviors, dietary behaviors and physical activity among youth and adolescents.</p>			

Code	Credit Hours	Course Title	Prerequisites
1509(1)701	2	Human Genetics	
<p>This course will highlight the importance of human genetics in public health and some definitions. Nucleic acids structure. Techniques used in DNA analysis. The importance of genetics in development and the characteristics of different types of inheritance. Steps of counseling and problems related to it. Describe the criteria for screening and identify types of screening.</p>			

Code	Credit Hours	Course Title	Prerequisites
150705	2	Ethics and Law for Health Professionals	
<p>Definitions of ethics, law, risk management and public health will be clarified. Major ethical and legal conflicts in public health will be addressed. Justifying public health programs and policies will be discussed. Human rights and public health will be explained. The course will also tackle understanding of the public health profession's roles and professional values.</p>			

Code	Credit Hours	Course Title	Prerequisites
1508(1)701	2	Health Planning	
<p>This course provides students with the knowledge and skills required for successful planning for different health organizations and systems with special emphasis on strategic planning. It covers areas related to development of Health Service Organization (HSO) missions, objectives, programmes, policies & procedures. Differentiates between types of plans e.g. strategic versus operational, single use versus standing plans.....etc. Contemporary issues in planning e.g. criticism of planning and how to plan in a dynamic environment. Components of HSO strategic planning as discussed in detail i.e. I) Formulating objectives. II) Strategic assessment (including SWOT analysis). III) Strategy Choice. Moreover, introduction of planning tools and techniques which will help students in health planning results are include e.g. forecasting, benchmarking, budgeting & scheduling, as well as contemporary planning techniques e.g. project management and scenario planning.</p>			

Code	Credit Hours	Course Title	Prerequisites
1508(1)706	2	Problem Solving and Decision Making: Concepts and Techniques	
<p>This course aims at developing graduates trained in adequately solving organizational health problems based on objective non- biased decisions. The course follows the workshop approach where students are required to apply each step of the framework of problem solving in the classroom situation. Students are also required to present a problem solving assignment at the end of the course. The course content includes decision-making definition, types of decisions and problems, relation between decision making and problem solving, phases and steps of the "systematic framework for problem solving" as well as the various factors influencing problem solving and decision making.</p>			

Code	Credit Hours	Course Title	Prerequisites
1509(3)702	2	Psychological Testing	
<p>Definitions, classification and historical review of psychological testing, purposes and principles of psychological testing (reliability, validity, norms), intelligence tests, objective personality tests, projective personality tests, neuropsychological tests, psychiatric rating scales.</p>			

Code	Credit Hours	Course Title	Prerequisites
1509(3)703	2	Child & Adolescent Mental Health	
<p>Definitions & different classifications of mental & neurological disorders in children and adolescents. Management of common mental, neurological, psychosocial, and developmental problems in children and adolescents.</p>			

Code	Credit Hours	Course Title	Prerequisites
1509(3)708	2	Evidence Based Approaches for Prevention & Control of Substance Abuse	
Evidence based studies on the epidemiology of substance abuse and evidence based studies in the prevention and control of substance abuse.			

Code	Credit Hours	Course Title	Prerequisites
1502701	3	Study Design and Sampling	
The different types of study designs and their appropriate statistics. The concept of sampling, sampling distributions, parameters and statistics, central limit theorem, types of samples and sampling error, complex samples, the normal distribution and estimation of a population parameter from a sample, determination of the minimum required sample size for different designs.			

Code	Credit Hours	Course Title	Prerequisites
1502703	2	Categorical Data Analysis	
Measures of association, Measurement of agreement (Kappa). The Odds ratio, relative risk and confidence interval, Stratified analysis, Logistic regression.			

Code	Credit Hours	Course Title	Prerequisites
1502710	2	Statistical Software Computer Packages (Program 1)	Applied statistics 1502707
Introduction to computer, Installing SPSS software package, Data definition and access, Data management and modifications, Data analysis and presentation, Graphical presentation, Output management, Saving files, Printing files.			

21- Master's Degree in Public Health (Majoring Mental Health)

Students should fulfill a total of 38 credit hours:

1- Basic requirements: 10 credit hours.

150701, 150702, 150703, 150704, 150706

2- Compulsory courses: 14 credit hours.

1509(3)701, 1509(3)702, 1509(3)703, 1509(3)704, 1509(3)705, 1509(3)717, 1502707

3- Elective courses: 6 credit hours.

1509(3)706, 1509(3)707, 1509(3)708, 1509(3)709, 1509(3)710, 1509(3)711, 1509(3)712, 1509(3)713, 1509(3)714, 1509(3)715, 1509(3)716, 1509(1)709, 1509(2)710, 1509(4)701, 1508(1)706, 1508(1)707, 1508(3)710, 1502701, 1502703, 1502710, 150705

4- Thesis: 8 credit hours. 1509(3)799

1- Basic requirements: 10 credit hours

Code	Course Title	Theoretical	Practical/ Clinical	Field	Credit Hours	Prerequisites
150701	Epidemiology and Biostatistics الوبائيات والاحصاءات الحيوية	2			2	
150702	Environmental & Occupational Health الصحة البيئية والمهنية	2			2	
150703	Health Administration & Behavioral Sciences الادارة الصحية والعلوم السلوكية	2			2	
150704	Research Methodology طرق البحث	2	2		3	
150706	Field Studies الدراسات الميدانية	-	-	4	1	
Total		8	2	4	10	

2- Compulsory courses: 14 credit hours

Code	Course Title	Theoretical	Practical/ Clinical	Field	Credit Hours	Prerequisites
1509(3)701	Medical Psychology علم النفس الطبي	2			2	
1509(3)702	Psychological Testing القياسات النفسية	2			2	
1509(3)703	Child & Adolescent Mental Health الصحة النفسية للطفل والمراهق	2			2	
1509(3)704	Adult & Elderly Mental Health الصحة النفسية للبالغ والمسن	2			2	
1509(3)705	Psychiatry الطب النفسي	1	2		2	
1509(3)717	Public Health Approach to Mental Health منهاج الصحة العامة في الصحة النفسية	2			2	
1502707	Applied statistics الإحصاء التطبيقي	1	2		2	
Total		12	4		14	

3- Elective Courses: 6 credit hours

Code	Course Title	Theoretical	Practical/ Clinical	Field	Credit Hours	Prerequisites
1509(3)706	Field Training in Mental Health تدريب حقلي في الصحة النفسية	1		4	2	
1509(3)707	Special Studies دراسات خاصة	2			2	
1509(3)708	Evidence Based Approaches for Prevention & Control of Substance Abuse الاتجاهات القائمة علي الدليل في الوقاية والمكافحة لتعاطي المخدرات	2			2	
1509(3)709	Reproductive Mental Health الصحة النفسية الإنجابية	2			2	
1509(3)710	Evidence Based Approaches for Mental Health Care in Chronic Diseases الاتجاهات القائمة علي الدليل في الرعاية النفسية في الأمراض المزمنة	2			2	
1509(3)711	Neurology طب الأمراض العصبية	1	2		2	
1509(3)712	Behavior Modification in Mental Health التعديل السلوكي في الصحة النفسية	2			2	
1509(3)713	Smoking Cessation Counseling المشورة للإقلاع عن التدخين	2			2	
1509(3)714	Psychiatric Epidemiology وبائية الأمراض النفسية	2			2	
1509(3)715	Geriatric Mental Health Problems مشاكل الصحة النفسية في المسنين	2			2	
1509(3)716	Principles of Mental Health Services مبادئ خدمات الصحة النفسية	2			2	
1509(1)709	Care of Children with Special Needs رعاية الأطفال ذوي الاحتياجات الخاصة	1			1	
1509(2)710	Health Care and Problems of Youth الرعاية الصحية ومشاكل الشباب	2			2	
1509(4)701	Physical and Mental Changes of Elderly People التغيرات البدنية والنفسية للمسنين	2			2	
1508(1)706	Problem Solving and Decision Making: Concepts and Techniques حل المشاكل واتخاذ القرار: المفاهيم والأساليب	2			2	
1508(1)707	Conceptual & Application Approaches to Health Program Evaluation المفاهيم والتطبيق في مجال تقييم البرامج الصحية	2			2	
1508(3)710	Health Education Approaches and Strategies In Drug Education طرق واستراتيجيات التثقيف الصحي في مجال الإدمان	2			2	
1502701	Study Design and Sampling نوع الدراسة وطرق المعاينة	2	2		3	
1502703	Categorical Data Analysis تحليل البيانات الوصفية	1	2		2	
1502710	Statistical Software Computer Packages (Program 1) البرنامج الأول من مجموعة برامج الحاسب الآلي الإحصائية	1	2		2	Applied* statistics 1502707
150705	Ethics and Law for Health Professionals الأخلاقيات والقانون لأفراد الفريق الصحي	2			2	

Course Description

Code	Credit Hours	Course Title	Prerequisites
150701	2	Epidemiology & Biostatistics	
<p>Scope & uses of epidemiology. Natural history of the diseases, requisites for perpetuation of infectious diseases, magnitude and risk factors of non communicable diseases. Basic biostatistics concepts, Basic principle of epidemiologic methods. Presentation of grouped and ungrouped data shape of distribution. Probability concepts and Laws of Probability.</p>			

Code	Credit Hours	Course Title	Prerequisites
150702	2	Environmental and Occupational Health	
<p>Definition of environment and environmental health, water sources, water uses and classification, water pollution, point and non-point sources of pollution, types of pollutants, their source and effect, air pollution, types of air pollutants, their source and effect (including climate change, ozone depletion, acid rain, etc), soil pollution, types of soil pollutants, their source and effect, control measures for different types of pollution. Occupational hazards, occupational diseases and their prevention.</p>			

Code	Credit Hours	Course Title	Prerequisites
150703	2	Health Administration & Behavioral Sciences	
<p>This course aims at developing students' knowledge regarding basic managerial concepts, processes, skills and techniques and application of such knowledge in the delivery of high quality health care. Managerial processes covered include: planning, decision making, organizing, leadership, supervision, staffing and evaluation. Among the managerial issues and techniques included are: quality health care and problem solving. In addition, certain skills as communication, motivation, ...etc. will be covered. It also aims at developing students with knowledge and skills regarding role and application of behavioral sciences in the field of public health.</p>			

Code	Credit Hours	Course Title	Prerequisites
150704	4	Research methodology and field studies	
<p>This course is intended to prepare students to design and implement research. It also includes statistical design and analysis as well as proposal writing and report slash thesis writing.</p>			

Code	Credit Hours	Course Title	Prerequisites
1509(3)701	2	Medical Psychology	
Introduction, development of personality and personality theories, learning and cognitive theories, defense mechanisms, cognitive functions, emotional development, cognitive development, development of language, aggression and moral development, counseling skills.			

Code	Credit Hours	Course Title	Prerequisites
1509(3)702	2	Psychological Testing	
Definitions, classification and historical review of psychological testing, purposes and principles of psychological testing (reliability, validity, norms), intelligence tests, objective personality tests, projective personality tests, neuropsychological tests, psychiatric rating scales.			

Code	Credit Hours	Course Title	Prerequisites
1509(3)703	2	Child & Adolescent Mental Health	
Definitions & different classifications of mental & neurological disorders in children and adolescents. Management of common mental, neurological, psychosocial, and developmental problems in children and adolescents.			

Code	Credit Hours	Course Title	Prerequisites
1509(3)704	2	Adult & Elderly Mental Health	
Definitions & different classifications of mental & neurological disorders in adults and elderly. Management of common mental & neurological disorders in adults and elderly.			

Code	Credit Hours	Course Title	Prerequisites
1509(3)705	2	Psychiatry	
Psychiatric signs and symptoms, psychiatric examination, diagnostic criteria of common psychiatric disorders including schizophrenia, mood disorders, anxiety disorders, sleep problems and dementia, management of psychiatric disorders in primary care setting.			

Code	Credit Hours	Course Title	Prerequisites
1509(3)717	2	Public Health Approach to Mental Health	
Mental health concepts and public health importance, neuroscience of mental health, classification and manifestations, the bio-psychosocial model, and models of mental health care. Advanced understanding of recent public health approach to the field of mental health including promotion, prevention, and treatment of mental illness.			

Code	Credit Hours	Course Title	Prerequisites
1502707	2	Applied Statistics	
<p>This is a course to teach students from different specialties of public health how to analyze data and interpret the results. By the end of the course the student should be able to determine the type of analysis (parametric or non parametric), test the relation between variables using comparison of means, test the hypothesis, test the relation between variables, using various measures of association.</p>			

Code	Credit Hours	Course Title	Prerequisites
1509(3)706	2	Field Training in Mental Health	
<p>To acquire knowledge and clinical skills regarding the presenting symptoms and the clinical picture of the common neuro-psychiatric disorders encountered in our culture and thus the post-graduate student finds the link between his pre-clinical and clinical studies. To acquire knowledge and skills regarding substance use prevention/intervention. To acquire the skills to be able to design, implement mini-research. To be able to acquire the skills of writing a report on activities performed in the field training.</p>			

Code	Credit Hours	Course Title	Prerequisites
1509(3)707	2	Special Studies	
<p>To acquire knowledge, skills and expertise in the most up to date information on promotion of mental health of vulnerable groups in the community, as well as occurrence, risk factors and evidence based interventions for such mental health problems.</p>			

Code	Credit Hours	Course Title	Prerequisites
1509(3)708	2	Evidence Based Approaches for Prevention & Control of Substance Abuse	
<p>Evidence based studies on the epidemiology of substance abuse and evidence based studies in the prevention and control of substance abuse.</p>			

Code	Credit Hours	Course Title	Prerequisites
1509(3)709	2	Reproductive Mental Health	
<p>Spectrum of mental and psychosocial problems of women in their age, etiology, preconception mental health problems, pregnancy problems, post partum problems, pregnancy loss, infertility, menopause problems.</p>			

Code	Credit Hours	Course Title	Prerequisites
1509(3)710	2	Evidence Based Approaches for Mental Health Care in Chronic Diseases	
Evidence based studies on mental health care of patients, improving patient's understanding, recall, satisfaction and compliance, psychosocial aspects and intervention in diabetes mellitus, malignancy, cardiovascular diseases, terminally ill patients, chronic renal diseases, bronchial asthma, chronic pain.			

Code	Credit Hours	Course Title	Prerequisites
1509(3)711	2	Neurology	
Neurological signs and symptoms, neurological examination, diagnostic criteria of common neurological disorders including epilepsy, stroke and cerebro-vascular accident, multiple sclerosis and Parkinson's disease, management of neurological disorders in primary care setting.			

Code	Credit Hours	Course Title	Prerequisites
1509(3)712	2	Behavior Modification in Mental Health	
Human health and behavior, counseling skills, principles of behavior modification, behavioral and cognitive approaches to management of mental health problems, and behavior modification techniques.			

Code	Credit Hours	Course Title	Prerequisites
1509(3)713	2	Smoking Cessation Counseling	
Role of physicians in prevention, assessment and management of nicotine dependency, individual and group smoking cessation counseling and cognitive and behavioral approaches in smoking cessation.			

Code	Credit Hours	Course Title	Prerequisites
1509(3)714	2	Psychiatric Epidemiology	
Principles, methods, and special concepts in psychiatric epidemiology, problems specific to psychiatric epidemiology, psychiatric diagnostic classifications (categorical vs. dimensional, single vs. multi-axial), psychiatric and somatic co-morbidity, the boundaries between psychiatric illness, personality disorders, personality characteristic and mental well-being, the measurement of outcome, course, relapse, and chronicity, descriptive and analytical epidemiology of mental disorders (depression, anxiety, psychosis, substance abuse, personality disorders).			

Code	Credit Hours	Course Title	Prerequisites
1509(3)715	2	Geriatric Mental Health Problems	
Mental health needs of elderly, classification of geriatric mental disorders, aging and psychopathology, assigned readings on common geriatric mental health problems (dementias, depression), geriatric mental health services.			

Code	Credit Hours	Course Title	Prerequisites
1509(3)716	2	Principles of Mental Health Services	
Current status of service organization nationally and internationally, guidance for organizing mental health services, principles of integration of mental health services into general health services.			

Code	Credit Hours	Course Title	Prerequisites
1509(1)709	1	Care of Children with Special Needs	
This course will provide the student with the fundamental understanding of the concepts related to handicapping as well as the common disabilities in children globally and in developing countries. The course will shed light on the different etiological factors leading to the handicapping conditions and the impact of these conditions on the child, family and society. Besides, the students will be able to outline the various preventive measures at the primary, secondary and tertiary levels. Furthermore, the situation of care in Egypt and the available services will be addressed.			

Code	Credit Hours	Course Title	Prerequisites
1509(2)710	2	Health Care and Problems of Youth	
General characteristics of adolescents and youth. Morbidities and mortalities among youth. Common health problems of youth. Health risk behavior among youth and adolescents. Tobacco, alcohol and other drug use. Sexual behaviors, dietary behaviors and physical activity among youth and adolescents.			

Code	Credit Hours	Course Title	Prerequisites
1509(4)701	2	Physical and Mental Changes of Elderly People	
Introduction to geriatrics and gerontology, general changes accompanying aging. Functional changes as a result of tissues, organs and system changes. Problems due to such changes and body mechanisms for coping and compensation. Emotional and personality changes with advancing age.			

Code	Credit Hours	Course Title	Prerequisites
1508(1)706	2	Problem Solving and Decision Making: Concepts and Techniques	
<p>This course aims at developing graduates trained in adequately solving organizational health problems based on objective non- biased decisions. The course follows the workshop approach where students are required to apply each step of the framework of problem solving in the classroom situation. Students are also required to present a problem solving assignment at the end of the course. The course content includes decision-making definition, types of decisions and problems, relation between decision making and problem solving, phases and steps of the "systematic framework for problem solving" as well as the various factors influencing problem solving and decision making.</p>			

Code	Credit Hours	Course Title	Prerequisites
1508(1)707	2	Conceptual & Application Approaches to Health Program Evaluation	
<p>This course provides students with an overview of concepts and methods of program evaluation in health care organizations. It focuses on understanding different types of evaluation approaches using appropriate standards needed for effective program evaluation including role of economic skills in program evaluation. It also provides the skills required to design, and implement program evaluation, and how to integrate evaluation with routine program implementation.</p>			

Code	Credit Hours	Course Title	Prerequisites
1508(3)710	2	Health Education Approaches and Strategies In Drug Education	
<p>The course provides necessary skills to design implement and evaluate health education intervention in drug education. It provides students with a fundamental understanding of drug taking behavior, factors that promote positive relationship, communication skills, cigarette smoking and youth, community based health education interventions for drug education, peer programs, decision making models, communication strategies for drug education programs.</p>			

Code	Credit Hours	Course Title	Prerequisites
1502701	3	Study Design and Sampling	
<p>The different types of study designs and their appropriate statistics. The concept of sampling, sampling distributions, parameters and statistics, central limit theorem, types of samples and sampling error, complex samples, the normal distribution and estimation of a population parameter from a sample, determination of the minimum required sample size for different designs.</p>			

Code	Credit Hours	Course Title	Prerequisites
1502703	2	Categorical Data Analysis	

Measures of association, Measurement of agreement (Kappa). The Odds ratio, relative risk and confidence interval, Stratified analysis, Logistic regression.

Code	Credit Hours	Course Title	Prerequisites
1502710	2	Statistical Software Computer Packages (Program 1)	

Applied statistics
1502707

Introduction to computer, Installing SPSS software package, Data definition and access, Data management and modifications, Data analysis and presentation, Graphical presentation, Output management, Saving files, Printing files.

Code	Credit Hours	Course Title	Prerequisites
150705	2	Ethics and Law for Health Professionals	

Definitions of ethics, law, risk management and public health will be clarified. Major ethical and legal conflicts in public health will be addressed. Justifying public health programs and policies will be discussed. Human rights and public health will be explained. The course will also tackle understanding of the public health profession's roles and professional values.

22- Master's Degree in Public Health (Majoring Geriatric Health)

Students should fulfill a total of 38 credit hours:

1- Basic requirements: 10 credit hours.

150701, 150702, 150703, 150704

2- Compulsory courses: 14 credit hours.

1509(4)701, 1509(4)702, 1509(4)703, 1509(4)704, 1509(3)705, 1509(4)705, 1502707

3- Elective courses: 6 credit hours.

1509(4)706, 1509(4)707, 1509(4)708, 1507(1)609, 150705

4- Thesis: 8 credit hours. 1509(4)799

1- Basic requirements: 10 credit hours

Code	Course Title	Theoretical	Practical/ Clinical	Field	Credit Hours	Prerequisites
150701	Epidemiology and Biostatistics الوبائيات والاحصاءات الحيوية	2			2	
150702	Environmental & Occupational Health الصحة البيئية والمهنية	2			2	
150703	Health Administration & Behavioral Sciences الادارة الصحية والعلوم السلوكية	2			2	
150704	Research Methodology طرق البحث	2	2		3	
150706	Field Studies الدراسات الميدانية	-	-	4	1	
Total		8	2	4	10	

2- Compulsory courses: 14 credit hours

Code	Course Title	Theoretical	Practical/ Clinical	Field	Credit Hours	Prerequisites
1509(4)701	Physical and Mental Changes of Elderly People التغيرات البدنية والنفسية للمسنين	2			2	
1509(4)702	Family Dynamics and Health Problems of the Elderly التغيرات الديناميكية للأسرة والمشاكل الصحية للمسنين	2			2	
1509(4)703	Geriatric Medicine طب المسنين	1	2		2	
1509(4)704	Health Promotion and Preventive Geriatrics تعزيز الصحة و الصحة الوقائية للمسنين	2			2	
1509(3)705	Adult and Elderly Mental Health الصحة النفسية للبالغين و المسنين	2			2	
1509(4)705	Departmental Field Training تدريب حقلي تخصصي	1		4	2	
1502707	Applied Statistics إحصاء تطبيقي	1	2		2	
Total		11	4	4	14	

3- Elective Courses: 6 credit hours

Code	Course Title	Theoretical	Practical/ Clinical	Field	Credit Hours	Prerequisites
1509(4)706	Health Settings and Innovations for the Elders أماكن الرعاية الصحية والابتكارات للمسنين	2			2	
1509(4)707	Care of the Disabled Elder العناية بالمسن المعاق	2			2	
1509(4)708	Chronic Diseases and Quality of Life of the Elderly المرضى المزمنة و نوعية الحياة بين المسنين	2			2	
1508(1)605	Basic Principles of Leadership in Health المبادئ الأساسية للقيادة في الصحة	2			2	
1507(1)609	Dietary Needs of Special Groups الاحتياجات التغذوية للفئات الخاصة	2			2	
150705	Ethics and Law for Health Professionals الأخلاقيات والقانون لأفراد الفريق الصحي	1			1	

Course Description

Code	Credit Hours	Course Title	Prerequisites
150701	2	Epidemiology & Biostatistics	
<p>Scope & uses of epidemiology. Natural history of the diseases, requisites for perpetuation of infectious diseases, magnitude and risk factors of non communicable diseases. Basic biostatistics concepts, Basic principle of epidemiologic methods. Presentation of grouped and ungrouped data shape of distribution. Probability concepts and Laws of Probability.</p>			

Code	Credit Hours	Course Title	Prerequisites
150702	2	Environmental and Occupational Health	
<p>Definition of environment and environmental health, water sources, water uses and classification, water pollution, point and non-point sources of pollution, types of pollutants, their source and effect, air pollution, types of air pollutants, their source and effect (including climate change, ozone depletion, acid rain, etc), soil pollution, types of soil pollutants, their source and effect, control measures for different types of pollution. Occupational hazards, occupational diseases and their prevention.</p>			

Code	Credit Hours	Course Title	Prerequisites
150703	2	Health Administration & Behavioral Sciences	
<p>This course aims at developing students' knowledge regarding basic managerial concepts, processes, skills and techniques and application of such knowledge in the delivery of high quality health care. Managerial processes covered include: planning, decision making, organizing, leadership, supervision, staffing and evaluation. Among the managerial issues and techniques included are: quality health care and problem solving. In addition, certain skills as communication, motivation, ... etc. will be covered. It also aims at developing students with knowledge and skills regarding role and application of behavioral sciences in the field of public health.</p>			

Code	Credit Hours	Course Title	Prerequisites
150704	4	Research Methodology and Field Studies	
<p>This course is intended to prepare students to design and implement research. It also includes statistical design and analysis as well as proposal writing and report slash thesis writing.</p>			

Code	Credit Hours	Course Title	Prerequisites
1509(4)701	2	Physical and Mental Changes of Elderly People	
<p>Introduction to geriatrics and gerontology, general changes accompanying aging. Functional changes as a result of tissues, organs and system changes. Problems due to such changes and body mechanisms for coping and compensation. Emotional and personality changes with advancing age.</p>			

Code	Credit Hours	Course Title	Prerequisites
1509(4)702	2	Family Dynamics and Health Problems of the Elderly	
<p>Ecology of geriatric problems, specific characters of elderly problems. Problems of all systems of the body, cognitive problems, depression, sleep disorders and behavioral problems. Problem of retirement and its sequelae. Elderly abuse and their types, nutritional problems.</p>			

Code	Credit Hours	Course Title	Prerequisites
1509(4)703	2	Geriatric Medicine	

Aging differences in clinical vital signs and modified forms of some disease presentation. Proper history taking and pathological characteristics. Cardiovascular diseases, cerebrovascular, gastrointestinal, central nervous system, locomotor, respiratory, metabolic, special senses, and neoplastic problems, their diagnosis and management.

Code	Credit Hours	Course Title	Prerequisites
1509(4)704	2	Health Promotion and Preventive Geriatrics	

Definition of preventive medicine and its goals for the elders. Screening and periodic assessment as important tools in promotion of health. Important immunizations for the elderly. Risky health behaviours and how to stop or modify them. Diet and physical exercise as important clues for health promotion and disease prevention. Outstanding common preventable health problems among the elderly; cardiovascular, diabetes, osteoporosis, immobility and falls. Preventive programs for different problems. Dealing with demented elders. Social activity and its contribution in self dependency and mental health.

Code	Credit Hours	Course Title	Prerequisites
1509(3)705	2	Adult and Elderly Mental Health	

Introduction, etiology, common mental disorders in adults and elders, mood disorders, anxiety disorders, schizophrenia, personality disorders, common mental disorders in the elders, depression, dementia and common neurological disorders in adults and elders.

Code	Credit Hours	Course Title	Prerequisites
1509(4)705	2	Departmental Field Training	

Orientation week- Out-patient clinics activity –In-patients activity –Elderly homes activity –Final meeting and resume

Code	Credit Hours	Course Title	Prerequisites
1502707	2	Applied Statistics	

This is a course to teach students from different specialties of public health how to analyze data and interpret the results. By the end of the course the student should be able to determine the type of analysis (parametric or non parametric), test the relation between variables using comparison of means, test the hypothesis, test the relation between variables, using various measures of association.

Code	Credit Hours	Course Title	Prerequisites
1509(4)706	2	Health Settings and Innovations for the Elders	
<p>Health care system-ABCs of Medicare and health insurance-home care-nursing homes-hospitalization-institutionalization-alternative long term care and continuum of care-complementary and alternative medicine.</p>			

Code	Credit Hours	Course Title	Prerequisites
1509(4)707	2	Care of the Disabled Elder	
<p>Types of disabilities whether functional or pathological, causes, management and intervention. Rehabilitation as an important tool in prevention of disability, modification of the social and physical environment to suite the disabled elder. Community services for the disabled elder.</p>			

Code	Credit Hours	Course Title	Prerequisites
1509(4)708	2	Chronic Diseases and Quality of Life of the Elderly	
<p>Definition and measures of quality of life (QOL) among the elders: ADL, IADL, GDS, MMSE. Tendency to chronicity among the elderly. Most common chronic problems; physical and mental, their diagnosis and prevention on the three levels. How to keep and promote QOL.</p>			

Code	Credit Hours	Course Title	Prerequisites
150705	2	Ethics and Law for Health Professionals	
<p>Definitions of ethics, law, risk management and public health will be clarified. Major ethical and legal conflicts in public health will be addressed. Justifying public health programs and policies will be discussed. Human rights and public health will be explained. The course will also tackle understanding of the public health profession's roles and professional values.</p>			

23- Master Degree in Public Health Sciences (Majoring Public Health Nursing)

Students should fulfill a total of 38 credit hours:

1- Basic requirements: 10 credit hours.

150701, 150702, 150703, 150704

2- Compulsory courses: 14 credit hours.

1509(5)701, 1509(5)702, 1509(5)703, 1509(5)704, 1509(5)705, 1509(1)702, 1509(1)705

3- Elective courses: 6 credit hours.

1509(5)706, 1509(5)707, 1509(5)708, 1509(5)709, 1501706, 1502707, 1509(2)708, 1508(1)730, 150705

4- Thesis: 8 credit hours. 1509(5)799

1- Basic requirements: 10 credit hours

Code	Course Title	Theoretical	Practical/ Clinical	Field	Credit Hours	Prerequisites
150701	Epidemiology and Biostatistics الوبائيات والاحصاءات الحيوية	2			2	
150702	Environmental & Occupational Health الصحة البيئية والمهنية	2			2	
150703	Health Administration & Behavioral Sciences الادارة الصحية والعلوم السلوكية	2			2	
150704	Research Methodology طرق البحث	2	2		3	
150706	Field Studies الدراسات الميدانية	-	-	4	1	
Total		8	2	4	10	

2- Compulsory courses: 14 credit hours

Code	Course Title	Theoretical	Practical/ Clinical	Field	Credit Hours	Prerequisites
1509(5)701	Scopes of Public Health Nursing مجالات تمريض الصحة العامة	2			2	
1509(5)702	Scientific Approaches of Community Health Nursing Practices الأساليب العلمية لممارسات تمريض الصحة العامة	2	2		3	
1509(5)703	Problems Facing Public Health Nursing Programs المشاكل التي تواجه برامج تمريض الصحة العامة	2			2	
1509(5)704	Social and Behavioral Sciences as Bases for Public Health Nursing Practice العلوم الاجتماعية والسلوكية كأساس لممارسة تمريض الصحة العامة	2			2	
1509(5)705	Special Studies دراسات خاصة	2			2	
1509(1)702	Child Growth and Development نمو و تطور الطفل	2			2	
1509(1)705	Demography علم دراسة السكان	1			1	
Total		13	2		14	

3- Elective Courses: 6 credit hours

Code	Course Title	Theoretical	Practical/ Clinical	Field	Credit Hours	Prerequisites
1509(5)706	Public Health Nursing Administration إدارة تمريض الصحة العامة	2			2	
1509(5)707	Gerontology in Relation to Community Health Nursing علم الشيخوخة وعلاقته بتمريض صحة المجتمع	2			2	
1509(5)708	Occupational Health Nursing تمريض الصحة المهنية	2			2	
1509(5)709	Field Training in Different Areas of Public Health Nursing تدريب حقلي في مختلف مجالات تمريض الصحة العامة			4	1	
1501706	Infection Control مكافحة العدوى	2			2	
1502707	Applied Statistics إحصاء تطبيقي	1	2		2	
1509(2)708	Health Consequences of Tobacco Smoking among Women and how to Quit المخاطر الصحية للتدخين بين السيدات وكيفية الإقلاع	2			2	
150705	Ethics and Law for Health Professionals الأخلاقيات والقانون لأفراد الفريق الصحي	2			2	

Course Description

Code	Credit Hours	Course Title	Prerequisites
150701	2	Epidemiology & Biostatistics	
Scope & uses of epidemiology. Natural history of the diseases, requisites for perpetuation of infectious diseases, magnitude and risk factors of non communicable diseases. Basic biostatistics concepts, Basic principle of epidemiologic methods. Presentation of grouped and ungrouped data shape of distribution. Probability concepts and Laws of Probability.			

Code	Credit Hours	Course Title	Prerequisites
150702	2	Environmental and Occupational Health	
Definition of environment and environmental health, water sources, water uses and classification, water pollution, point and non-point sources of pollution, types of pollutants, their source and effect, air pollution, types of air pollutants, their source and effect (including climate change, ozone depletion, acid rain, etc), soil pollution, types of soil pollutants, their source and effect, control measures for different types of pollution. Occupational hazards, occupational diseases and their prevention.			

Code	Credit Hours	Course Title	Prerequisites
150703	2	Health Administration & Behavioral Sciences	
<p>This course aims at developing students' knowledge regarding basic managerial concepts, processes, skills and techniques and application of such knowledge in the delivery of high quality health care. Managerial processes covered include: planning, decision making, organizing, leadership, supervision, staffing and evaluation. Among the managerial issues and techniques included are: quality health care and problem solving. In addition, certain skills as communication, motivation, ... etc. will be covered. It also aims at developing students with knowledge and skills regarding role and application of behavioral sciences in the field of public health.</p>			

Code	Credit Hours	Course Title	Prerequisites
150704	4	Research Methodology and Field Studies	
<p>This course is intended to prepare students to design and implement research. It also includes statistical design and analysis as well as proposal writing and report slash thesis writing.</p>			

Code	Credit Hours	Course Title	Prerequisites
1509(5)701	2	Scopes of Public Health Nursing	
<p>This course is designed to meet the needs of the post graduate nurse to know the scopes of public health nursing. It deals with the professional role of the nurse as care provider & supervisor and as part of the interdisciplinary health care team. The course content includes: introduction, definitions, & history and nature of community health nursing. School health nursing, Maternal & child health nursing, occupational health nursing, geriatric and mental health nursing and the nurse in the primary health care setting.</p>			

Code	Credit Hours	Course Title	Prerequisites
1509(5)702	3	Scientific Approaches of Community Health Nursing Practices	
<p>This course helps the students to gain knowledge and skills to contribute in the promotion of community health. Assigned clinical experiences develop student skills and practice of community health nursing. The course content includes: methods of public health nursing services, applying the nursing process method in all areas of care which includes methods of assessment, methods of planning and methods of implementation, methods of recording, outreach, health education, methods of counseling, audiovisual aids and designing the program and evaluate it.</p>			

Code	Credit Hours	Course Title	Prerequisites
1509(5)703	2	Problems Facing Public Health Nursing Programs	
<p>This course helps the students to use critical thinking to study the selected current health problems in the community. In depth consideration of community based health care delivery system to improve the practice of public health nursing and to identify risk factors affecting it. The course content includes: community diagnosis, common health problems arising at the national level, evidence based practice approach and its application in nursing, problem solving approach such as staff conflicts or staff performance problems.</p>			

Code	Credit Hours	Course Title	Prerequisites
1509(5)704	2	Social and Behavioral Sciences as Bases for Public Health Nursing Practice	
<p>This course focuses on helping the student to synthesize philosophy and theory of social sciences and nursing science as a basis for public health nursing practice. The course content includes: introduction to social sciences and its importance to public health (basic concepts and implications, individual differences in behavior, mental mechanism, and socialization of the child, role of the nurse in manipulation of behavioral and social factors of the clients.</p>			

Code	Credit Hours	Course Title	Prerequisites
1509(5)705	2	Special Studies	
<p>This course is designed to enable the student to deal with the scientific nursing subjects and articles written in the professional magazines. To be able to prepare a guideline manual for the public health nurse in one activity or two of the following areas; maternal & child health, schools, occupational, geriatric, and mental health services.</p>			

Code	Credit Hours	Course Title	Prerequisites
1509(1)702	2	Child Growth and Development	
<p>The course is meant to provide the students with the scientific basis needed to asses the growth and development of children. By the end of the course students would be able to detect deviations from normal using different tools such as growth curves and growth charts. Subsequent management and referral to the appropriate referral level would be the ultimate goal.</p>			

Code	Credit Hours	Course Title	Prerequisites
1509(1)705	1	Demography	
<p>This course provides the students with knowledge and skills required to understand and analyze the key demographic problems globally. They will be especially familiar with the problems that Egypt faces and the effect of the population problem on health. The role of birth control strategies in the control of population problems will be emphasized also.</p>			

Code	Credit Hours	Course Title	Prerequisites
1509(5)706	2	Public Health Nursing Administration	
<p>This course will prepare the candidate for leadership roles in public health nursing through consideration of community based health care delivery systems. The course contains: leadership, organizations related to the delivery of public health nursing care. Managerial process and management of resources in public health nursing. Clinical practical administrative experiences as well as seminars are associated with this course.</p>			

Code	Credit Hours	Course Title	Prerequisites
1509(5)707	2	Gerontology in Relation to Community Health Nursing	
<p>This course is designed to acquaint the students with the fundamental concepts regarding elderly and to develop efficient skills in dealing with them. Discussing issues related to professional and advanced practice in this area of care. The course contains: common health needs and problems of the elders, quality of life and the traditional and modern settings for elderly care. Competent nursing care using community-oriented strategies aimed at primary, secondary and tertiary levels of care.</p>			

Code	Credit Hours	Course Title	Prerequisites
1509(5)708	2	Occupational Health Nursing	
<p>This course helps the student to refine the application of public health nursing principles of occupation as a functional component within the community health program. The course contains: scope of occupational health nursing. Nurses qualifications. Occupational health program, health team members' aspects and responsibilities. Work hazards in different work places. Occupational health center and different nursing procedures.</p>			

Code	Credit Hours	Course Title	Prerequisites
1509(5)709	1	Field Training in Different Areas of Public Health Nursing	
<p>During this field training the students will visit different community settings available in Alexandria. At the end of this field the students will observe and assess the functions of nurses and nursing managers of the selected settings. They will criticize, and to evaluate the nursing role in such settings.</p>			

Code	Credit Hours	Course Title	Prerequisites
1501706	2	Infection Control	

Definitions, sources of spread of infection, general principles of infection control, infection control in institutions and settings and infection control for individuals (health & safety practices).

Code	Credit Hours	Course Title	Prerequisites
1502707	2	Applied Statistics	

This is a course to teach students from different specialties of public health how to analyze data and interpret the results. By the end of the course the student should be able to determine the type of analysis (parametric or non parametric), test the relation between variables using comparison of means, test the hypothesis, test the relation between variables, using various measures of association.

Code	Credit Hours	Course Title	Prerequisites
1509(2)708	2	Health Consequences of Tobacco Smoking among Women and how to Quit	

Include tobacco use among women throughout their life span as an adolescent, pregnant, lactating and mothers of young kids. Smoking cessation interventions. Key concepts in smoking cessation counseling.

Code	Credit Hours	Course Title	Prerequisites
150705	2	Ethics and Law for Health Professionals	

Definitions of ethics, law, risk management and public health will be clarified. Major ethical and legal conflicts in public health will be addressed. Justifying public health programs and policies will be discussed. Human rights and public health will be explained. The course will also tackle understanding of the public health profession's roles and professional values.