COURSE SPECIFICATIONS
Public Health and Community Medicine

Fourth year 2016-2017
Course Specifications

Course title: Public Health and Community Medicine
(Code) COM-410

- Department offering the course: Public Health and Community Medicine Department
- Fourth Academic year of M.B.& B.Ch. program.
- Date of specification approval: 2016

A) Basic Information:

- Allocated marks: 300 marks
- Course duration: Eight weeks
- Teaching hours: Theoretical: 128 hours
  Practical sessions: 64 Hours
  Field training: 10 visits

B) Professional Information:

1- Overall Aim of the Course:

1. Introduce basic knowledge and principles of Public Health and Community Medicine in the fields of epidemiology, biostatistics, research methods, environmental health, nutrition, health care management and health services.

2. Prepare a community- oriented physician capable of anticipating and responding to community health needs within the primary health care (PHC).

3. Apply and practice the principles of health research in provision of the valid and accurate information necessary for the decision making process in the medical profession.

4. Apply basic principles of nutrition and environmental health to help in promoting the health and well being of community.

5. Develop a graduate who would be able to apply communication skills to educate, motivate, supervise, lead and advocate in health promotion, prevention and control programs.
2- **Intended Learning Outcomes (ILOs):**

   a- **Knowledge and understanding:**
   *By the end of the course, students should be able to:*

   a.1- Understand the concept of community medicine, spectrum of health, pattern and levels of care and health services in a comprehensive health care program
   
a.2- Describe the different health education /communication, counseling and consultation strategies for use with clients, health care team, and the community.
   
a.3- Describe basic terms related to nutrition, the function of each nutrient, its source, required intake and impact of nutrient deficient or excess intake throughout lifecycle.
   
a.4- Describe nutritional screening and assessment
   
a.5- Recognize the recent dietary guides and guidelines, routine and modified of hospital diets and its indications
   
a.6- Define the basics of sound environment, the nature, health effects and sources of environmental risks including waste management in the community and in health care settings
   
a.7- Identify the population structure, measures for the population changes, census and estimated population
   
a.8- Understand basics of vital statistics related to fertility, morbidity, mortality and burden of disease
   
a.9- Describe different types of health research and epidemiological study and their application.
   
a.10- Describe different sampling techniques.
   
a.11- Define the screening tests pertinent to selected morbidity conditions.
   
a.12- Identify statistics, biostatistics, variables and characteristics of normal distribution curve
   
a.13- Describe the common terms used in the field of epidemiology and epidemiological cycle
a.14- Describe the MOH programs for the prevention and control of the communicable and most prevailing diseases in Egypt including surveillance and outbreak/ epidemic/ pandemic investigation

a.15- Recognize determinants of health and illness, health promotion and disease prevention of priority non communicable diseases.

a.16-Describe principles of health care management, leadership and team building, quality and its dimensions in health care.

a.17- Identify the common health problems that affect vulnerable groups including; mothers , children , school children, elderly, at risk occupational groups, and people with special needs.

a.18- Recognize different health policies, programs, and the approved MOH standards of practice applied for PHC, maternal and child, school children, elderly, at risk occupational groups, and people with special needs

Professional Skills

b-Practical and community ,

By the end of the course, students should be able to:

b.1- Develop a diet plan for normal individuals throughout the life cycle, especially the vulnerable and for selected disease conditions using dietary guides and food exchange lists

b.2- Assess indoor and outdoor environment for the basic sanitary requirements

b.3 Revise latest figures and trends for the Egyptian population, and its vital indicators

b.4 Practice research protocol writing, data collection, entry, cleaning, analysis and basic presentation skills followed by results' interpretation while abiding with highest standards of research ethics based on “Evidence Based Practice” approach

b.5 Apply the principles of epidemiology to some airborne, food borne, arthropod, and contact transmitted diseases as well as Non communicable diseases

b.6- Criticize the cold chain effectiveness at a given PHC facility
b.7- Apply standard methods of routine hand washing and alcohol-based hand rubs

b.8 Apply management functions in problem identification, prioritization, planning, implementation and evaluation of health care services by use of appropriate indicators

b.9 Apply MOH standards and protocols for maternal, child, occupational health care program in Egypt

b.10- Apply simple analytical tools to develop the "Family Health Status Index" to identify the priority at-risk rural family for health interventions

C. Professional attitude and behavioral skills

By the end of the course, students should be able to:

c.1- Acknowledge the importance of a multidisciplinary approach and group for disease prevention, national health care programs and in conducting public health surveillance to address specific public health problems and issues.

c.2- Appreciate the role of cultural, social, and behavioral factors in determining disease, disease prevention, health promoting behavior, and medical service organization and delivery.

c.3- Interact and communicate sensitively, effectively, and professionally and demonstrate respect for persons from diverse cultural, socioeconomic, educational, and professional backgrounds, and with persons of all ages and lifestyle preferences.

c.4- Appreciate the role of physician in primary health care.

d- Communication skills

By the end of the course, students should be able to:

d.1- Prepare health education message in specified topic and group

d.2- Apply appropriate health education and communication strategies in different settings including group as well as peer health education using behavioral change models

d.3- Communicate effectively with clients, community members, colleagues from other disciplines

d.4- Appreciate peer evaluation
e- **Intellectual skills:**

*By the end of the course, students should be able to:*

e.1- Calculate and interpret morbidity, mortality, and fertility statistics

e.2- calculate the different output indicators as derived from the service statistics' data;

e.3- Select the appropriate study design as indicated to the study objectives

e.4- Calculate measures of disease frequency and measures of association between risk factors and disease

e.5- Assess measures for validity of screening test

e.6- Choose the proper methods for data presentation and summarization

e.7- Identify trends in health and disease including epidemiological causes of high prevalence of certain infection, causes of eradication, emerging or reemerging previous infections worldwide and in Egypt.

e.8- Explain the ecological factors of morbidity and mortality within the concept of epidemiologic and demographic transitions.

f. **General and transferable skills**

*By the end of the course, students should be able to:*

f.1- Manage time and take responsibility for learning required for continuous professional development.

f.2- Identify his/her personal weakness through utilization of self-assessment and performance feedback and address weaknesses by developing learning plan.

f.3- Work effectively as a member or a leader of an interdisciplinary team.

f.4- Communicate effectively with clients and colleagues.

f.5- Apply simple statistical methods to analyze and understand data in medical and social research.
3- **Course contents:**

**A: course content:**

**Introduction To Public Health**
- Definitions and concepts
- Spectrum of Health
- Determinants of health
- Public health
- Patterns/levels of care
- Levels of practice

**Communication and Health Education**
- Communication
- Counseling
- Consultation
- Health Education (HE)

**Basic and Applied Nutrition**
- Definitions
- Major dietary nutrients
- Diet planning in health and disease
- Nutrition for the vulnerable groups
- Assessment of the nutritional status
- Malnutrition
- Nutrition and chronic diseases

**Environmental Health**
- Definitions
- Introduction
- Function and aim of environmental health
- Basic Requirements for a Healthy Environment
- Water and Health
- Waste
- Role of the Public Health Physician regarding environmental health issues

**Demography**
- Definitions:
- The population size
- Population change
- The population structure
Measurement of Health
- Definitions
- Importance of vital statistics
- Data sources
- Vital statistics’ indicators 1- Morbidity statistics 2- Mortality statistics 3- Fertility rates

Epidemiologic Research Methods
- Introduction
- Types of Health Research
- Study Design Types
- Sampling
- Screening tests

Medical Statistics
- Definitions
- Variables
- Data and information
- Descriptive statistics
- Normal distribution curve

Epidemiology of communicable diseases
- General Epidemiology of communicable diseases
- The infection cycle
- Prevention of Infectious Diseases
- Control of Infectious Diseases
- Public Health Surveillance
- Immunization in Practice
- Epidemic/ Pandemic/ Outbreak Investigation
- Epidemiology of droplet infections
- Epidemiology of Food Borne Infections
- Epidemiology of Contact Infections
- Epidemiology of Arthropod Borne Infections

Epidemiology of Non Communicable Diseases
- Definitions
- General Epidemiology of the Non-Communicable Diseases
- Current situation of Non- Communicable Diseases in Egypt
- Epidemiology of Selected Non-Communicable Diseases
  - Hypertension
- Coronary heart diseases
- Diabetes Mellitus
- Cancer
- Chronic Obstructive Pulmonary Disease (COPD)

**Health Care Management**
- Basic Management Skills
- Quality Management
- Patient Safety
- Health Economics

**Health System**
- Introduction
- What is a health system?
- Health system in Egypt.

**Primary Health Care**
- Definitions
- Principles of PHC
- Characteristics of PHC
- The Eight Elements of PHC
- PHC services
- Family Practice
- Assessment of Community Needs

**Maternal and Child Health Care**
- Rationale for special care for the mothers and children
- Goals and objective of MCH
- Related Definitions
- Maternal health problems
- Health care for the mothers
- Child health problems
- Child health programme
- Evaluation of the MCH programme

**School Health**
- Health problems of school children:
- School Health Program

**Disability/People with special needs**
- Definitions and magnitude of the problem
- Etiology of disability
- Prevention of disability

**Health of the Elderly**
- Definitions, demographic changes and the trend of aging
Health problems of the elderly
The elderly health care program.

**Occupational Health.**
- Definitions
- Occupational health hazards
- Occupational Health and Safety Program (OHSP)

**Mental Health**
- Definition of mental health
- Domains and criteria of Mental Health
- Factors affecting Mental Health
- Mental Health Promotion and prevention

**Egypt’s Population Policy and family Planning**
- Egypt Population Problem
- Objectives of the National Population Policy and its strategies
- Fertility and Over Population
- Family Planning Program

**B: Lectures and Training Activities Outlines**

<table>
<thead>
<tr>
<th>Topic</th>
<th>Hours</th>
<th>%</th>
<th>Practical Topics</th>
<th>Hours</th>
<th>Field Visits</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Introduction &amp; Health education and communication</strong></td>
<td>8</td>
<td></td>
<td>Orientation</td>
<td>2</td>
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<tr>
<td>1 General Introduction</td>
<td>2</td>
<td>6</td>
<td>Leadership &amp; Team Building</td>
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<tr>
<td>2 Communication and health behavior</td>
<td>6</td>
<td></td>
<td>Pre-visit rural</td>
<td>3</td>
<td>Visit 1 Rural</td>
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<tr>
<td><strong>Nutrition</strong></td>
<td>16</td>
<td>12.5</td>
<td>Feedback rural 1</td>
<td>3</td>
<td>Visit 2 Rural</td>
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<tr>
<td>3 Basic nutrition</td>
<td>4</td>
<td></td>
<td>Post-visit 2 Rural</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>4 Applied nutrition</td>
<td>4</td>
<td></td>
<td>Pre-visit PHC</td>
<td>3</td>
<td>Visit 1 PHC</td>
</tr>
<tr>
<td>5 Nutritional assessment</td>
<td>4</td>
<td></td>
<td>Post –visit PHC</td>
<td>3</td>
<td>Visit 2 PHC</td>
</tr>
<tr>
<td>6 Malnutrition</td>
<td>4</td>
<td></td>
<td>Counseling</td>
<td>3</td>
<td>Health education lab</td>
</tr>
<tr>
<td><strong>Epidemiological methods, medical statistics &amp; informatics</strong></td>
<td>22</td>
<td></td>
<td>Pre –visit Cairo</td>
<td>3</td>
<td>Cairo University Visit</td>
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<tr>
<td>7 Measurement of Health</td>
<td>4</td>
<td></td>
<td>Post visit Cairo</td>
<td>3</td>
<td></td>
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</table>

9
<table>
<thead>
<tr>
<th>Methods</th>
<th>Hours</th>
<th>Lectures</th>
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<tbody>
<tr>
<td>Methods</td>
<td>17</td>
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<tr>
<td>Medical Statistics</td>
<td>4</td>
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<tr>
<td>Demography</td>
<td>2</td>
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<tr>
<td>Epidemiology</td>
<td>44</td>
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<tr>
<td>General Epidemiology</td>
<td>16</td>
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<tr>
<td>Communicable diseases</td>
<td>24</td>
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<tr>
<td>Non-communicable diseases</td>
<td>4</td>
<td></td>
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<tr>
<td>Management and health services</td>
<td>34</td>
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<tr>
<td>Health Care Management</td>
<td>8</td>
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<tr>
<td>Mental Health</td>
<td>2</td>
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<tr>
<td>PHC</td>
<td>4</td>
<td></td>
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<tr>
<td>Reproductive Health</td>
<td>4</td>
<td></td>
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<tr>
<td>School Health</td>
<td>2</td>
<td></td>
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<tr>
<td>Child Health</td>
<td>4</td>
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<tr>
<td>Health of the elderly</td>
<td>2</td>
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<tr>
<td>Health of people with special needs</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Occupational Health</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Family planning</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Environment</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>TOTAL HOURS</td>
<td>128</td>
<td>100</td>
</tr>
</tbody>
</table>

**Lectures:** Faculty Teaching Halls “98 hours”

**Mini-lectures** “15 x 2” hours within the departmental halls = 30 hours

[Pre & Post for expected 10 field visits] = 64 “within the dept.”

**Practical Exercises held in the departmental halls:**

1. Post primary health care visit seminar (Mathematical calculation and presentation of different output indicators derived from services statistics’ data)
2. Leadership (perform self and peer assessments regarding leadership criteria)
3. Nutritional lab. (Nutritional assessment for adults and children)
4. Communication and Health Education lab. (Role plays for effective communication in consultation)
5. Computer lab 1&2 (data entry, cleaning, analysis and presentation using EXCEL program)
6. Rural seminar (Calculation of family health status index and crowding index)
7. Post field visits seminars (data analysis using pivot tables to calculate measures of disease or disease related problems frequency and association between risk factors and disease)
8. Communicable diseases’ case study

C: Extracurricular activities (for those interested after the end of the round):
1. Writing up research paper
2. International publication through international conferences and scientific journals
3. Department conference
4. Scientific DAYs

4- Teaching and learning methods:

A: Instructional Strategies

Illustrated lectures, seminars, small groups seminars, interactive presentations, group discussions, brainstorming, case studies/problem solving, role plays, demonstrations, facilitated practice, practical field visits and practical exercises.

B: Instructional Materials

Materials include students' handouts, classroom notes, and students’ workbook including written exercises, assignments, skills learning guides and checklists.

C: Teaching Plan:

The educational year is divided into 4 rounds each lasting 8 weeks. The whole course is covered during each round (lectures, tutorial and practical training).

Each round the department receives one fourth of students' number. Students of each round are divided according to the following:
Lectures (Large Faculty halls) = all students
Tutorials (mini-lectures) in the department the students are divided into 10 groups (1, 2, 3, 4, 5, 6….). Each group = 35-40 students
Practical sessions: each group is divided into four teams (A, B, C, D). The total is 40 teams= each team is composed of 10 students
Site visits: all visits include 40 students.

D: Teaching and Learning Facilities

- Lecture halls: one grand lecture hall allocated for daily teaching (central lecture halls);
- Small 10 classrooms' halls available within the department;
- Writing boards are available in all rooms; overhead aids and slide projectors and computer lab, data show, videos are available when needed;
- Skills lab: health education and nutrition assessment and computer lab
- Field

5- Students Assessment methods:

A) Attendance criteria: Faculty bylaws

B) Assessment tools:

<table>
<thead>
<tr>
<th>Tool</th>
<th>Purpose (ILOs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Written examination</td>
<td>To assess intellectual, knowledge and analytical skills, problem solving</td>
</tr>
<tr>
<td>Oral examination</td>
<td>To assess: Presentation skills, information synthesis, understanding, applied knowledge</td>
</tr>
<tr>
<td>Practical examination</td>
<td>To assess: Analytical skills, problem solving, presentation skills, leadership/team work, communication skills, creativeness, advocacy, reporting skills</td>
</tr>
</tbody>
</table>

C) Time schedule: Faculty bylaws

<table>
<thead>
<tr>
<th>Exam</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>1- Written following each round</td>
<td>Following each round</td>
</tr>
<tr>
<td>2- Practical exam</td>
<td>Following each round</td>
</tr>
<tr>
<td>3- Final exam</td>
<td>End of year</td>
</tr>
</tbody>
</table>
5-D) Grading system:

<table>
<thead>
<tr>
<th>Examination</th>
<th>Marks allocated</th>
<th>% of Total Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1- Shock exams</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2-written end of round</td>
<td>60</td>
<td>20%</td>
</tr>
<tr>
<td>3-OSPE exam (end round practical exam)</td>
<td>30</td>
<td>20%</td>
</tr>
<tr>
<td>End of year</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4- Written</td>
<td>150</td>
<td>50%</td>
</tr>
<tr>
<td>5- Oral</td>
<td>30</td>
<td>10%</td>
</tr>
<tr>
<td>6- Assignments &amp; other practical activities</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>300</strong></td>
<td></td>
</tr>
</tbody>
</table>

- The minimum passing & Passing grades (Faculty bylaws).

Formative assessment:
Student knows his marks after the Formative exams.

E) Examination description:

<table>
<thead>
<tr>
<th>Examination</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1- Shock exams</td>
<td>Structured objective questions</td>
</tr>
<tr>
<td>2- End of round</td>
<td></td>
</tr>
<tr>
<td>Written</td>
<td>Short questions and structured objective questions</td>
</tr>
<tr>
<td>Practical</td>
<td>OSPE for assessment of practical sessions participation</td>
</tr>
<tr>
<td>3- Final exam:</td>
<td></td>
</tr>
<tr>
<td>Written</td>
<td>(Short essay) questions – problem solving- Structured objective questions</td>
</tr>
<tr>
<td>Oral</td>
<td>Oral questions using cards</td>
</tr>
<tr>
<td>Assignments &amp; other activities</td>
<td>All through round groups are given assignments for presentation included in the practical part</td>
</tr>
</tbody>
</table>
6- List of references:

6.1- Basic materials:
Public Health and community medicine book, 2nd edit. 2016/ 2017

6.2- Essential books (text books):

1. Wallace/Maxey-Rosenau-Last public health & preventive medicine
2. PARK’s Textbook of preventive and social medicine by John Everett Park -
   Banarsidas Bhanot 23th edition 2016
   Hill companies INC. 2015

6.3- Recommended books:
1. Text books in Medical epidemiology
2. Text books in Social Medicine
3. Text books in Family Medicine
4. Text books in Medical statistics
5. Text books in Health Administration and Health management
6. Text books in Health Economics
7. Text books in Human Environment
8. Text books in basic and applied Nutrition
9. Text books in Occupational Health and Ergonomics
10. Text books in Infectious diseases epidemiology
11. Text books in Non-communicable diseases epidemiology

6.4- Periodicals, Web sites … etc:
- World health organization available at www.who.int/
- Center for disease control and prevention available at https://www.cdc.gov/
  http://worldpopulationreview.com/countries/egypt-population/
- World Medical Association Declaration of Helsinki. World medical Association
  available at www.wma.net/en/30publications/10policies/b3/
- Bulletin of the World Health Organization available at www.who.int/bulletin/
- Nutrition and Health (Hundreds of Journals and periodicals) available at
  journals.sagepub.com/home/nah
7- **Facilities required for teaching and learning:**

Facilities used for teaching this course include:

- Lecture halls
- Small group classes
- Skill labs
- Information technology / AV aids
- Films and video tapes for demonstration
- Site visits (Rural area, Primary Health Care Facilities, rural community, Fever Hospital)
- **3 mini-buses (26 sets each) for transportation** and official agreement permissions from the responsible authorities of these sites.
- **Logistic support for motivating local workers** at these sites (helping in training students e.g. physicians, nursing staff, health workers and raeda rifia.
- **Security permissions** for attendance and entrance of Non-Egyptian students to some of these sites e.g. occupational activities.

**Course coordinators:** Ass.Professor Dr. Eman Taher and Dr. Mona Adel

**Head of Department:** Professor Dr. Mona Allawendi

**Date:** 05 / 01 /2017