**Course Description**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Course Title** | | | | | Epidemiology | **Course Code** | **BND361** |
| **Program** | | | | | Therapeutic Nutrition and Dietetic | **Level** | 3rd level |
| **Credit Hours** | | | | | 3 | **Pre-requisites** | **BMD16** |
| **Course Description:** | | | | | | | |
| This course provides students with a basic concept about the meaning and function of nutritional epidemiology to identify and study associations between diet and disease in defined populations. A major enterprise of nutritional epidemiology is to assess the efficacy of nutrition interventions, develop diet assessment methods that enable public health officials and researchers to monitor dietary intake and other healthy related behaviors of defined populations.  Epidemiological methods are widely applied in public health nutrition, and even practitioners who do not themselves carry out surveys will find that their public health practice is influenced by epidemiological observations.  In this course, students also look at the types of studies used in nutritional epidemiology. The course is based on lectures as well as seminars, field visits, case study design, and problem solving. The students will be evaluated through written exams and report evaluation. Biostatistics course is a prerequisite course. | | | | | | | |
| **Topics Covered:** | | | | | | | |
|  | | | Introduction to epidemiology and nutritional epidemiology concept | | | | |
|  | | | Uses of descriptive epidemiology | | | | |
|  | | | Descriptive epidemiology | | | | |
|  | | | Analytical epidemiology | | | | |
|  | | | Experimental epidemiology | | | | |
|  | | | Causation | | | | |
|  | | | Mid-Exam | | | | |
|  | | | Field epidemiology | | | | |
|  | | | Survey and surveillance | | | | |
|  | | | Clinical epidemiology | | | | |
|  | | | Measures | | | | |
|  | | | Dietary assessment (1) | | | | |
|  | | | Dietary assessment (2) | | | | |
|  | | | Chronic diseases epidemiology | | | | |
|  | | | Final Exam | | | | |
| **Course Learning Outcomes:** | | | | | | | |
| After completing this course, students would be able to: | | | | | | | |
|  | **Compare study types:** Identify the strengths and weaknesses of various study designs like cross-sectional, case-control, cohort, and interventional studies. | | | | | | |
|  | **Distinguish association vs. causation:** Understand the difference between a statistical link and a causal relationship. | | | | | | |
|  | **Outbreak investigation**: Be able to describe how outbreaks are investigated and controlled. | | | | | | |
|  | **Understand epidemiological principles**: Cover both communicable and non-communicable diseases. | | | | | | |
|  | **Calculate epidemiological measures**: Work with rates, ratios, proportions, risks, and test specificity from data samples. | | | | | | |
|  | **Illustrate study designs**: Show understanding of study types using timelines (e.g., prospective vs. retrospective). | | | | | | |
|  | **Apply case studies:** Practice nutritional epidemiology through real-world case designs. | | | | | | |
|  | **Analyze and report findings**: Handle data, calculate results, interpret them, and write up the findings. | | | | | | |
|  | **Professional ethics and community involvement:** Respect privacy, collaborate with health professionals, and contribute to public health efforts (especially in the context of Yemen). | | | | | | |
| **Textbooks:** | | | | | | | |
| 1 | | **Rebecca G. Knapp** (1992). Clinical Epidemiology and Biostatistics. Williams & Wilkins, USA. | | | | | |
| 2 | | **Boyle, Marie A. & Holben, David H.** (2006). Community Nutrition in Action: An Entrepreneurial Approach, 4th edition. Thomson Wadsworth Publishers, Australia. | | | | | |
| **Course Assessment:** | | | | | | | |
| **No.** | | | | **Assessment Tasks** | | **Mark** | |
|  | | | | Assignments and reports | | 10 | |
|  | | | | Midterm Exam | | 20 | |
|  | | | | Practical exam | | 20 | |
|  | | | | Final Exam | | 50 | |
| **Total** | | | | | | **100** | |