

ALLAMA IQBAL OPEN UNIVERSITY ISLAMABAD
(Department of Home & Health Sciences)

Course: Nutritional Epidemiology (7505)
Level: Post Graduate

Semester: Spring, 2013
Credit Hours: 3(3+0)

CONTENT LIST

1. Course Book (Unit 1–9)
2. Course Outline Unit 1–9
3. Theory Assignment Two
4. Assignment forms Eight
5. Assignment Schedule for submitting the assignment & tutorial meetings.

Note: If any one item of the above mentioned content is missing from your study pack kindly contact:

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Course: NUTRITIONAL EPIDEMIOLOGY (7505)

Level: M.Sc.

Credit Hours: 3(3+0)

UNIT 1: OVERVIEW OF THE PRINCIPLES OF NUTRITIONAL EPIDEMIOLOGY

- Objective of Nutritional Epidemiological
- Research Types of Epidemiological Studies
- Epidemiological Measurements
- Interpretation of Epidemiological Research: (*the Role of Chance, Bias and Consideration of Effect of other Variables*)
- Systematic Reviews and the Role of Meta-Analysis

UNIT 2: DESIGN, PLANNING AND EVALUATION OF NUTRITIONAL EPIDEMIOLOGICAL STUDIES.

- Introduction
- The Design and Planning of Nutritional Epidemiological Studies
- New Issues in Study Design and Use of Computers
- Evaluation of Study Design.

UNIT 3: SAMPLING, STUDY SIZE AND POWER STUDY

- Types of Sampling
- Variability
- Sample size
- Power of studies

UNIT 4: COVARIATE MEASUREMENT ERRORS IN NUTRITIONAL EPIDEMIOLOGY; EFFECTS AND REMEDIES

- Modeling Disease- Covariate Relationships
- Measurement Errors and Bias in epidemiological Studies
- Covariate Measurement in Linear Regression
- Correcting for Measurement Error
- Scale Bias and Calibration Confounding Measurement Errors

UNIT 5: FOOD CONSUMPTION, NUTRIENT INTAKE AND THE USE OF FOOD COMPOSITION TABLES

- Introduction and the use of Food Analysis in Determining Nutrient intake.
- Food consumption Tables and Nutrient Databases
- Calculation on Nutrient Intake from Data on Food Intake and on the Composition of Foods.
- Food Groups and Food Scores.

UNIT 6: HOUSEHOLD SURVEYS

- Introduction
- Characteristics of Household Data
- Techniques, Uses and Limitations
- Using Household Surveys in Epidemiological Studies.

UNIT 7: INDIVIDUAL SURVEYS

- Methods for Assessment of Present or Recent Data
- Techniques, Uses and Limitations
- Measurement Error in Dietary Assessment
- Energy Adjustment, Effects of Measurement Error on Validity
- Adjustment of Intake in the Distant Past
- Problems of Retrospective Assessment in Population Sub Group

UNIT 8: BIOCHEMICAL MARKERS OF NUTRIENT INTAKE

- Prediction of Nutrient Intakes from the Values of Biochemical Markers of Nutrient Status.
- Markers of Dietary Intake: Inorganic Nutrients
- Markers of Dietary Intake: Lipids, protein, Dietary Fiber and Energy

UNIT 9: THE VALIDATION OF DIETARY ASSESSMENT

- The Context of Validation, Validation Techniques
- Factors Affecting the Design of Validation Studies
- Statistical Techniques and Interpretation

Recommended Books:

- 1) Barrie M. Margetts and Michael Nelson. Design concepts in Nutritional Epidemiology (1997), Oxford Printing Press.
- 2) Walter Willer, Nutritional epidemiology, 1998, Oxford University Press.
- 3) Spark Arlene. J. Nutrition in Public Health: Principles and practice. 2007 – CRC Press.

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WARNING

1. **PLAGIARISM OR HIRING OF GHOST WRITER(S) FOR SOLVING THE ASSIGNMENT(S) WILL DEBAR THE STUDENT FROM AWARD OF DEGREE/CERTIFICATE, IF FOUND AT ANY STAGE.**
2. **SUBMITTING ASSIGNMENTS BORROWED OR STOLEN FROM OTHER(S) AS ONE'S OWN WILL BE PENALIZED AS DEFINED IN "AIOU PLAGIARISM POLICY".**

Course: Nutritional Epidemiology (7505)
Level: Postgraduate
Total Marks: 100

Semester: Spring, 2013
Credit Hours: 3 (3+0)
Pass Marks: 40

Assignment No. 1
(Unit 1–4)

Note: Answers the following questions. Distribution of marks is given against each question.

- Q. 1 Define epidemiology. Give classification of study design and describe merits and demerits of each study design. (16)
- Q.2 What are the objectives of questionnaire? Discuss the format and the principles of a good questionnaire. (16)
- Q.3 Briefly discuss the stages in designing of nutritional epidemiological study with the help of flow chart. (16)
- Q.4 Appropriate sampling is important in any kind of research? Write down the detail of different kinds of sampling techniques with special reference to nutritional research. (16)
- Q.5 Discuss confounder measurement errors in detail. (16)
- Q. 6 Write short note on the following.
 - (i) Power of studies (10)
 - (ii) Measurement errors and bias in epidemiological studies. (10)

Assignment No. 2
(Units: 5 – 8)

Total Marks: 100

Note: Answers the following questions. Distribution of marks is given against each question.

- Q. 1 What are the requirements of food composition tables with reference to nutritional epidemiological study? Discuss in detail. (16)
- Q.2 What are basic characteristics of household survey? Also enlighten the different techniques used and limitation of such type of surveys. (16)
- Q.3 How can we predict the nutrient intake from the value of biochemical markers of nutritional status. Discuss with special reference to micronutrient. (16)
- Q.4 What do you know about the errors in dietary assessment? Analyze in detail. (16)
- Q.5 Define validity. Discuss limitations of reference methods appropriate for validation of dietary assessment measure. (16)
- Q.6 Write short notes on the following:
 - a) Factors affecting the design of validation studies. (10)
 - b) Assessment of dietary intake in distant past. (10)
