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

Course: Biostatistics (7510)   **Semester: Spring, 2014**
Level: MS Community Health & Nutrition   **Credit: 3 (2 + 1)**

CHECKLIST

1. Course Book   (Unit 1-9)
2. Theory Assignments   One
3. Practical Assignment   One
4. Assignment's Forms   Eight
5. Schedule for submitting the assignments & tutorial meeting.

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

The Mailing Officer
Mailing Section
Services & Operational Block
Allama Iqbal Open University,
Sector H-8, Islamabad

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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".**

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Total Marks: 100   **Pass Marks: 40**

ASSIGNMENT No. 1
(Units 1–9)

Note: All questions are compulsory. Distribution of marks is given against each.

Q.1 Differentiate between simple regression equation and multiple regressions. Interpret the intercept and slope coefficient in a multiple regression as well as statement regarding their statistical significance. (18)

Q.2 Define correlation and correlation coefficient. Which are the types of correlation? Explain the methods of studying correlation in detail. (18)

Q.3 What do you know about the term probability, the multiplication rule, the addition rule, the odd ratio? Write in detail. (18)

Q.4 Define sampling, sampling error, none sampling error and sampling bias. Also distinguish between standard error and standard deviation by giving example of the use of each. (18)

Q.5 Write short notes on followings:
   a) Differentiate between median, mode & percentile. (07)
   b) Primary & secondary screening. (07)
   c) Test-statistics for measuring significance. (07)
   d) Discuss multiple causation and establishing causation. (07)

ASSIGNMENT No. 2

Total Marks: 100   **Pass Marks: 40**

Note: *This assignment will be completed during the workshop under the close supervision of your tutor.*

1. Develop a data sheet on SPSS (Statistical Package for Social Sciences). You can enter data related to Nutritional indicators of the countries.   (25)
    Source: World population data sheet by population reference bureau available on net. Website: www: prb.org OR as advised by the tutor in the workshop.

2. Analyse the data related to health and nutrition, making frequency distribution, measure of central tendency, measure of dispersion, cross tabulation, chi square test (non parametric, parametric test) and regression analysis.   (25)

3. Write a report on your findings.   (50)

Course Outline: BIOSTATISTICS (7510)

Level: MS Community Health & Nutrition   **Credit: 3 (2 + 1)**

Unit 1:   **BIOLOGICAL VARIABILITY**

Unit 2:   **PROBABILITY**

Unit 3:   **SCREENING**

Unit 4:   **STATISTICAL SIGNIFICANCE**

Unit 5:   **SAMPLING**

Unit 6:   **CORRELATION**

Unit 7:   **MULTIPLE REGRESSIONS**

Unit 8:   **RANDOMIZED CLINICAL TRIALS**

Unit 9:   **ASSOCIATION AND CAUSATION**

Recommended Books:

1. *A Study Guide to Epidemiology and biostatistics; J. Richard Hebel and Robert J. Mc Carter (2006) Jones & Bertlett Publishers*

2. *Basic Biostatistics (Statistics for Public Health Practices: B Burt Geretman (2008) Jones An) Bartlett Publishers.*

3. *Bio-Statistics for Health Students with manual on Software Application by M. Hanif, Munir Ahmed and Aftab Ahmed published by ISOSS, Lahore.*