

2011

University: Mansoura
 Faculty: Nursing
 Program: Master of Nursing Science
 Department: Nursing Department

Course specifications

1-Basic Information

Code: MPB1	Course Title: Biostatistics and Research method إحصاء حيوى و طرق بحث	year/level: Master – 2011/2012
Hours: Theory 2 hrs x 16 wks	Practical: 2 hrs x 16 wks	Total: 64 hrs

2-Course general Objective: The graduate master program student will be able to understand and explain the variation in health data, basic information and skills that are required to apply the science of statistics to health services and studies, determine the principle of scientific research, be efficient applicator of basic, strategies and use of different tools of scientific research, writing up complete protocol, and critiquing research.

3- Intended learning Outcomes (ILOs):

A-Knowledge and Understanding:	A1- Discuss principles of research methodology a2- discuss theories and methods of quantitative and qualitative research designs A3- Describe various researches designs used in nursing research. A4- identify sources of variation in health science data A5- identify the parameters of a frequency distribution A6- discuss the different methods of data presentation A7- Discuss the different of statistical significance tests A8- select the appropriate test of statistical significance according to the type of variables hypothesis A9- describe the process of sampling A0- discuss guidelines for research critique A11- differentiate between reliability and validity
B-Intellectual Skills:	B1- Calculate the sample size for different research designs B2- Select the appropriate method to present the obtained results B3 - Formulate the research hypothesis and questions B4- Design research study

	B5- Critique research paper
C-Professional Skills:	C1- Write research proposal C2- Code obtained data c3- Apply the different statistical techniques to simulated case study C4- Use computerized statistical analysis packages in data processing
D-General and Transferable:	D1-Utilize the information technology in data processing D2- Use the different methods of recording, reporting and documentation techniques D3- Learn effective methods of scientific research
4- Course Content:	
1- Introduction to basic research and components of research proposal 2- Qualitative research study design 3- Quantitative research study design 4- Methods of data collection 5- Literature review 6- Critique of scientific research paper 7- Sampling types and techniques 8- Measures of central tendency 9- Measures of dispersion 10- Correlation (Pearson & Spearman correlation coefficient) 11- Tests of significance <ul style="list-style-type: none"> ▪ T- test ▪ X² square 12- Basics of SPSS 13- Presentation of statistical data 14- Principles of presenting scientific papers	
5- Teaching and learning Methods:	
- Interactive lectures - Project- based learning - Case study - Computer lab hands- on exercises (SPSS)	
6- Teaching and learning Methods of Students with Special need:	
Not Relevant	
7- Student Assessment Methods:	
A- Assessment Methods	- Oral exam -Practical exam - Final written exam
B- Schedule	- Assessment 1 Practical exam Week 16 - Assessment 2 Oral exam Week 17 - Assessment 3 Final written exam Week 17

C- Weighting of Assessments	<ul style="list-style-type: none"> - Oral exam 20 Grade - Clinical exam 30 - Final written exam 50 Total = 100 Grade
8- List of references:	
A- Course notes	
B- Compulsory Books	<ol style="list-style-type: none"> 1. Agronin ME, Maletta GJ. Principle of scientific research. Philadelphia. Lippincott William &Wilkins Company 2006. 2. Statistics for nursing and allied health. 2009. 3. Total quality management. 2004.
C-Recommended Books	<ol style="list-style-type: none"> 1. Macrakis. NY. Scientific research methods (2004) Oxford University Press, 280. 2. Gay and Lesbian: the Role of Theory in Social Scientific Research.2006. 3. Quality of life research. 2003. 4. The post graduate research handbook. 2001.
D- Periodicals, Web Sites,...etc	<ol style="list-style-type: none"> 1. Journal of Nursing Research 2. http://www.nap.edu/catalog.php?record_id=10236 3. http://www.scienceresearch.com/. 4. http://www.asrt.sci.eg/ 5. http://www.academicjournals.org/sre/

Course Coordinator: Assistant Prof. Dr. Amira Hasanin

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Head of Department : Assistant Prof. Dr. Amany Sheble

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