

Module Description: Biostatistic (17369R0102)

Module designation	Course Module
Semester(s) in which the module is taught	VI
Person responsible for the module	<ol style="list-style-type: none"> 1. Saldy Yusuf, S.Kep.,Ns.,MHS.,Ph.D (SY) 2. Dr. Suni Harjati, S.Kep.,Ns.,M.Kep. (SH) 3. Dr. Maryunis, S.Kep.,Ns.,M.Kes.(MA) 4. Rini Rachmawaty, S.Kep.,Ns.,MN.,PhD (RR)
Language	Bilingual, Bahasa Indonesia and English
Relation to Curriculum	This course is a compulsory course and offered in the 6 rd semester.
Teaching Methods	<p>Teaching methods used in this course are:</p> <ul style="list-style-type: none"> - Lecture. - Discussion. - Simulation.The teaching - Practice. - Individual structured assignments. <p>The class size for lecture is approximately 60 students.</p>
Workload (incl. contact hours, self-study hours)	<p>For this course, students are required to meet a minimum of 90.67 hours in one semester, which consist of:</p> <ul style="list-style-type: none"> - 13.33 hours for lecture, - 16 hours for structured assignments, - 16 hours for private study, 45.33 hours for practice.
Credit points	2 credit points (equivalent with 3.02 ECTS)
Required and recommended prerequisites for joining the module	No requirement.
Module objectives/intended learning outcomes	<p>After completing the course the students will be:</p> <p>CLO 1: Students will be able to apply nursing knowledge, information system, and technology into clinical practice (K2, High).</p> <p>CLO 2: Students will be able to communicate his/her opinions/argumentation or products of innovation that are useful for nursing profession developments nationality and internationally that credible in scientific and professional ethics (S1, High).</p> <p>CLO 3: Students will be able to improve nursing and health services quality by applying research skills and integrating theory into nursing practice (C4, Medium).</p>

Content	<p>Students will learn about:</p> <ol style="list-style-type: none"> 1. Explaining and presenting biostatistics data management (C4) and (S1). 2. Presenting and interpreting descriptive and analytical biostatistics (K2). 3. Explaining the concepts of probability and data normality testing (K2). 4. Conducting a mean difference test using SPSS and practicing the analysis and interpretation (S1). 5. Conducting a validity test using SPSS and practicing the analysis and interpretation (S1). 6. Conducting a reliability test using SPSS and practicing the analysis and interpretation (S1). 7. Conducting a proportion difference test using SPSS and practicing the analysis and interpretation (S1). 8. Conducting a correlation test using SPSS and practicing the analysis and interpretation (S1).
Examination forms	<p>Written exam: Case-based analytical Study</p> <p>Skill examination: Case-based analytical using SPSS</p>
Study and examination requirements	<ul style="list-style-type: none"> - Students must attend 15 minutes before the class starts. - Students must inform the lecturer if they will not attend the class due to sickness, etc. - Students must submit all class assignments before the deadline.
Reading list	<ol style="list-style-type: none"> 1. du Prel JB, Röhrig B, Hommel G, Blettner M. Choosing statistical tests: part 12 of a series on evaluation of scientific publications. <i>Dtsch Arztebl Int.</i> 2010 May;107(19):343-8. doi: 10.3238/arztebl.2010.0343. Epub 2010 May 14. PMID: 20532129; PMCID: PMC2881615. 2. Kaliyadan F, Kulkarni V. Types of Variables, Descriptive Statistics, and Sample Size. <i>Indian Dermatol Online J.</i> 2019 Jan-Feb;10(1):82-86. doi: 10.4103/idoj.IDOJ_468_18. PMID: 30775310; PMCID: PMC6362742. 3. Mishra P, Pandey CM, Singh U, Gupta A, Sahu C, Keshri A. Descriptive statistics and normality tests for statistical data. <i>Ann Card Anaesth.</i> 2019 Jan-Mar;22(1):67-72. doi: 10.4103/aca.ACA_157_18. PMID: 30648682; PMCID: PMC6350423. 4. Schober, Patrick MD, PhD, MMedStat*; Vetter, Thomas R. MD, MPH†. Chi-square Tests in Medical Research. <i>Anesthesia & Analgesia</i> 129(5):p 1193, November 2019. DOI: 10.1213/ANE.00000000000004410 5. Nowacki A. Chi-square and Fisher's exact tests (From the "Biostatistics and Epidemiology Lecture Series, Part 1"). <i>Cleve Clin J Med.</i> 2017 Sep;84(9 Suppl 2):e20-e25. doi: 10.3949/ccjm.84.s2.04. PMID: 28937359.

Cluster of Competence	Nursing Clinical Sciences and Skills
Form of Assessments	-
Date of last amendment made	13 th February 2023

Course Learning Outcome Assessment of Learning Outcomes for Course Modules

Course Module Name : Biostatistics
Code : 17369R0102
Semester : VI
Person responsible for the module : Saldy Yusuf, S.Kep.,Ns.,MHS.,Ph.D (SY)
Lecturers :
 1. Saldy Yusuf, S.Kep.,Ns.,MHS.,Ph.D (SY)
 2. Dr. Suni Harjati, S.Kep.,Ns.,M.Kep. (SH)
 3. Dr. Maryunis, S.Kep.,Ns.,M.Kes.(MA)
 4. Rini Rachmawaty, S.Kep.,Ns.,MN.,PhD (RR)

Intended Learning Outcomes	Course Module Objectives	List of Assessments	List of Rubrics
Knowledge (K) Nursing graduates master nursing science and also information system and technology to provide patients with nursing care based on scientific nursing process and approaches	Knowledge (K) CLO 1 Presenting and interpreting descriptive and analytical biostatistics (K2).	Written test	Rubric based on each course
	CLO 2 Explaining the concepts of probability and data normality testing (K2).	Written test	Rubric based on each course
Skills (S) S1. Graduates are able to communicate thoughts and ideas or innovative creation, either verbally or non-verbally, that are beneficial	CLO 3 Conducting a mean difference test using SPSS and practicing the analysis and interpretation (S1).	Individual assignment using problem based analytic	Rubric based on each course

Intended Learning Outcomes	Course Module Objectives	List of Assessments	List of Rubrics
for the nursing profession development in national or international levels, and these can be kept accountable scientifically and comply with professional ethics.	CLO 4 Conducting a validity test using SPSS and practicing the analysis and interpretation (S1).	Individual assignment using problem based analytic	Rubric based on each course
	CLO 5 Conducting a reliability test using SPSS and practicing the analysis and interpretation (S1).	Individual assignment using problem based analytic	Rubric based on each course
	CLO 6 Conducting a proportion difference test using SPSS and practicing the analysis and interpretation (S1).	Individual assignment using problem based analytic	Rubric based on each course
	CLO 7 Conducting a correlation test using SPSS and practicing the analysis and interpretation (S1).	Individual assignment using problem based analytic	Rubric based on each course
Competence (C1): C4. Graduates are able to improve the quality of nursing and health services by implementing research skills and integrating nursing theories into practices.	Competence: CLO 8 Explaining and presenting biostatistics data management (C4) and (S1).	Individual assignment using problem based analytic	Rubric based on each course

Proportion of assessment aspects according to the course learning outcomes.

No	Code	CLO	Sub CLO	Learning Method	Evaluation Method						Proporsi
					Participatory Analysis	Project result	Assignment	Quis	Mid-test	Final Test	
1	S1 and C4	CLO 1	Sub CLO 1	lecturer							
			Sub CLO 2	Simulation			Problem-based analysis 12.5%				12.5%
2	K2	CLO 2	Sub CLO 3	lecturer							
			Sub CLO 4	Practice			Problem-based analysis 12.5%				12.5%
3	K2	CLO 3	Sub CLO 5	lecturer							
			Sub CLO 6	Simulation			Problem-based analysis 12.5%				12.5%
4	S1	CLO 4	Sub CLO 7	lecturer							
			Sub CLO 8	Practice			Problem-based analysis 12.5%				12.5%
5	S1	CLO 5	Sub CLO 9	lecturer							
			Sub CLO 10	Simulation			Problem-based analysis 12.5%				12.5%
6	S1	CLO 6	Sub CLO 11	lecturer							
			Sub CLO 12	Practice			Problem-based analysis 12.5%				12.5%
7	S1	CLO 7	Sub CLO 13	lecturer							
			Sub CLO 14	Simulation			Problem-based analysis 12.5%				12.5%
8	S1	CLO 8	Sub CLO 15	lecturer							
			Sub CLO 16	Practice			Problem-based analysis 12.5%				12.5%

Sample of Project Base Data Analytic (CLO 1-2)

INSTRUCTIONS:

- Conduct interviews and measurements based on the questionnaire items provided below.
- Each group member shall assume the role of a research participant.
- Ensure that all group members respond to the following inquiries.

A. Participant ID:

B. Demography Data:

1. Age:
2. Gender:
3. Ethnicity:
4. City of Origin:
5. Religion:
6. Marital Status:
7. Highest Education Level Attained:

C. Physical and Physiology Data:

1. Body Weight:
2. Body Height:
3. Body Mass Index (BMI):
4. Blood Type:
5. History of Surgeries: a. If present, how many times?
6. History of Hospitalizations: a. If present, how many times?
7. History of Allergies: a. If present, please specify.


D. Exercise Data:

Ask participant walking for ten minutes, then fill below table:

Pre Exercise	Data	Post Exercise
	Heart Rate	
	Blood Pressure (mmHg)	
	Respiratory Rate	



INSTRUCTION

1. Duration 1x 50 minutes.
 2. Input your data collaboratively into the master table using Ms Excel.
 3. Ensure that each question is represented as a separate COLUMN.
 4. Verify the accuracy of NUMERICAL data during input.
 5. For NOMINAL and ORDINAL data, create corresponding codes in separate columns. For example: o Male: code 1 o Female: code 2
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INSTRUCTION:

1. Time: 1 session of 50 minutes.
2. Collaboratively input your data into the master table using Ms Excel.
3. Ensure that each question is represented in a separate COLUMN.
4. Verify the accuracy of NUMERICAL data during input.
5. For NOMINAL and ORDINAL data, create corresponding codes in separate columns. For example: o Male: code 1 o Female: code 2

Assessment Component	Weight	Very Poor	Poor	Fair	Good	Very Good
		< 20	20-39	40-59	60-79	80-100
Data collection.	20%					
Data cleaning	20%					
Develop master table using Ms. Excel	20%					
Convert data from Ms. Excel to SPSS.	20%					
Data management using SPSS	20%					