

Republic of Yemen

Ministry of Higher Education & Scientific Research

21 September University for Medicals and Applied Sciences



Faculty of Clinical Pharmacy

Bachelor of Clinical Pharmacy & Pharm. D.

Course Specification of *Medical statistics*

Course No. (05.02.222)

2022

Prepared by:	Reviewed by:	Head of the Department:	Vice Dean for Quality affairs	Dean of College:
Dr. Abdulelah Thabet	Dr. Muneer Al wasabi	Dr. ----.....	Dr. Abdulelah Thabet	Dr. Ali Alyahawi



I. General Information:

1.	Course Title:	Medical statistics				
2.	Course Code:	05.02.222				
3.	Credit Hours:	Credit Hours	Theory Contact Hours		Practical Contact Hours	
			Lecture	Tutorial/Seminar	Lab	Clinical
		2	2	0	0	0
4.	Level/ Semester at which this Course is offered:	2 nd Level / 1 st Semester				
5.	Pre –Requisite (if any):	NON				
6.	Co –Requisite (if any):	NON				
7.	Program (s) in which the Course is Offered:	Bachelor of Clinical Pharmacy & Pharm. D.				
8.	Language of Teaching the Course:	English				
9.	Location of Teaching the Course:	Faculty of Clinical Pharmacy				
10.	Prepared by:					
١١	Date and Number of Approval by Council:	2022				

II. Course Description:

This course is designed to acquire student with basic principles of statistics and how to deal with different data at various clinical settings and researches.



III. Course Intended Learning Outcomes (CILOs) : Upon successful completion of the course, students will be able to:		Referenced PILOs	
A. Knowledge and Understanding:		I, P or M/A	
a1	Identify Types of variables & data & statistical test and their applications to health.	M	A1
a2	Discuss types of hospital records & nonparametric tests & methods of data presentation.	I	
B. Intellectual Skills:			
b1	Differentiate between alternative and null hypotheses & types of hospital Records & methods of data presentation.	A	B1
b2	Analyses the importance of biostatistics into research.	P	
C. Professional and Practical Skills:			
c1	Apply methods of graphical presentation & exercise about testes of hypotheses.	M	C1
c2	Records different types of hospital data.	I	
D. Transferable Skills:			
d1	Using computer to analyze data Effectively.	P	D2. D3
d2	consider confidentiality during data management & work within legal aspect.	M	

I= Introduced, P=Practiced or M/A= Mastered/Advanced

(A) Alignment of Course Intended Learning Outcomes (Knowledge and Understanding) to Teaching Strategies and Assessment Methods:			
Course Intended Learning Outcomes		Teaching Strategies	Assessment Strategies
a1	Identify Types of variables & data & statistical test and their applications to health.	Lecture	▪ Written exam
a2	Discuss types of hospital records & nonparametric tests & methods of data presentation.	Lecture	▪ Written exam
(B) Alignment of Course Intended Learning Outcomes (Intellectual Skills) to Teaching Strategies and Assessment Methods:			
Course Intended Learning Outcomes		Teaching Strategies	Assessment Strategies
b1	Differentiate between alternative and null hypotheses & types of hospital Records & methods of data presentation.	▪ Lecture ▪ Brain storming	Written exam. ▪ Assignment
b2	Analyses the importance of biostatistics into	▪ Lecture	Written exam.



	research.	▪ Brain storming	Assignment
(C) Alignment of Course Intended Learning Outcomes (Professional and Practical Skills) to Teaching Strategies and Assessment Methods:			
	Course Intended Learning Outcomes	Teaching Strategies	Assessment Strategies
c1	Apply methods of graphical presentation & exercise about testes of hypotheses.	▪ Lecture. ▪ Practice	Written exam. Assignment
c2	Records different types of hospital data.	▪ Lecture. ▪ Practice	Written exam. Assignment
(D) Alignment of Course Intended Learning Outcomes (Transferable Skills) to Teaching Strategies and Assessment Methods:			
	Course Intended Learning Outcomes	Teaching Strategies	Assessment Strategies
d1	Using computer to analyze data Effectively.	▪ Lecture. ▪ Research	▪ Assignment.
d2	consider confidentiality during data management & work within legal aspect.	▪ Lecture. ▪ Research	▪ . Assignment

IV. Course Contents:

A. Theoretical Aspect:

No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
1	Introduction	▪ Definition and application of biostatistics ▪ Variables ▪ Hypothesis ▪ Sampling types of samples and methods.	1	2	a1, b1, c2
2	Data	• Data collection • Classification of data • Methods of data presentation • Tabulation of data • Graphic presentation of data • Uses of frequency distribution tables.	3	6	a2, b1, c1, d1
3	Statistical test and their applications to	• Mean, SD, mode and Median • Applicable examples	3	6	a2, b2,

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Dr. Abdulalah Thabet Dr. Muneer Al wasabi Dr. ----- Dr. Abdulalah Thabet Dr. Ali Alyahawi



No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
	health	onbiostatistics - Measurement of correlation and calculation of correlation coefficient. - Research analysis. - Vital statistics.			d1
4	Midterm exam	—	1	2	a1, a2, b1, b2, c1
5	Records	- Types of hospital records. - The importance of statistical ratio. - Statistical data analysis to obtain percentage, rate, test and graphic presentation.	3	6	a2, b2, c2, d1, d2
6	Nonparametric tests	- Association and Causation - Correlation and regression - Analysis of Variance - Multivariate analysis	4	8	a2, d1
7	Final exam	—	1	2	a1, a2, b1, b2, c1, c2
Number of Weeks /and Units Per Semester			16	32	

B. Practical Aspect (Lab/Clinical) (if any):

No.	Tasks/ Experiments	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
1	NA			
Number of Weeks /and Units Per Semester				

C. Tutorial Aspect (if any):

No.	Tutorial	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
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No.	Tutorial	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
1	NA			
Number of Weeks /and Units Per Semester				

VII. Assignments:

No.	Assignments	Week Due	Mark	Aligned CILOs (symbols)
1	Calculate Mortality, Morbidity and birth rate	6 th -12 th	5	b1, b2, c1, c2
2	Research		5	d1, d2
Total			10	

VIII. Schedule of Assessment Tasks for Students During the Semester:

No.	Assessment Method	Week Due	Mark	Proportion of Final Assessment	Aligned Course Learning Outcomes
1	Assignments	6 th - 12 th	10	10%	b1, b2, c1,c2, d1,d2
2	Mid-Term Exam	8 th	20	20%	a1, a2, b1, b2,c1
3	Final Exam	16 th	70	70%	a1, a2, b2, c1, c2
Total			100	100%	

IX. Learning Resources:

1- Required Textbook(s):

1. P.Armitag. et al (2002). Statistical methods in medical research. 4nded, blackwell publishing,USA.
2. . Biostatistics. P.S.S. SundarRao, J. Richard Prentice(1998). A foundation for Analysis in the Health Sciences: Daniel, W.W., John Wiley and Pub, Canada.

2- Essential References:

1. Byp A (1995). Statistical methods in medical research. 2nded, oxford.
2. P.S.S. SundarRao, J. Richard Prentice(1996). An Introduction to Biostatistics. A manual for students in Health Sciences, Hall, New Delhi.

3- Electronic Materials and Web Sites etc.:

Prepared by: Dr. Abdulelah Thabet Reviewed by: Dr. Muneer Al wasabi Head of the Department: Dr. ----- Vice Dean for Quality affairs: Dr. Abdulelah Thabet Dean of College: Dr. Ali Alyahawi



Websites:

- 1- www.blackwell-sciences.com.
- 2- www.cpd-syria.com.

X. Course Policies: (Based on the Uniform Students' By law (2007))

1	Class Attendance: Class Attendance is mandatory. A student is considered absent and shall be banned from taking the final exam if his/her absence exceeds 25% of total classes.
2	Tardiness: A student will be considered late if he/she is not in class after 10 minutes of the start time of class.
3	Exam Attendance/Punctuality: No student shall be allowed to the exam hall after 30 minutes of the start time, and shall not leave the hall before half of the exam time has passed.
4	Assignments & Projects: Assignments and projects must be submitted on time. Students who delay their assignments or projects shall lose the mark allocated for the same.
5	Cheating: Cheating is an act of fraud that results in the cancelation of the student's exam or assignment. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' Bylaw (2007) shall apply.
6	Forgery and Impersonation: Forgery/Impersonation is an act of fraud that results in the cancelation of the student's exam, assignment or project. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' Bylaw (2007) shall apply.
7	Other policies: The University official regulations in force will be strictly observed and students shall comply with all rules and regulations of the examination set by the Department, Faculty and University Administration.

Faculty of Clinical Pharmacy

Bachelor of Clinical Pharmacy & Pharm. D.

Course Plan (Syllabus) of **Medical statistics**

Course Code. (05.02.222)

I. Information about Faculty Member Responsible for the Course:						
Name of Faculty Member:		Office Hours				
Location & Telephone No.:	-----					
E-mail:	--@--.	SAT	SUN	MON	TUE	WED THU

2022/2023

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2.	Course Code:	05.02.222			
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IV. Course Intended Learning Outcomes (CILOs) :

Upon successful completion of the Course, student will be able to:

	A. Knowledge and Understanding:
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a2	Discuss types of hospital records & nonparametric tests & methods of data presentation.
	B. Intellectual Skills:
b1	Differentiate between alternative and null hypotheses & types of hospital Records & methods of data presentation.
b2	Analyses the importance of biostatistics into research.
	C. Professional and Practical Skills:
c1	Apply methods of graphical presentation & exercise about testes of hypotheses.
c2	Records different types of hospital data.
	D. Transferable Skills:
d1	Using computer to analyze data Effectively.
d2	consider confidentiality during data management & work within legal aspect.

V. Course Contents:

A. Theoretical Aspect:

No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours
1	Introduction	- Definition and application of biostatistics - Variables - Hypothesis - Sampling types of samples and methods.	1	2
2	Data	- Data collection - Classification of data	3	6



No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours
		- Methods of datapresentation - Tabulation of data - Graphic presentation of data - Uses of frequency - distribution tables.		
3	Statistical test and their applications to health	- Mean, SD, modeand Median - Applicable examples on biostatistics - Measurement ofcorrelation and calculation of correlation coefficient. - Research analysis. - Vital statistics.	3	6
4	Midterm exam	–	1	2
5	Records	- Types of hospital records. - The importanceof statistical ratio. - Statistical data analysis to obtain percentage, rate,test and graphic - presentation.	3	6
6	Nonparametric tests	Association andCausation - Correlation andregression - Analysis of Variance - Multivariate analysis	4	8
7	Final exam	–	1	2
Number of Weeks /and Units Per Semester			16	32
No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours
1	Introduction	- Definition andapplication of biostatistics - Variables - Hypothesis - Sampling types of	1	2



No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours
		samples and methods.		
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7	Final exam	—	1	2
Number of Weeks /and Units Per Semester			16	32

No.	Tasks/ Experiments	Number of Weeks	Contact Hours
1	NA		

No.	Tasks/ Experiments	Number of Weeks	Contact Hours
Number of Weeks /and Units Per Semester			

No.	Tasks/ Experiments	Number of Weeks	Contact Hours
1	NA		
Number of Weeks /and Units Per Semester			

VI. Teaching Strategies of the Course:

- Lecture.
- Brine Storming.
- Research.

VII. Assessment Methods of the Course:

- Written exam.
- Assignment.

VIII. Assignments:

No.	Assignments	Week Due	Mark
1	Calculate Mortality, Morbidity and birth rate	6th -12th	5
2	Research		5
Total			10

IX. Schedule of Assessment Tasks for Students During the Semester:

No.	Assessment Method	Week Due	Mark	Proportion of Final Assessment
1	Assignments	6th - 12th	10	10%
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3	Final Exam	16th	70	70%
Total			100	100%

No.	Assessment Method	Week Due	Mark	Proportion of Final Assessment
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Head of the Department:

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