هيئة تقويم التعليم والتدريب
Education & Training Evaluation Commission

اعتماد
NCAA

2023

TP-153

Course Specification

(Bachelor)

Table of Contents

A. General information about the course:

1. Course Identification

1. Credit hours:					
3 Credit Hours					
2. Course type					
A.	☐ University	☒ College	☐ Department	☐ Track	☐ Others
B.	☐ Required		☒ Elective		
3. Level/year at which this course is offered: (3rd year - 6h level)					
4. Course general Description:					
The field of genetics and genomics is moving at a fast pace and soon it will be affordable to obtain the sequence of an individual's own genome. Genetic information will play a greater role in future health care as nearly every disease has a genetic component. Therefore, a sound knowledge of genetics and genomics is essential for health care providers in evaluating needs of patients and delivering care to patients and families. The course will prepare nursing students by reinforcing the basic principles of genetics while exploring new advances and discussing how these advances will affect health care. It focuses on the impact of human genome on nursing practice in the term of ethical and legal issues					
5. Pre-requirements for this course (if any):					
PATHOLOGY 215 NUR-2					
6. Co-requisites for this course (if any):					
None					
7. Course Main Objective(s):					
The main purpose of this course is to provide nursing students a comprehensive knowledge regarding human genetics and its application in nursing practice By the end of the course, the students will be able to: 1. To utilize terminology such as gene, genotype, phenotype, variant, traits, multifactorial disease, SNP, genetic test, genome scan, pharmacogenomics. 2. To describe how DNA determines traits. 3. To interpret family pedigrees and explain how genes are inherited. 4. To differentiate between the major categories of genetic disease and describe characteristics of each type. 5. To understand the congenital anomaly diseases and concept of teratogenicity. 5. To explain and predict genetic risk for different types of genetic disease. 6. To outline genetic screening, diagnosis, testing. 7. To understand the methods of genetic technology and treatment.					

2. Teaching mode (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
	Traditional classroom		100%
	Blended	30	
	• **E-learning**		
	Distance learning		

3. Contact Hours (based on the academic semester)

No	Activity	Contact Hours
1.	**Lecture**	30
2.	**Laboratory/Studio**	
3.	**Tutorial**	
4.	**Others** (specify)	
Total		**30**

B. Course Learning Outcomes (CLOs), Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Code of PLOs aligned with program	Teaching Strategies	Assessment Methods
1.0	**Knowledge and understanding**			
1.1	Explain structure of genes and how genes are organized, controlled and segregated.	K1	1-Interactive lecture 2-using audiovisual materials 3-Discussion 4-Problem based learning	Written Test • **Constructed-Response Tests** o Fill-in-the blank o Essay: Short/Long • **Selected-Response Tests** o MCQs o Matched Qs True and False ,Matching
1.2	Recognize patterns of inheritance & factors that affect development of the phenotype	K1		
1.3	Devise likely diagnoses from clinical scenarios by recognizing key manifestations of any type of diseases be it congenital or acquired appropriately	K2		
2.0	**Skills**			
2.1	Apply the knowledge of a patient's genotype to develop a more effective approach to	S2	2-Small group 3-discussion 4-Self-learning	1. Case presentations 2. Periodical Examinations

Code	Course Learning Outcomes	Code of PLOs aligned with program	Teaching Strategies	Assessment Methods
	health maintenance and disease prevention.		5-packages Tutorials, Seminars and Symposia 6-Reading assignment Activities: library work	that vary from recall to comprehension, analysis, and application 3. Quizzes 4- MCQs. 5- Problem solving questions. 6- Assignments
2.2	Utilize appropriately best evidence-based knowledge and technological advances, regarding alteration in health, to guide action which promotes and maintains patient-centered care.	S3		
2.3	Communicate effectively, both orally and in writing, with patients' families, colleagues and other professionals within the context of the healthcare environment.	S4		
3.0	**Values, autonomy, and responsibility**			
3.1	Integrate properly knowledge, skills and values necessary to function as part of an inter-professional team to provide patient-centered collaborative care.	V_1	1- Class presentation. 2- Problem-Based Learning. experience 4. Video clips. 5-Small group discussion 6- Group project	1- MCQs. 2- Short answer question 3-Assignments. 4- Case studies. 5- Oral exams. 6- Supervisor evaluation for performance and attitude. 7-Problem-solving
3.2	Commit to lifelong learning while independently seeking new knowledge and skills in their own recognized areas of learning deficit	V_2		

C. Course Content

No	List of Topics	Contact Hours
1	Introduction to genetics	**2**
2	Chromosomal and DNA structure and replication.	4
3	Gene action, expression and Mutation.	2

4	Classification of genetic Diseases. Chromosomal disorders.	2
5	Single gene disorders: Autosomal disorders.	4
6	X. Linked disorders.	2
7	Multifactorial gene disorders.	2
8	Cancer Genetics	2
9	Birth Defect, congenital anomalies and teratogenicity problems.	2
10	Genetic testing and screening.	2
11	Genetic technology and treatment.	2
12	Genetic counseling and ethics.	2
13		2
Total		**30**

D. Students Assessment Activities

No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
1.	Short Quizzes	5th – 7th Week	10
2.	Midterm Examination	8th – 9th Week	25
3.	Participation/Attendance	From the Start until the End of Semester	5
4	Assignment	10th Week	10
5	Final Examination	18-20th Week	50

*Assessment Activities (i.e., Written test, oral test, oral presentation, group project, essay, etc.).

E. Learning Resources and Facilities

1. References and Learning Resources

Essential References	Lashley, F. (2005). Clinical Genetics in Nursing Practice (Third edition). New York, Springer Publishing Company. Lashley, F. (2007): Essentials of Clinical Genetics in Nursing Practice .NewYork,Springer Publishing Company . -Skirton .H: Patch, C.&William,J..(2005): Applied Genetics in Health Care,Taylor and Francis group.UK.
Supportive References	Lewis, R. (2012). Human Genetics: Concepts and Applications, (10th ed.) Boston: McGraw-Hill Publishers. ISBN 0073525308 This book is available as a paperback or an ebook
Electronic Materials	WWW.emedicine.com Medicare web site www.Google.com

Other Learning Materials	

2. Required Facilities and equipment

Items	Resources
Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)	Lecture room for at least 50 students.
Technology Resources (AV, data show, Smart Board, software, etc.)	• Internet connections, Data Show or Smart Board.
Other Resources (Specify, e.g. if specific laboratory equipment is required, list requirements or attach a list)	

F. Assessment of Course Quality

Assessment Areas/Issues	Assessor	Assessment Methods
Effectiveness of Teaching	Program Coordinator Course Coordinator Students	• Students/teacher focus group • Students personal written reflections Direct Assessments
Achievement of course learning outcomes	Course Coordinator Course Instructor	CLO survey form
Quality of learning resources	Program Coordinator Quality Assurance	Annual Report
Effectiveness of Teaching	Program Coordinator Course Coordinator Students	• Students/teacher focus group • Students personal written reflections Direct Assessments
Other		

Assessors (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify)

Assessment Methods (Direct, Indirect)

G. Specification Approval

COUNCIL /COMMITTEE	PLANS AND CURRICULUM COMMITTEE
REFERENCE NO.	**2403**
DATE	**SEPTEMBER 2024**