Republic of Iraq
Ministry of higher education & scientific research Supervision and scientific evaluation directorate
Quality assurance and academic accreditation

Academic Program Specification Form For The Academic

University :Northern Technical University

Institute: Technical college of Management / Mosul

Department: Statistics and Informatics Techniques

Date of form completion: 16/4/2024

Dean`s Assistant for Scientific Affairs
Dr. Ahmad Najm Sheet
Date:16/4/2024
Signature

Head of Department
Dr. Elham AbdulKareem Hussein
Date: 16/4/2024
Signature

Quality Assurance and University performance manager
Dr.Wijdan Hasan Hamoody
Date: / /Signature

Dean`s Name
Dr.Sameer Taha Yaseen
Date : 16/4/2024
Signature

HIGHER EDUCATION PERFORMANCE REVIEW: PROGRAMME REVIEW

PROGRAMME SPECIFICATION

This description of the academic program provides a necessary summary of the most important characteristics of the program and the learning outcomes expected of the student to achieve, demonstrating whether he has made the most of the available opportunities. It is accompanied by a description of each course within the program .

1. Teaching Institution	**Technical college of Management / Mosul**
2. University Department/Centre	**Northern Technical University / Statistics and Informatics Techniques**
3. Programme Title	**Statistics and Informatics Techniques**
4. Title of Final Award	Bachelor's Courses
5. Modes of Attendance offered	
6. Accreditation	
7. Other external influences	Discussions - workshops - scientific visits
8. Date of production/revision of this specification	16/4/2024
9. Aims of the Programme	
The student's ability to perform statistical analysis by dealing with raw data, organizing and tabulating it, then analyzing it and extracting results.	

10. Learning Outcomes, Teaching, Learning and Assessment Methods

A. Knowledge and Understanding

A1- Understanding the basic concepts and principles of statistics
A2- Acquiring data analysis skills
A3- Developing critical thinking and problem-solving skills
A4- Giving the student the ability to use statistics in various fields
A5- Developing awareness of the importance of ethics in the use of statistics

B. Subject-specific skills

B1 - Data collection and analysis skills
B2 - Skills in using statistics programs
B3 - Problem solving skills
B4 - Creative and analytical thinking skills

Teaching and Learning Methods

Lectures, laboratory, summer training, scientific visits, graduation projects.

Assessment methods

Oral and written paper tests, semester exams, reports, daily exams, daily interaction in lectures, scientific student activities outside the scope of lectures.

C. Thinking Skills

C1- Developing a love of curiosity and scientific research by encouraging students to ask questions and search for answers
C2- Developing a sense of social responsibility by helping students understand the importance of statistics in solving social problems
C3- Developing communication and cooperation skills
C4- Developing a sense of self-confidence by developing a sense of self-confidence and the ability to solve problems

Teaching and Learning Methods

Lectures, laboratory (practical courts), summer training, scientific visits, graduation projects.

Assessment methods

Paper oral and written tests, semester exams, reports, daily exams, daily interaction in lectures, scientific student activities outside the scope of lectures.

D. General and Transferable Skills (other skills relevant to employability and personal development(

D - General and qualifying transferable skills (other skills related to employability and personal development).
D1- Critical thinking skills through the ability to analyze data logically and draw correct conclusions.
D2- Technology use skills by enabling the student to use various statistics programs such as SPSS, R, and

others.
D3- The ability to learn independently and search for information.
D4- The ability to keep pace with developments in the field of statistics.

Teaching and Learning Methods

Lectures, laboratory, summer training, scientific visits, graduation projects.

Assessment Methods

Paper oral and written tests, semester exams, reports, daily exams, daily interaction in lectures, scientific student activities outside the scope of lectures.

11. programme structure

stage	Course name	Course name	theoretical	practical
level one		Principles of mathematics	2	2
		Record numbers	2	2
		Programming basics	2	2
		Statistics and ready-made statistical applications	2	2
		Sports applications	2	2
Second Level		Principles of probability	3	1
		Preview theory	2	2
		Linear algebra	2	2
		Principles of time series	3	1
		Differential equations	2	2
		Numerical Analysis	2	2
		General time series	3	1
		Probability and random variables	3	1
		calculator apps (spss)	2	2
		Data structures	2	2
		Hypothesis testing	2	2
The third level		Principles of mathematical statistics	3	1
		Operations research	2	2
		Linear regression analysis	3	1
		Principles of biostatistics	3	1
		Reliability	2	2
		General mathematical statistics	3	1
		Nonlinear regression analysis	3	1
		General vital statistics	3	1
		Calculator applications (AR language)	2	2
		Data mining	2	2
		Queuing theory	2	2
fourth level		Design of experiments 1	2	2
		Design of agricultural experiments	2	2
		Random processes	3	1
		Principles of statistical inference	3	1
		Statistical inference	3	1
		Nonparametric methods	3	1
		Multivariate 1	3	1

		Multivariate random	3	1
		Artificial intelligence	2	2
		research project		2
		Information theory	2	2
		Teaching the machine	2	2

12. personal development Planning

1- Access to modern scientific literature.
2- Participation in relevant scientific conferences.
3- Sending workers for training inside and outside the country.
4- Hosting specialized professors.
5- Scientific cooperation with other universities and corresponding colleges.

13. Admission criteria

1- Mean

2- Scientific Department**.**

14. Key sources of information about the programme

Study plan and approved academic vocabulary

Curriculum Skills Map																			
Please tick in the relevant boxes where individual Programme Learning Outcomes are being assessed																			
Programme Learning Outcomes																			
Year/ le vel	**Cour se Code**	**Course Title**	**Core (C) Title or Option (O)**	**Knowledge and understanding**				**Subject-specific skills**				**Thinking Skills**				**General and Transferable Skills relevant to employability and personal development**			
				A1	**A2**	**A3**	**A4**	**B1**	**B2**	**B3**	**B4**	**C1**	**C2**	**C3**	**C4**	**D1**	**D2**	**D3**	**D4**
2023-2024/first level	SIT128	Principles of mathematics	Basic	√	√	√	√	√	√	√	√	√	√	√	√	√	√		
2023-2024/Second level	SIT221	Principles of probability	Basic	√	√	√	√	√	√	√		√	√			√	√		
2023-2024/third level	SIT314	Biostatistics	Basic	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
2023-2024/Level Four	SIT413	Principles of inference	Basic	√	√	√	√	√	√	√		√	√			√	√		

Course Description Form

Reviewing the performance of higher education institutions (Academic Program Review)

Course description

This course description provides a necessary summary of the most important characteristics of the course and the learning outcomes expected of the student to achieve, demonstrating whether he has made the most of the available learning opportunities.

1. The educational institution	Administrative Technical College/Mosul
2. The university department/center	Northern Technical University / Department of Statistics and Informatics Techniques
3. Course name/code	Principal of probability / SIT221
4. programs that are included in it	
5. Attendance forms available	weekly
6. season/year	First and second semester
7. Study hours (total)	56 hours
8. The date this description was prepared	16/4/2024
9. Course objectives	
The course objective to enable the student to become familiar with the basics of probability and probability theory and possibility of applying them in practical life .	

10. Learning outcomes and methods of teaching, learning and assessment
A- Knowledge and understanding .A2- Probabilistic studies of some random correlations A3- The student's ability to know how to apply the subject in free life A4- It includes monitoring or relationships related to data, interpreting the relationship and its components, interpreting shapes and graphs, interpreting statistical tables.
b- Subject-specific skills B1 - Be skilled in solving probabilistic problems B2 - He should be skilled in knowing the type of distribution in which the data is .distributed B3 - Be skilled in determining the function of the data through distribution
Methods of teaching and learning
lecture and simultaneous interaction, electronic laboratory based on electronic models for practical application, summer training
Evaluation modalities
Oral exams, written exams, semester exams, final exams, daily evaluation
C- thinking skills C1. The ability to use mental ability to solve problems C2- Using logical thinking

Methods of teaching and learning
Electronic lecture, electronic laboratory, summer training
Evaluation modalities
Oral exams, written exams, semester exams, final exams, daily evaluation
D - General and transferable skills (other skills related to employability and personal development). D1. Developing the student's mental abilities D2- Developing skill capabilities

11. Course structure					
the week	**hours**	**required learning outcomes**	**Name of the unit/course or topic**	**education method**	**Evaluation method**
the first	4	Student understanding of the lesson	Group theory	=	=
The second	4	=	Basic counting methods, permutations	=	=
Third	4	=	Combinations	=	=
the fourth	4	=	Binomial expansion theorem	=	=
Fifth	4	=	exercises	=	=
Sixth	4	=	Polynomial theorem	=	=
Seventh	4	=	Exams	=	=
Eighth	4	=	Probabilities, probability concepts, random experiment, sample/event space, event probability	=	=
ninth	4	=	Field and field algebra	=	=
The tenth	4	=	Axioms of probability, conditional probability	=	=
eleventh	4	=	Independence	=	=
twelveth	4	=	Random variables and their distributions	=	=

fourteenth	4	=	Probability function for a discrete random variable, distribution function for a discrete random variable	=	=
Fifteenth	4	=	Probability function for a continuous random variable, distribution function for a continuous random variable	=	=

12. Infrastructure	
1. Required prescribed books	• Principles of probability / Walid Al-Sayfo
2.Main references (sources)	• Probability theory / Amir Hanna
Electronic references, websites	1- https://www.noor-book.com/%D9%83%D8%AA%D8%A7%D8%A8-%D8%A7%D9%84%D8%A7%D8%AD%D8%B5%D8%A7%D8%A1-%D9%88-%D8%A7%D9%84%D8%A7%D8%AD%D8%AA%D9%85%D8%A7%D9%84%D8%A7%D8%AA-%D8%A7%D9%84%D9%86%D8%B8%D8%B1%D9%8A%D9%87-%D9%88-%D8%A7%D9%84%D8%AA%D8%B7%D8%A8%D9%8A%D9%82-pdf

.13Course development plan
1. Developing the curriculum based on recent versions of books and references .