Course Specification
(Bachelor)

Course Title:	**Demography**
Course Code:	**STA 1467**
Program:	**Bachelor of Science in Applied Statistics**
Department:	**Mathematics and Statistics**
College:	**Science**
Institution:	**Imam Mohammad Ibn Saud Islamic University**
Version:	**2024 – V1**
Last Revision Date:	**2 October 2024**

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A. General information about the course:

1. Course Identification

1. Credit hours:					
3 (2 Lectures, 1 Lab, 1 Tutorial)					
2. Course type:					
A.	☐University	☐College	☒ Program	☐Track	☐Others
B.	☐ Required		☒ Elective		
3. Level/year at which this course is offered:					
Level 7 / Year 4					
4. Course General Description:					
Introduction to the theory and methods of survival analysis, including modeling time-to-event data, methods for the treatment of censoring (including the right/left censoring and double censoring), and the Cox proportional hazard models and their extensions.					
5. Pre-requirements for this course (if any)**:**					
STA 1332					
6. Co-requisites for this course (if any)**:**					
None					
7. Course Main Objective(s):					
• **Give students theoretical and practical background on the use of statistical models in the field of population statistics.** • **The student's knowledge of the statistical measures for births and Deaths.** • **Students learn how to construct and use life tables.** • **Understanding internal and international migration.**					

2. Teaching mode (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	**60**	**%100**
2	E-learning		
3	Hybrid • Traditional classroom • E-learning		
4	Distance learning		

3. Contact Hours (based on the academic semester)

No	Activity	Contact Hours
1.	Lectures	30
2.	Laboratory/Studio	15
3.	Field	0
4.	Tutorial	15
5.	Others (specify)	0
Total		60

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

Code	Course Learning Outcomes	Code of PLOs aligned with the program	Teaching Strategies	Assessment Methods
1.0	Knowledge and understanding			
1.1	To describe the basic principles of demography and the need for it.	K1, K2, K3	2 lecture hours\week	Direct: Regular Exams
1.2	To outline fertility and reproduction and methods of measuring various kinds of fertility.	K1, K2, K3	1 tutorial hours\week 1 lab hours\week Self-study	Direct: Short Quizzes
2.0	Skills			
2.1	To summarize the different sources of population data.	S1, S2	Self-study Real-life problems	Direct: Participations Short Quizzes
2.2	To explain the concepts and measures that are central to statistical demography.	S2, S4, S5	Real-life problems	Direct: Short Quizzes
2.3	To analyze demographic data using appropriate statistical methods and software.	S3, S5	Self-study	Direct: Participations
2.4	To perform simple projections of population development.	S3, S4	Self-study Real-life problems	Direct: Regular Exams Participation Short Quizzes
3.0	Values, autonomy, and responsibility			
3.1	To defend the formulated conclusions.	V1, V2	Personal questions	Direct: Participation
3.2	To operate meaningfully and productively with others.	V1, V3	Teamwork and class discussions.	Direct: Homework Mini projects

C. Course Content

No	List of Topics	Contact Hours
1.	**Introduction:** Some basic concepts. The nature of demographic data. Demographic statistics in practice.	**11**
2.	**Describing data and the normal distribution, Computing and testing kurtosis and skewness for sample normality, Computing the Kolmogorov–Smirnov one-sample test.**	**16**
3.	**General influences on population:** Population in history. Population today. Resources and population. Population policies. General prospects for the future.	**17**
4.	**Technical analysis:** Life tables. Methods of summary and comparison. Techniques of population projection. Introduction to population mathematics. The handling of suspect or scanty data.	**16**
Total		**60**

D. Students Assessment Activities

No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
1.	**Homeworks, Quizzes, Mini-projects**	**During the term**	**10%**
2.	**First Midterm**	**Week 5-6**	**25%**
3.	**Second Midterm (lab Exam)**	**Week 10-11**	**25%**
4.	**Final Exam**	**Week 16-17**	**40%**

*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	**1- Demography, 5th Edition,** Peter R. Cox, Cambridge University Press, 2009. ISBN: 9780521290203.
Supportive References	**1- Methods and Models in Demography,** C. Newell, New York, The Guilford Press, 1988. **2- Demographic Methods,** A. Hinde, Hodder Arnold Publication, 1998. **3- The Demography of Health and Health care,** 2nd Edition, Louis G. Pol and Richard, Kluwer Academic Publishers, 2001.
Electronic Materials	**Course Website: Learning Management Systems (Blackboard)**
Other Learning Materials	**None**

2. Required Facilities and equipment

Items	Resources
facilities (Classrooms, laboratories, exhibition rooms, simulation rooms, etc.)	▪ Each class room should be equipped with a whiteboard and a projector. ▪ Laboratories should be equipped with computers and an internet connection.
Technology equipment (projector, smart board, software)	The rooms should be equipped with data show and Smart Board. All computers should be equipped with the following software: ▪ Microsoft Excel ▪ IBM SPSS ▪ R-Project ▪ MATLAB
Other equipment (depending on the nature of the specialty)	See the attached file

F. Assessment of Course Quality

Assessors (Students, Faculty, Program Leaders, Peer Reviewers, Others (specify)
Assessment Methods (Direct, Indirect)

G. Specification Approval

COUNCIL /COMMITTEE	MATHEMATICS AND STATISTICS DEPARTMENT COUNCIL
REFERENCE NO.	8/1446
DATE	(08/10/2024) 05/04/1446