

Module code	SM-4339		
Module Title	Survival Analysis		
Degree/Diploma	Bachelor of Science (Mathematics)		
Type of Module	Major Option		
Modular Credits	4	Total student Workload	10 hours/week
		Contact hours	4 hours/week
Prerequisite	SM 2205		
Anti-requisite	None		
Aims			
This module describes the various methods used for modeling and evaluating survival data.			
Learning Outcomes			
<i>On successful completion of this module, a student will be expected to be able to:</i>			
Lower order :	30%	- understand the basic concepts of survival analysis	
Middle order :	60%	- to recognize when it is necessary to account for time in the analysis of yes/no outcomes	
		- learn to appropriately summarize survival data, also called time-to-event data	
		- understand different types of censoring, and learn to estimate survival characteristics	
		- describe the various methods and underlying theory used for modeling	
		- analyze and interpret survival data	
Higher order:	10%	- to explain and illustrate how survival analysis is applied to real data using a computer software	
Module Contents			
- Introduction to survival data			
- Types of censoring and truncation			
- Estimation of the survival function: Nelson Aalen methods, Kaplan Meiers method.			
- Cox regression model			
- Accelerated failure time models			
- Parametric survival models: their estimation and testing			
- Application of the various survival analysis techniques			
Assessment	Formative assessment	Weekly exercises will be discussed to give feedback for student's learning.	
	Summative assessment	Examination: 60%	
		Coursework: 40%	
		- Two (2) class tests (20%)	
		- One (1) project (20%)	