

Faculty	Natural Sciences		
Home Department	Statistics and Population Studies		
Module Topic	Time Series Analysis		
Generic Module Name	Computational Finance 711		
Alpha-numeric Code	COF711		
NQF Level	8		
NQF Credit Value	15		
Duration	Semester		
Proposed semester to be offered.	Second Semester		
Programmes in which the module will be offered	BSc Hons (Statistical Science) (3737); BSc Hons (Computational Finance) (3739);		
Year level	7		
Main Outcomes	On completion of this module students should be able to: <ul style="list-style-type: none"> Apply fundamentals of time domain methods and develop elementary analysis skills. 		
Main Content	<ul style="list-style-type: none"> Classical time series methods; strong and weak stationarity, and non-stationarity; ARMA models – acf, pacf, stationarity and invertibility; evaluation of residuals; ARIMA models; seasonality in ARIMA models; estimation and prediction; spectral density functions; periodogram; example analyses using SPSS 		
Pre-requisite modules	STA211; STA221; MAT211; MAT221 or equivalent		
Co-requisite modules	None		
Prohibited module Combination	None		
Breakdown of Learning Time	Hours	Timetable Requirement per week	Other teaching modes that does not require time-table
<i>Contact with lecturer: / tutor:</i>	21	<i>Lectures p.w.</i>	1
<i>Assignments & tasks:</i>	30	<i>Practicals p.w.</i>	0
<i>Practicals:</i>	30	<i>Tutorials p.w.</i>	0
<i>Tutorials:</i>	0		
<i>Tests & Examinations:</i>	5		
<i>Selfstudy:</i>	60		
<i>Other:</i>	4		
Total Learning Time	150		
Methods of Student Assessment	Continuous Assessment (CA): 50% Final Assessment (FA):50%		
Assessment Module type	Continuous and Final Assessment (CFA)		