University of Pretoria Yearbook 2021

Simulation and computation 710 (STC 710)

Qualification	Postgraduate
Faculty	Faculty of Economic and Management Sciences
Module credits	15.00
NQF Level	08
Programmes	BComHons Mathematical Statistics
	BComHons Statistics and Data Science
	BScHons Mathematical Statistics
	BScHons Statistics and Data Science
Prerequisites	Admission to either BScHons Mathematical Statistics or BComHons Mathematical Statistics or BScHons Statistics and Data Science or BComHons Statistics and Data Science
Contact time	1 lecture per week
Language of tuition	Module is presented in English
Department	Statistics
Period of presentation	Semester 1 or Semester 2

Module content

Efficient programming, Monte Carlo simulation, sampling of discrete and continuous probability models, General transformation methods, Accept-reject methods, Monte Carlo integration, importance sampling, numerical optimisation, Metropolis-Hastings algorithm, GIBBS sampling.

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