

# University of Pretoria Yearbook 2021

## Simulation and computation 710 (STC 710)

<b>Qualification</b>	Postgraduate
<b>Faculty</b>	<a href="#">Faculty of Economic and Management Sciences</a>
<b>Module credits</b>	15.00
<b>NQF Level</b>	08
<b>Programmes</b>	<a href="#">BComHons Mathematical Statistics</a> <a href="#">BComHons Statistics and Data Science</a> <a href="#">BSchHons Mathematical Statistics</a> <a href="#">BSchHons Statistics and Data Science</a>
<b>Prerequisites</b>	Admission to either BSchHons Mathematical Statistics or BComHons Mathematical Statistics or BSchHons Statistics and Data Science or BComHons Statistics and Data Science
<b>Contact time</b>	1 lecture per week
<b>Language of tuition</b>	Module is presented in English
<b>Department</b>	Statistics
<b>Period of presentation</b>	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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