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# University of Pretoria Yearbook 2017

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## Solution algorithms in operations research 780 (BAR 780)

<b>Qualification</b>	Postgraduate
<b>Faculty</b>	<a href="#">Faculty of Engineering, Built Environment and Information Technology</a>
<b>Module credits</b>	32.00
<b>Programmes</b>	<a href="#">BEngHons Industrial Engineering</a> <a href="#">BScHons Applied Science Industrial Systems</a>
<b>Prerequisites</b>	BAN 313 or BAN 780
<b>Contact time</b>	48 Contact hours
<b>Language of tuition</b>	Module is presented in English
<b>Academic organisation</b>	Industrial and Systems Eng
<b>Period of presentation</b>	Semester 1 or Semester 2

### Module content

When developing decision-support models using optimisation, the computational burden is often so great that exact optimal solutions are not attainable, or not efficiently found, especially in combinatorial and discrete optimisation problems. Often approximate solutions are adequate and can provide superior solutions to the current state-of-practice decision approaches. The module introduces a selection of heuristics and metaheuristics applied to a variety of problems frequently faced by Industrial Engineers. The module also introduces a methodology to test and validate heuristics to ensure robust and reliable application.

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