

# University of Pretoria Yearbook 2020

## Reliability engineering 781 (MIR 781)

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| <b>Qualification</b>          | Postgraduate   |
| <b>Faculty</b>                | <a href="#">Faculty of Engineering, Built Environment and Information Technology</a>   |
| <b>Module credits</b>         | 16.00  |
| <b>Programmes</b>             | <a href="#">BEngHons Mechanical Engineering</a><br><a href="#">BScHons Applied Science Mechanics</a><br><a href="#">BScHons Applied Science Mechanics: Physical Asset Management</a> |
| <b>Prerequisites</b>          | No prerequisites.  |
| <b>Contact time</b>           | 21 contact hours per semester  |
| <b>Language of tuition</b>    | Module is presented in English   |
| <b>Department</b>             | Mechanical and Aeronautical Engineering  |
| <b>Period of presentation</b> | Semester 1   |

### Module content

Introduction to probabilistic distributions, computation of system reliability, building reliability models and optimisation of system reliability; Fault Tree Analysis; Failure Modes, Effects and Criticality Analysis (FMECA), Monte Carlo Simulation; probability-based design.

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