Reliability-based maintenance 781 (MII 781)

Qualification	Postgraduate
Faculty	Faculty of Engineering, Built Environment and Information Technology
Module credits	16.00
Prerequisites	MIR 781 Reliability engineering 781
Contact time	21 contact hours per semester
Language of tuition	English
Academic organisation	Mechanical and Aeronautical En
Period of presentation	Semester 1 or Semester 2

Module content

Component reliability: Weibull analysis, Limitations of Weibull analysis – when not to use it. System reliability and availability: reliability/availability modelling, the availability block diagram (ABD), Cut sets, capacity constraints, m-out-of-n systems and storage capacity, Fault trees, Failure modes, Effects and criticality analysis (FMECA). Failure and repair rate data: Reliability engineering's red herring: "We don't have the data", Some data banks that are in fact useful, Data synthesis: the method of paired comparisons, Paper on The use of NERC-GADS data in determining standards for system design, Case study in and exercise in data synthesis.