

University of Pretoria Yearbook 2020

Maintenance and asset management 780 (IMC 780)

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| Qualification | Postgraduate |
| Faculty | Faculty of Engineering, Built Environment and Information Technology |
| Module credits | 16.00 |
| Programmes | BEngHons Engineering and Technology Management BScHons Applied Science Mechanics: Physical Asset Management BScHons Engineering and Technology Management |
| Prerequisites | No prerequisites. |
| Contact time | 20 contact hours per semester |
| Language of tuition | Module is presented in English |
| Department | Engineering and Technology Management |
| Period of presentation | Semester 1 and Semester 2 |

Module content

Every man-made component, spare part, equipment, system or infrastructure has an inherent reliability that is determined by design, construction, installation, manufacture or how it is built. This inherent reliability is influenced by both organisational and physical conditions under which, for example, an item of equipment operates. The operational reliability significantly determines the availability of the equipment. A primary objective of maintenance intervention is to eliminate the operating environment hazards, which reduce the operational reliability of equipment and consequently, the availability of equipment for use. In the event of malfunction or failure, the goal of maintenance is to restore the operational reliability and availability of an item of equipment. Irrespective of whether a maintenance activity is intervening or restorative, it needs to be properly planned, scheduled and executed towards achieving the highest levels of operational reliability and availability, whilst concurrently minimising the expenditure of time and resources. Organisational systems of work (which encompass business processes, culture, and information technology) greatly influence the planning, scheduling and execution of maintenance activities. Furthermore, knowledge of technologies embedded, as well as how various items of equipment malfunction or fail in operation, determines how well the maintenance activities are planned, scheduled and executed. The content of the module not only covers strategies, technical principles, practical processes and systems but also includes standards (e.g., CEN13306) and legislative guidelines that influence the management of maintenance in all industrial sectors. The content will also include an introduction to the ISO 5500x asset management standards.

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Ignorance concerning these regulations and rules will not be accepted as an excuse for any transgression.