

University of Pretoria Yearbook 2022

Tribology 780 (MIT 780)

Qualification Postgraduate

Faculty [Faculty of Engineering, Built Environment and Information Technology](#)

Module credits 16.00

NQF Level 08

Prerequisites No prerequisites.

Contact time 10 lectures per week

Language of tuition Module is presented in English

Department Mechanical and Aeronautical Engineering

Period of presentation Semester 2

Module content

Friction – Theory and laws of friction, friction behaviour of different materials. Lubrication and theory, hydrodynamic lubrication, elastohydrodynamic lubrication, boundary lubrication. Lubricants – wear – wear theory, wear mechanisms, particle properties. Surface modification and coverings, filtration, choice of filtration limits. Design and wear – determining wear rates, role of operational parameters, choice, role and effect of material choice, lubrication techniques. Tribological aspects of: bearing design, gear design, design of sliding elements.

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