

University of Pretoria Yearbook 2021

Nuclear physics 719 (PHY 719)

Qualification Postgraduate

Faculty [Faculty of Natural and Agricultural Sciences](#)

Module credits 10.00

NQF Level 08

Prerequisites Admission only with permission by the Head of the Department of Physics

Contact time 2 lectures per week

Language of tuition Module is presented in English

Department Physics

Period of presentation Semester 2

Module content

Quarks, Nucleons, Isobaric Invariance, NN-interaction, Two-nucleon system, Deuteron, Elements of scattering theory, NN-scattering, Few-body nuclear systems, General properties of medium and heavy nuclei, Nuclear models, Radioactivity, Nuclear reactions, α -, β -, and γ -decays, Nuclear fission, Nuclear fusion, nuclear astrophysics.

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