



University of Pretoria Yearbook 2021

General chemistry 181 (CHM 181)

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| Qualification | Undergraduate |
| Faculty | Faculty of Natural and Agricultural Sciences |
| Module credits | 16.00 |
| NQF Level | 05 |
| Programmes | BEng Chemical Engineering BEng Chemical Engineering ENGAGE |
| Service modules | Faculty of Engineering, Built Environment and Information Technology |
| Prerequisites | CHM 171 |
| Contact time | 1 discussion class per week, 1 practical per week, 1 web-based period per week, 4 lectures per week |
| Language of tuition | Module is presented in English |
| Department | Chemistry |
| Period of presentation | Semester 2 |

Module content

One quarter general physical-analytical chemistry: Physical behaviour of gases, intermolecular forces, solutions, liquids and solids (phase changes), chemical equilibrium, acids and bases, applications of aqueous equilibria (e.g. buffers, titrations, solubility) precipitation. One quarter organic chemistry: Structure and bonding, functional groups and drawing of structures of organic compounds, nomenclature, isomerism, introductory stereochemistry, introduction to chemical reactions and chemical properties of organic compounds. Appropriate tutorial classes and practicals. Quality theoretical and practical teaching with an ethical approach provides a broad understanding of fundamental chemistry, e.g. predicting the behaviour of specific functional groups present in organic compounds, essential for new drug development, purification of mixtures and proper waste management to protect the environment and ultimately human and animal life, thereby meeting some of the UN sustainable development goals.

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