



---

# University of Pretoria Yearbook 2022

---

## Thermodynamics 223 (CTD 223)

<b>Qualification</b>	Undergraduate
<b>Faculty</b>	<a href="#">Faculty of Engineering, Built Environment and Information Technology</a>
<b>Module credits</b>	16.00
<b>NQF Level</b>	06
<b>Programmes</b>	<a href="#">BEng (Chemical Engineering)</a> <a href="#">BEng (Chemical Engineering) ENGAGE</a>
<b>Prerequisites</b>	CIR 211, MPR 212/213, (WTW 258)
<b>Contact time</b>	3 tutorials per week, 4 lectures per week
<b>Language of tuition</b>	Module is presented in English
<b>Department</b>	Chemical Engineering
<b>Period of presentation</b>	Semester 2

### Module content

Simple applications of the first and second laws of thermodynamics. The concepts of work, heat, enthalpy and entropy. The calculation of internal energy, enthalpy and entropy using the equations of state. Simple heat engine cycles. Refrigeration and gas liquefaction. Process efficiency by means of energy. Introduction to non-ideality in VLE and mixing behaviour.

---

The regulations and rules for the degrees published here are subject to change and may be amended after the publication of this information.

The [General Academic Regulations \(G Regulations\)](#) and [General Student Rules](#) apply to all faculties and registered students of the University, as well as all prospective students who have accepted an offer of a place at the University of Pretoria. On registering for a programme, the student bears the responsibility of ensuring that they familiarise themselves with the General Academic Regulations applicable to their registration, as well as the relevant faculty-specific and programme-specific regulations and information as stipulated in the relevant yearbook. Ignorance concerning these regulations will not be accepted as an excuse for any transgression, or basis for an exception to any of the aforementioned regulations.