

## University of Pretoria Yearbook 2020

## Differential equations 256 (WTW 256)

Faculty Faculty of Natural and Agricultural Sciences  Module credits 8.00  Programmes BEng Chemical Engineering BEng Chemical Engineering ENGAGE BEng Civil Engineering ENGAGE BEng Civil Engineering ENGAGE BEng Computer Engineering ENGAGE BEng Computer Engineering ENGAGE BEng Computer Engineering ENGAGE BEng Electrical Engineering BEng Electrical Engineering ENGAGE BEng Electronic Engineering BEng Electronic Engineering BEng Beng Industrial Engineering ENGAGE BEng Industrial Engineering BEng Mechanical Engineering ENGAGE BEng Mechanical Engineering ENGAGE BEng Mechanical Engineering ENGAGE BEng Metallurgical Engineering BEng Metallurgical Engineering BEng Metallurgical Engineering ENGAGE BEng Mining Engineering BEng Metallurgical Engineering ENGAGE BEng Mining Engin	Qualification	Undergraduate
BEng Chemical Engineering ENGAGE BEng Civil Engineering ENGAGE BEng Civil Engineering ENGAGE BEng Computer Engineering BEng Computer Engineering BEng Computer Engineering BEng Computer Engineering ENGAGE BEng Electrical Engineering ENGAGE BEng Electronic Engineering ENGAGE BEng Electronic Engineering ENGAGE BEng Electronic Engineering ENGAGE BEng Industrial Engineering BEng Industrial Engineering BEng Mechanical Engineering BEng Mechanical Engineering ENGAGE BEng Metallurgical Engineering ENGAGE BEng Metallurgical Engineering BEng Metallurgical Engineering ENGAGE BEng Mining Engineering BEng Metallurgical Engineering ENGAGE BEng Mining Engineering BEng Metallurgical Engineering ENGAGE BEng Mining Engineering ENGAGE BEng Mining Engineering ENGAGE BEng Mining Engineering ENGAGE BEng Mining Engineering ENGAGE BENG Mathematics BSc Meteorology BSc Physics  Service modules Faculty of Engineering, Built Environment and Information Technology  Prerequisites WTW 158 and WTW 164 Contact time 1 tutorial per week, 2 lectures per week	Faculty	Faculty of Natural and Agricultural Sciences
BEng Chemical Engineering ENGAGE BEng Civil Engineering BEng Civil Engineering ENGAGE BEng Computer Engineering BEng Computer Engineering BEng Computer Engineering BEng Computer Engineering BEng Electrical Engineering ENGAGE BEng Electroil Engineering ENGAGE BEng Electronic Engineering BEng Electronic Engineering BEng Industrial Engineering BEng Industrial Engineering BEng Industrial Engineering BEng Mechanical Engineering BEng Mechanical Engineering BEng Metallurgical Engineering BEng Metallurgical Engineering BEng Metallurgical Engineering BEng Mining Engineering BEng Mining Engineering BEng Mining Engineering BEng Metallurgical Engineering BEng Mining Engineering BEng Mining Engineering BEng Mining Engineering BEng Mining Engineering ENGAGE BSc Mathematics BSc Meteorology BSc Physics  Service modules Faculty of Engineering, Built Environment and Information Technology Prerequisites UTW 158 and WTW 164 Contact time	Module credits	8.00
BEng Civil Engineering BEng Civil Engineering ENGAGE BEng Computer Engineering BEng Computer Engineering BEng Computer Engineering ENGAGE BEng Electrical Engineering ENGAGE BEng Electronic Engineering ENGAGE BEng Electronic Engineering BEng Electronic Engineering BEng Beng Electronic Engineering BEng Industrial Engineering BEng Industrial Engineering BEng Mechanical Engineering BEng Mechanical Engineering BEng Mechanical Engineering BEng Metallurgical Engineering BEng Mining Engineering BEng Mining Engineering BEng Mining Engineering BEng Mining Engineering ENGAGE BSc Mathematics BSc Meteorology BSc Physics  Service modules Faculty of Engineering, Built Environment and Information Technology  Prerequisites UTW 158 and WTW 164 Contact time	Programmes	BEng Chemical Engineering
BEng Civil Engineering ENGAGE BEng Computer Engineering BEng Computer Engineering BEng Computer Engineering ENGAGE BEng Electrical Engineering ENGAGE BEng Electronic Engineering ENGAGE BEng Electronic Engineering ENGAGE BEng Industrial Engineering ENGAGE BEng Industrial Engineering BEng Industrial Engineering BEng Mechanical Engineering BEng Mechanical Engineering BEng Mechanical Engineering BEng Metallurgical Engineering BEng Metallurgical Engineering BEng Metallurgical Engineering BEng Mining Engineering ENGAGE BSc Mathematics BSc Meteorology BSc Physics  Service modules Faculty of Engineering, Built Environment and Information Technology  Prerequisites Uttorial per week, 2 lectures per week		BEng Chemical Engineering ENGAGE
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BEng Electronic Engineering ENGAGE  BEng Industrial Engineering  BEng Industrial Engineering ENGAGE  BEng Mechanical Engineering  BEng Mechanical Engineering ENGAGE  BEng Metallurgical Engineering  BEng Metallurgical Engineering  BEng Metallurgical Engineering ENGAGE  BEng Mining Engineering  BEng Mining Engineering  BEng Mining Engineering ENGAGE  BSc Mathematics  BSc Meteorology  BSc Physics  Service modules  Faculty of Engineering, Built Environment and Information Technology  Prerequisites  WTW 158 and WTW 164  Contact time  1 tutorial per week, 2 lectures per week		BEng Electrical Engineering ENGAGE
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BEng Industrial Engineering ENGAGE  BEng Mechanical Engineering  BEng Mechanical Engineering ENGAGE  BEng Metallurgical Engineering  BEng Metallurgical Engineering ENGAGE  BEng Mining Engineering  BEng Mining Engineering  BEng Mining Engineering ENGAGE  BSc Mathematics  BSc Meteorology  BSc Physics  Service modules  Faculty of Engineering, Built Environment and Information Technology  Prerequisites  WTW 158 and WTW 164  Contact time  1 tutorial per week, 2 lectures per week		BEng Electronic Engineering ENGAGE
BEng Mechanical Engineering BEng Mechanical Engineering ENGAGE BEng Metallurgical Engineering BEng Metallurgical Engineering ENGAGE BEng Mining Engineering BEng Mining Engineering BEng Mining Engineering ENGAGE BSc Mathematics BSc Meteorology BSc Physics  Service modules Faculty of Engineering, Built Environment and Information Technology  Prerequisites WTW 158 and WTW 164 Contact time 1 tutorial per week, 2 lectures per week		BEng Industrial Engineering
BEng Metallurgical Engineering BEng Metallurgical Engineering BEng Metallurgical Engineering ENGAGE BEng Mining Engineering BEng Mining Engineering ENGAGE BSc Mathematics BSc Meteorology BSc Physics  Service modules Faculty of Engineering, Built Environment and Information Technology  Prerequisites WTW 158 and WTW 164 Contact time 1 tutorial per week, 2 lectures per week		BEng Industrial Engineering ENGAGE
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BEng Metallurgical Engineering ENGAGE  BEng Mining Engineering  BEng Mining Engineering ENGAGE  BSc Mathematics  BSc Meteorology  BSc Physics  Service modules  Faculty of Engineering, Built Environment and Information Technology  Prerequisites  WTW 158 and WTW 164  Contact time  1 tutorial per week, 2 lectures per week		BEng Mechanical Engineering ENGAGE
BEng Mining Engineering BEng Mining Engineering ENGAGE BSc Mathematics BSc Meteorology BSc Physics  Service modules Faculty of Engineering, Built Environment and Information Technology  Prerequisites WTW 158 and WTW 164 Contact time 1 tutorial per week, 2 lectures per week		BEng Metallurgical Engineering
BEng Mining Engineering ENGAGE  BSc Mathematics  BSc Meteorology  BSc Physics  Service modules  Faculty of Engineering, Built Environment and Information Technology  Prerequisites  WTW 158 and WTW 164  Contact time  1 tutorial per week, 2 lectures per week		BEng Metallurgical Engineering ENGAGE
BSc Mathematics  BSc Meteorology  BSc Physics  Service modules Faculty of Engineering, Built Environment and Information Technology  Prerequisites WTW 158 and WTW 164  Contact time 1 tutorial per week, 2 lectures per week		BEng Mining Engineering
BSc Meteorology  BSc Physics  Service modules Faculty of Engineering, Built Environment and Information Technology  Prerequisites WTW 158 and WTW 164  Contact time 1 tutorial per week, 2 lectures per week		BEng Mining Engineering ENGAGE
BSc Physics  Service modules Faculty of Engineering, Built Environment and Information Technology  Prerequisites WTW 158 and WTW 164  Contact time 1 tutorial per week, 2 lectures per week		BSc Mathematics
Service modules Faculty of Engineering, Built Environment and Information Technology  Prerequisites WTW 158 and WTW 164  Contact time 1 tutorial per week, 2 lectures per week		BSc Meteorology
Prerequisites WTW 158 and WTW 164  Contact time 1 tutorial per week, 2 lectures per week		BSc Physics
Contact time 1 tutorial per week, 2 lectures per week	Service modules	Faculty of Engineering, Built Environment and Information Technology
	Prerequisites	WTW 158 and WTW 164
Language of tuition Module is presented in English	Contact time	1 tutorial per week, 2 lectures per week
	Language of tuition	Module is presented in English



**Department** Mathematics and Applied Mathematics

**Period of presentation** Semester 1

## **Module content**

Theory and solution methods for linear differential equations as well as for systems of linear differential equations. Theory and solution methods for first order non-linear differential equations. The Laplace transform with application to differential equations. Application of differential equations to modelling problems.

The information published here is subject to change and may be amended after the publication of this information. The General Regulations (G Regulations) apply to all faculties of the University of Pretoria. It is expected of students to familiarise themselves well with these regulations as well as with the information contained in the General Rules section. Ignorance concerning these regulations and rules will not be accepted as an excuse for any transgression.