



# University of Pretoria Yearbook 2022

## Mechatronics and control 410 (MBB 410)

<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>	08
<b>Programmes</b>	<a href="#">BEng (Mechanical Engineering)</a> <a href="#">BEng (Mechanical Engineering) ENGAGE</a>
<b>Prerequisites</b>	MVR 320 GS
<b>Contact time</b>	2 practicals per week, 3 lectures per week
<b>Language of tuition</b>	Module is presented in English
<b>Department</b>	Mechanical and Aeronautical Engineering
<b>Period of presentation</b>	Semester 2

### Module content

Sensors and Actuators: Basics behind the most common sensors and actuators. Signal conditioning: Basic understanding of the use of analogue electronic components and power supplies. Sampling theory: Analogue-to-digital conversion, the effect of aliasing and the design of anti-aliasing filters. Digital: Basic understanding of digital communication. Digital control: Programming a microcontroller, and the implementation of control in discrete time systems.

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