

# University of Pretoria Yearbook 2022

## Automation 410 (EBT 410)

**Qualification** Undergraduate

**Faculty** [Faculty of Engineering, Built Environment and Information Technology](#)

**Module credits** 16.00

**NQF Level** 08

**Programmes** [BEng \(Electrical Engineering\)](#)

[BEng \(Electrical Engineering\) ENGAGE](#)

[BEng \(Electronic Engineering\)](#)

[BEng \(Electronic Engineering\) ENGAGE](#)

**Prerequisites** EBB 320 GS

**Contact time** 1 practical per week, 1 tutorial per week, 3 lectures per week

**Language of tuition** Module is presented in English

**Department** Electrical, Electronic and Computer Engineering

**Period of presentation** Semester 1

### Module content

Plant automation issues. The steps taken to establish controllers for industrial processes. Static and dynamic properties of sensors and actuators. Obtaining models from process data. Plant automation platforms. Model-based PID and internal model control. Turning and troubleshoot control loops. Unconstrained single-input-single-output model predictive control. Economic evaluation of automation systems.

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