



# University of Pretoria Yearbook 2023

## Systems engineering 410 (BSS 410)

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| <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 (Industrial Engineering)</a><br><a href="#">BEng (Industrial Engineering) ENGAGE</a> |
| <b>Prerequisites</b>          | No prerequisites.   |
| <b>Contact time</b>           | 1 discussion class per week, 3 lectures per week  |
| <b>Language of tuition</b>    | Module is presented in English  |
| <b>Department</b>             | Industrial and Systems Engineering  |
| <b>Period of presentation</b> | Semester 2  |

### Module content

A company's ability to remain competitive hinges increasingly on its ability to develop successful products. In practice this is often determined by how well the company performs systems engineering. Applying the principles of systems engineering allows designers to understand the big picture, i.e. how a product needs to perform technically as well as within its application domain, e.g. environmentally, human interfaces, and so on. This module equips the student with the relevant tools and process understanding to successfully apply systems engineering to product development. Some of these tools and processes include specification practices, requirements engineering, systems engineering management and verification and validation processes.

### Regulations and rules

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.



### **University of Pretoria Programme Qualification Mix (PQM) verification project**

The higher education sector has undergone an extensive alignment to the Higher Education Qualification Sub-Framework (HEQF) across all institutions in South Africa. In order to comply with the HEQSF, all institutions are legally required to participate in a national initiative led by regulatory bodies such as the Department of Higher Education and Training (DHET), the Council on Higher Education (CHE), and the South African Qualifications Authority (SAQA). The University of Pretoria is presently engaged in an ongoing effort to align its qualifications and programmes with the HEQSF criteria. Current and prospective students should take note that changes to UP qualification and programme names, may occur as a result of the HEQSF initiative. Students are advised to contact their faculties if they have any questions.