



University of Pretoria Yearbook 2025

Supply chain processes 781 (BLK 781)

Qualification	Postgraduate
Faculty	Faculty of Engineering, Built Environment and Information Technology
Module credits	16.00
NQF Level	08
Programmes	BEngHons specialising in Industrial Engineering BScHons in Applied Science specialising in Industrial Systems
Prerequisites	Industrial Engineering students may not register for this module.
Contact time	24 contact hours
Language of tuition	Module is presented in English
Department	Industrial and Systems Engineering
Period of presentation	Semester 1

Module content

Supply chain engineering is an area in which Industrial Engineering is often applied to execute, manage, or improve elements of product and service supply chains. This module introduces students to an integrated supply chain and exposes them to strategic supply chain planning and management decisions. It also introduces key activities, business processes and business decisions related to demand- and supply-side supply chain and operations management.

Module outline:

- Supply chain foundations
 - o Supply chain management overview
 - o Global dimensions of supply chains
 - o Introduction to supply chain reference models
 - o Aligning and integrating the supply chain
 - o Supply chain performance management
 - o Supply chain sustainability and reverse logistics
- Operations management
 - o Manufacturing planning and control framework
 - o Aggregate planning and master production scheduling
 - o Material requirement planning
 - o Inventory management and risk pooling
 - o Process selection and design
 - o Product and service design
 - o Strategic and operational capacity planning
 - o Production activity control
 - o Basic pull-based manufacturing flow control techniques (Introduction to lean and Theory of Constraints).
- Introduction to procurement principles.
- Demand-side supply chain management
 - o Demand management
 - o Order management and customer service
 - o Transportation management
 - o Warehousing operations

General Academic Regulations and Student Rules

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. The G Regulations are updated annually and may be amended after the publication of this information.

Regulations, degree requirements and information

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

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 (HEQSF) 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.