

University of Pretoria Yearbook 2018

Food engineering 353 (FST 353)

Qualification	Undergraduate
Faculty	Faculty of Natural and Agricultural Sciences
Module credits	18.00
Programmes	BSc Food Science
Prerequisites	FST 260 or TDH
Contact time	1 practical per week, 3 lectures per week
Language of tuition	Module is presented in English
Department	Food Science
Period of presentation	Semester 1

Module content

Lectures: Mass and energy balance. Heat transfer theory: Convection, conduction and radiation. Energy for food processing. Fluid flow and rheology. Unit operations: materials handling, cleaning, sorting, grading, peeling, disintegration, separation (e.g. membrane technology), pumping, mixing and forming, heating, concentration, drying, extrusion, refrigeration, freezing. Tutorials/practicals: Calculations on mass and energy balances, psychrometry, refrigeration and freezing.

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