

Report on Tshwane University of Technology (TUT) Engineering management Masters For PEESA III program, May 2021

The operation of the program has been impacted by the COVID pandemic. This has reduced the number of students enrolled, reduced the number of students actively engaged in research and hampered the ability for lecturers and professors to advise students. The number of students enrolled in taught modules peaked at over 50 at the beginning of last year, but at the start of 2021 semester the number is below 25. The COVID protocol has restricted the use of direct contact for surveys and questionnaires requiring some students to adjust their research plans. Other restrictions on access to industry sites has impacted the collection of data.

TUT encouraged conversion of courses to an online format. Much of the material for our taught modules had already been converted in preparation for a 2022 transition to online professional master's in engineering management. For example, the Supply chain management course was taught second semester 2020 totally online through our myTUTOR teaching/learning platform.

The process to introduce the professional master's degree is moving forward. PQM clearance was obtained in 2020 (from DHET). The Industrial engineering department is finalising work on the CHE documents – to be submitted later this year.

A major adjustment taking place in 2021 is the conversion of our online interactive myTUTOR platform from Blackboard to Brightspace. This has required adjustments on the part of both students and teachers that were unanticipated. The program conducted the following modules online in 2020 using our Blackboard based myTUTOR. All are now in the process of conversion to Brightspace.

First semester	Second semester
Engineering Business dynamics	Engineering Data Analysis
Research Methodology	Technical Venture Creation
Maintenance Engineering	Engineering Project Management
Quality Engineering	Life Cycle Management
	Supply Chain Management

The program graduated 5 students in 2020 and look to graduate 10 in 2021. This reflects a lower than desired graduation rate. This is due partly because many students stop after completed the taught modules. To improve the monitoring and guidance of the research project, we have engaged our post-doctoral researchers to serve as mentors and reviewers for our masters' students. This has improved retention and performance.