



POSTGRADUATE RESEARCH PROGRAMME IN PHYSICAL ASSET MANAGEMENT



Department of Industrial Engineering
Stellenbosch University



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POSTGRADUATE RESEARCH PROGRAMME IN PHYSICAL ASSET MANAGEMENT

The Asset Care Research Group provides an opportunity for prospective postgraduates to specialise in Physical Asset Management by studying for a Masters or Doctoral degree in Industrial Engineering or Engineering Management.

The Importance of Physical Asset Management

Physical Asset Management (AM) is about the systematic and coordinated activities through which organisations optimally and sustainably manage their assets over their respective life cycles. AM is not only about doing things to assets, but more so about extracting value from the assets to achieve the organisation's business objectives. AM is therefore multifaceted considering the strategic, tactical and operational aspects of an organisation's portfolio of assets.

AM has become considerably important in the modern economy. Higher performance demands are placed on physical assets, such as equipment and infrastructure, while there are business and regulatory pressures to lower costs, risks and operate assets in a health conscious, safe, environmentally and socially sustainable manner.

To support industry in managing physical assets these

challenges have led to the release of the ISO 55000 suite of standards and its predecessor PAS 55. Criticism of both these standards is that they provide guidance about "what" to do, but not about "how" to execute the guidelines. This has led to various developments such as the establishment of the Global Forum on Maintenance and Asset Management (GFMAM), defining the 39 asset management subjects and other asset management institutes which have developed custom models based on input from their member bases.

Globally AM practitioners are pursuing ISO 55000 compliance and practical guidance for extracting the value which AM has to offer. The need is however to pioneer methods, processes and technology applications to support AM activities horizontally across organisational activities and to support management vertically throughout the organisational hierarchy.

Research-based Programme in Physical Asset Management

With AM developments over the past decades more and more practitioners of AM have come to realise that the body of knowledge in the field has matured to such a level that there is diminished benefit in guarding this knowledge in an attempt to gain a competitive advantage. The AM fraternity has accepted that the sharing of knowledge and collaboration will ultimately advance the field.

The Asset Care Research Group (ACRG) was founded in 2011 with its focus areas being: to standardise, broaden, deepen and disseminate knowledge about AM. Since its inception the ACRG has established itself as a premium research destination for postgraduate AM thought

leadership with a comprehensive portfolio of research outputs and activities.

Based within the Faculty of Engineering and forming part of the Department of Industrial Engineering at Stellenbosch University the ACRG provides an opportunity for prospective graduates to specialise in the field of AM.

The M.Eng and PhD programmes with specialisation in Physical Asset Management are specifically aimed at thought leading individuals who wish to distinguish themselves amongst their peers as pioneers of and contributors towards the global AM body of knowledge.



Programme Objectives

The primary objective of this postgraduate programme is specialisation within a specific area of AM in order to become a subject matter expert. It is aimed at individuals who are already established and capable AM engineers who wish to distinguish themselves from their peers, as well as the next generation of AM thought leaders who will spearhead the future of AM.

The M.Eng programme is a research based programme, which requires the successful completion of a comprehensive thesis with an element of supplementary course work¹, while the PhD programme has no course work and only requires the completion of a dissertation.

The programme is not intended for students who wish to study a structured modular-based postgraduate programme for gaining knowledge in a wide array of AM subjects. For such training needs there are various tertiary and industry based service providers accredited by the Southern African Asset Management Association (www.saama.org.za).

¹ Course work is necessary to calibrate backgrounds and ensure common standard in research practices.

Programme Structure

The Masters and Doctoral programme options are to enrol for an M.Eng or PhD either in Industrial Engineering or in Engineering Management at the Department of Industrial Engineering at Stellenbosch University.

The choice between the study domains of Industrial Engineering and Engineering Management depends on the prospective student's preference. The former requires a stronger focus on the optimisation of AM processes and systems by using quantitative methods, while the latter has a stronger focus on management and decision making through the application of engineering principles to business and AM practices.

The M.Eng programme is on a National Qualifications Framework (NQF) level 9 and has a credit value of 180 South African Qualifications Authority (SAQA) credits. The credits translate to 1800 notional hours of study and would therefore require 18-24 months of full-time study. For part-time study 24-36 months would normally be required.

The PhD programme is on NQF level 10 and has a credit value of 360 SAQA credits. The credits translate to 3600 hours of study and would therefore require at least 36 months' study on a full-time basis. For part-time study a longer period would normally be required.

Admission Requirements and Research Opportunities

For more information about admission requirements and procedures visit

www.ie.sun.ac.za/prospective-postgraduates

For more information about research opportunities as part of the ACRG visit

www.ie.sun.ac.za/research/physical-asset-management/ or contact Dr Wyhan Jooste (wyhan@sun.ac.za).



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The scientific man does not aim at an immediate result. He does not expect that his advanced ideas will be readily taken up. His work is like that of the planter – for the future. His duty is to lay the foundation for those who are to come, and point the way. He lives and labours and hopes.

”

- Nikola Tesla (July 1934)

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www.ie.sun.ac.za/research/physical-asset-management/



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Pioneering the future of physical asset management