



Systems Engineering Management

Presented by the Graduate School of Technology Management, University of Pretoria

A project manager remains responsible and accountable for the success of a project whereas a systems engineer remains responsible for the systems engineering and other engineering activities of the project. The focus of this short course is therefore on **Systems Engineering Management**, where the delegates will be exposed to relevant management principles, processes and standards, and the development of the Systems Engineering Management Plan, generally known as the SEMP.

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Shifting knowledge to insight



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Course content

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| <p>Systems Engineering Management 2 days</p> <ul style="list-style-type: none"> • Overview of the system life cycle • Introducing management • Introducing project management models (PMBOK, PRINCE2, Agile project management such as SCRUM) • Systems engineering management models • Difference between project management and systems engineering management • Management responsibilities • Organising systems engineering management • Management metrics • Systems engineering management planning, formal plans • Technical design reviews and audits • Managing change • Case study | <p>Building High Performance Teams 3 days</p> <ul style="list-style-type: none"> • Leadership styles; identifying your own • Leadership vs. Management; what are the differences? • Organising for success • Role of organisational culture • Motivating your team • Decision making • Importance of communication • Taking ownership of a project • Managing stress; dealing with conflict • Behaviour patterns and their role; influencing behaviour patterns • Importance of team building • Assessing team performance • Case studies, practice sessions |
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Learning outcomes

Delegates who successfully complete the modules will be able to:

- Plan and structure the systems engineering effort of the project.
- Develop a coherent and effective SEMP, and understand its interfaces with the overall project plan.
- Identify and source high performing team members, structure and build a high performance systems engineering team.

Course fees

R21 336.00 per delegate (VAT incl.)

Course fees include all course material, lunch and refreshments.

Accreditation and certification

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This course is accredited by the Engineering Council of South Africa (ECSA) and course participants will be eligible to claim 5 Continuing Professional Development (CDP) points.

Registration and enquiries

Course Coordinator

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Course leader

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Course presenters



Dr Jörg Lalk (PrEng)

Senior lecturer

University of Pretoria Graduate School for Technology

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Dr Lalk participated in the founding of the university's new Institutional Research Theme on Energy. His research interests include systems engineering and the techno-economic modelling of energy systems. He has more than 30 years' experience in systems engineering, engineering management, project management and the management of strategic technology programmes in the aerospace, automotive, ICT, consulting and energy industries.

Memberships

- Senior member of the IEEE (Institution of Electrical and Electronic Engineers)
- Founding member and past-president of the South Africa Chapter of INCOSE (International Council of Systems Engineers)
- Associate-Director for Technical Review of INCOSE



Dr Louwrence Erasmus (PrEng)

Independent Consultant

Dr Erasmus has more than 20 years' experience in various national and international industries as an engineer. He is a principal systems engineer in the Integrative Systems Group of the Defence, Peace, Safety and Security business unit at the CSIR.

He also a senior lecturer with the Postgraduate School for Engineering Management at the University of Johannesburg in Systems Engineering and Engineering Management. His research interest is the underlying formal structures in enterprise and systems engineering using constructivist philosophy of science and their practical implications in the practice and management of engineering in complex environments.

Memberships

- Registered professional engineer with ECSA
- Senior member of IEEE and SAIEE
- LEAD Architecture Expert since 2014.

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