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Chair for Construction Engineering and Management

SHORT COURSE

CONSTRUCTION RISK MANAGEMENT

(CPD POINTS)

Block 1:- 22 – 23 February 2018

Block 2:- 09 – 11 May 2018

COURSE DESCRIPTION

A short course on Construction Risk Management will be presented at the Division in Construction Engineering and Management at the Department of Civil Engineering, Stellenbosch University. The course is offered in two blocks, on 22-23 February 2018 and from 9 to 11 May 2018. Industry participants can attend either one, two or both blocks. **CPD points** will be awarded for attending (**ECSA** and **SACPCMP**). During Block 2, participants have the option of only attending the first two days aimed at procurement practices.

Objectives:

The course provides delegates with a comprehension of the principles and concepts of risk management as performed by all parties involved in construction projects, including the client (owner), consultant and contractor. It aims to create an awareness of the advantages and needs of risk management. The objective is that students and attendees should be able to compile and use risk registers and prioritization matrices to manage typical construction risks. Different procurement practices are addressed to demonstrate how project risk is influenced by the choice of procurement model. Participants are exposed to more advanced risk management methods such as Monte Carlo analyses and other quantitative methods. The course finally aims to expose participants to commercial risk management software used in the construction environment.

Who should attend?

The course is aimed at persons in the construction industry who need a firm comprehension of construction risks and the role of procurement models. Representatives from client organizations, consultants and construction firms will all benefit from the course.

Course content:

Block 1:

- Risk management according to ISO 31000 and the Project Management Body of Knowledge (PMBOK).
- Typical construction risks as perceived by different project participants (client, consultant, contractor)
- Compilation of a risk register, prioritization matrices, management and monitoring of risks based on a quantitative approach
- Case studies used throughout as class assignments for group discussion

Block 2:

- Managing risk through procurement models:
 - o Public Private Partnerships (introduction and overview)
 - o Design build procurement (contractor, consultant)
- Principles of framework agreements
- Contractual risk and risk apportionment
- Quantitative methods including the Monte Carlo approach.



CONSTRUCTION RISK MANAGEMENT

Course Information

Date	Thursday 22 February 2018 – Friday 23 February 2018 (2 days) (Block 1) Wednesday 09 May 2018 – Friday 11 May 2018 (3 days) (Block2)
	Registration: 08:00 – 08:30 on Thursday, 22 February 2018 and 09 May 2018 respectively
Time	From 08:30 to 17:00 on Mondays to Fridays with light lunch and tea/coffee breaks
Place	Room S202, Civil Engineering Building, University of Stellenbosch Faculty of Engineering, Building for Civil (and Electronic & Electrical) Engineering, access from Hammanshand Road via Joubert Street or from Banhoek Street, Stellenbosch (Route map available on request)
Course Fee	R 4 300.00 / delegate – Block 1 only R 6 400.00 / delegate – Block 2 only R 4 300.00 / delegate – Block 2 Procurement Module only R10 000.00 Full course (5 days) R350 discount for Early Bird Registrations (on or before 09 February 2018) R 750.00 / Registered Postgraduate student in CEM (Block 1 & 2) and R 1 000.00 / Registered Postgraduate student in other engineering disciplines at Stellenbosch University (Block 1 & 2) Course Fee includes light lunch, tea/coffee and course notes (Transport & Accommodation:- Own arrangement) (Info available upon request)
Postal Address	Department of Civil Engineering, c/o H Bosman (S478), University of Stellenbosch, Private Bag X1, Matieland 7602
Website	www.civeng.sun.ac.za
Enquiries	Prof J A Wium Tel: 021 808 4348, Fax: 0865815756, janw@sun.ac.za Ms Tsholofelo Seroalo Tel: 021 808 4131, Fax: 0865815756, civilcourses@sun.ac.za



REGISTRATION FORM

COURSE: **Short Course - Construction Risk Management**

Thursday 22 February 2018 & Friday 23 February 2018 (2 days) (Block 1)

Wednesday 09 May 2018 – Friday 11 May 2018 (3 days) (Block 2)

TO REGISTER: Kindly complete this registration form and return to the Department of Civil Engineering.

Scan and e-mail to: tsholos@sun.ac.za
and copy
civilcourses@sun.ac.za

Alternatively mail to:
Department of Civil Engineering
c/o H Bosman (S478)
University of Stellenbosch
Private Bag X1
MATIELAND 7602

Attention: Tsholofelo Seroalo

- ♦ Upon receipt of a signed registration form, an invoice will be issued for the relevant course fee and faxed to the participant.
- ♦ The course fee may be paid electronically or by direct bank deposit (banking details are provided on invoice).
 - Please state invoice and debtor's number when making payment.
 - Forward proof of payment.

COURSE FEE: R10 000.00 / Delegate Full course
R9 000.00 / Delegate Full course (10% Early Bird registration: - on or before 09 February 2018)

R4 300.00 / Delegate Block 1 only (Including light lunch, tea/coffee, and course notes)

R6 700.00 / Delegate Block 2 only (Including light lunch, tea/coffee, and course notes)

R4 300.00 / Delegate Block 2 Procurement *Module* only (Including light lunch, tea/coffee, and course notes)

R750.00 / Registered Postgraduate student in CEM

R1 000.00 / Registered Postgraduate student in other engineering disciplines at Stellenbosch University (Block 1 & 2) (Fee includes lunch tea/coffee and course notes)

CLOSING DATE FOR REGISTRATIONS: FRIDAY, 09 FEBRUARY 2018 – BLOCK 1 (**10% penalty for late registration**)
FRIDAY, 07 MAY 2018 – BLOCK 2 (**10% penalty for late registration**)

CANCELLATIONS: *Written cancellations will be accepted with a 12% admin fee penalty if received no later than 4 working days prior to commencement of the course. Thereafter a cancellation fee of 25% of the applicable fee will be payable by the participant.*

ENQUIRIES: Tsholofelo Seroalo, Tel: (021) 808 4131, E-mail: tsholos@sun.ac.za/civilcourses@sun.ac.za

PERSONAL DETAILS										
Title:		Surname:		Full Name:			ID:		Ethnicity:	
Qualification	Highest		Year achieved		Institution			Field		
Tel:					Fax:					
Cell:					Email:					
COMPANY DETAILS										
Company Name:										
Postal Address:					Office Address:					
ATTENDANCE & PAYMENT DETAILS: For non-degree purposes (Draw a line through the options which do not apply)										
Attendance of course including light lunch, tea/coffee and course notes:					R10 000/delegate		R9 000/ (Early bird registration)			
					R4 300/delegate (Block 1)		R3 870/delegate (Early bird registration) (Block1)			
					R6 400/delegate (Block 2)		R5 760/delegate (Early Bird registration) (Block 2)			
					R 4 300.00 (Block 2 Procurement only)					
In whose name should the invoice be issued:					Company		Attendant			
Please specify any special dietary requirements:										
ATTENDANCE & PAYMENT DETAILS: For module purposes (Registered Postgraduate Students only)(Block 1 & 2)										
Student Number		Postgraduate Programme		Dept.		Block 1		Block 2		

I have read and I agree to the conditions of registration as stipulated above.

Signature: _____

Date: _____



The Division in Construction Engineering and Management

SHORT COURSE

CONSTRUCTION RISK MANAGEMENT

Block 1: 22-23 February 2018 (and Block 2: 09-11 May 2018)

PROGRAM

Block 1: 22 - 23 February 2018

Date	Time	Lecture topic	Lecturer
22/02/18	08h30	Introduction	
	08h30-09h20	Introduction to Risk management, risk types	Prof JA Wium
	09h30-12h50	Risk Management Frameworks and Models (ISO 31000 and PMBOK) Exercises	Prof JA Wium
	12h30-13h30	Lunch	
	13h30-15h00	Risk Management Models (cont.) (ISO 31000 and PMBOK) Exercises	Prof JA Wium
	15h00-15h20	Tea	
	13h20-17h00	Project participants : Client's risk, Contractor's risk, Consultant's	Prof JA Wium

Date	Time	Lecture topic	Lecturer
23/02/18	08h30-09h20	Case studies: Group work	Prof JA Wium
	09h30-10h20	Case studies: Group work	Prof JA Wium
	10h45-12h00	Group work feedback	Prof JA Wium
	12h00-13h00	Contractor's perspective of risk management	Schalk Loots
	13h00-13h45	Lunch	
	13h45-15h30	Design for safety	Prof JA Wium
	15h30-15h45	Tea	
	15h45-17h00	Student exercise and feedback	Prof JA Wium



Block 2: 9 – 11 May 2018

Date	Time	Lecture Topic	Lecturer
9 May	08h00	Registration	
	08h30	Introduction	
	08h40	Introduction to procurement models and the relationship between risk and procurement	Chris Jurgens
	10h20	Tea/coffee	
	10h45	Contractual risk and risk apportionment	Hannes Marais
	12h35	Lunch	
	13h15	Introduction to PPP Contextual Nuances in Structuring a PPP in South Africa	Dr Nthatisi Khatleli
	15h05	Tea/coffee	
	15h35	Contextual Nuances in Structuring a PPP in South Africa	Dr Nthatisi Khatleli
	16h30	Closure	
10 May	08h30	Understanding the Nature of PPPs and the latest international developments	Dr Nthatisi Khatleli
		Understanding the Nature of PPPs and the latest international developments	Dr Nthatisi Khatleli
	10h20	Tea/coffee	
	10h45-12h45	Understanding the Nature of PPPs and the latest international developments	Dr Nthatisi Khatleli
	12h45	Lunch	
	13h30	Design Build : Contractor's perspective:	Mike van Coller
	14h30	Design Build : Consultant's perspective:	Louis de Klerk
	15h30	Tea/coffee	
	15h45-16h45	Consultant's perspective of risk management	Louis de Klerk
11 May	08h30	Introduction to basic probability theory and statistics	Prof Jan Wium
	09h30	Decision trees: Theory & examples	Prof Jan Wium
	10h20	Tea/coffee	
	10h45	Decision trees: Value of information & Assignment	Prof Jan Wium
	12h35	Lunch	
	13h30-15h00	Monte Carlo : Simulation theory and modeling	Prof Jan Wium
	15h00-15h15	Tea/coffee	
	15h15-16h00	Monte Carlo : Sourcing expert opinion, common mistakes, interpreting the output	Prof Jan Wium
	16h00-17h00	Presentation of risk management software : @Risk	Werner Maritz