



UNIVERSITEIT•STELLENBOSCH•UNIVERSITY
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Department of Civil Engineering

Course G02: Soil Behaviour
A block release course over 5 days

19, 20, 22 & 23 March 2018 (4 days only)

Closing date for applications: 12 March 2018

Presenter:
Dr Marius de Wet

CPD credits: 4

Course Fee: R 4000.00

Registered PG students: R 500.00

Course Contents:

Mineralogy: The Chemical Composition of Soil
Particle size and shape, non-clay minerals. Clay minerals: structural units, isomorphous substitution, 1:1 minerals, 2:1 minerals. Clay genesis by weathering. Determination of mineral composition: XRD, DTA, SEM, TEM, glycol adsorption, etc. Clay-water electrolyte systems: double layer, interaction, cation exchange.
Fabric: The Physical Composition of Soil
Fine-grained soil: flocculation, de-flocculation, aggregation, and other particle associations. Coarse-grained soil: orientation, packing, contact. Determination of physical composition: SEM, TEM, XRF, XRD, pore size analysis, etc.
Soil Composition and Soil Properties
Importance of clay phase and organic components. Consistency of the clay phase. Swell and shrinkage: swell potential, swell pressure, models of swell mechanism, geotechnical testing.
Structure: The Stability of Fabric
Structure development, sensitivity and thixotropy, dispersivity, anisotropic behaviour, collapsing behaviour.
Compressibility
Factors and physical interactions during compression. Physical composition and structure.
Shear Strength and Deformation
Physical composition and structure. Residual shear strength, dilation, cohesion. Creep, stress relaxation.

Please note: Contents and programme may change at the lecturer's discretion without prior notice.

Registration form below.



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REGISTRATION (please fill in all requested info)

Title		Surname		Name	
Student No.	<i>(if applicable)</i>				
Company					
Address					
Tel			Cell		
Fax			E-mail		
Address invoice to: (name of person)			E-mail:		

Course Fee: R 4000.00
PG Students: R500.00

Please complete registration form return to:
civilcourses@sun.ac.za – subject “Soil Behaviour”

Closing date for applications: 12 March 2018

Cancellation policy

“Cancellations will be accepted in writing and without penalty, up to 10 working days prior to commencement of the course. Participants cancelling in writing less than 10 working days prior to commencement of the course will be liable for a 50% cancellation fee. Following registration without attendance and without written cancellation, delegates will be held responsible for the full course cost.”