



International Road Federation  
 Fédération Routière Internationale  
 Federación Internacional de Carreteras

## The International Road Federation

In association with



## SOUTH AFRICAN ROAD FEDERATION

*presents a Virtual 2-day course  
dealing with*

### CONCRETE TECHNOLOGY FOR SITE ENGINEERS AND TECHNICIANS ON ROAD CONSTRUCTION PROJECTS

**PRESENTER**

**Mr. Chris de Jager**

**Wednesday 20<sup>th</sup> – Thursday 21<sup>st</sup>  
April 2022**

**VIRTUAL Via MS Teams**

**Delegates can claim  
2 ECSA CPD points**

### ABOUT THE COURSE

The course will provide participants with a practical overview and sound knowledge of concrete technology and practices on site.

The course will also provide guidelines for the engineer or technician on procedures to follow on site.

### WHO SHOULD ATTEND

Attendance of the course would be beneficial to practitioners representing road authorities, consulting engineers, technicians, contractors, foreman involved in the production and construction of concrete on road pavement contracts.

The course is targeted at participants operating at NQF level 4 and above.

### Course programme will include:

#### A: BASIC CONCRETE TECHNOLOGY

##### 1. CONCRETE MATERIALS

- a. Cementitious materials
  - i. Portland cements
  - ii. Cement extenders, uses, properties – Importance.
- b. Aggregates, Mixing water, Chemical Admixtures.  
Uses and effects on concrete.

##### 2. PROPERTIES OF FRESH CONCRETE

- a. Stiffening and early hardening
- b. Workability
  - i. Consistence, Cohesion, compactability
  - ii. Assessing workability
- c. Bleeding
  - i. What, where, how
  - ii. Importance for the site engineer

##### iii. Controlling

- d. Plastic cracking
  - i. Plastic shrinkage and Plastic settlement cracks

##### 3. PROPERTIES OF HARDENED CONCRETE

- a. Properties
- b. Factors that influence the strength of concrete
  - i. Intrinsic factors
  - ii. Extrinsic factors
- c. Methods of measuring the strength

#### B: MANUFACTURING AND HANDLING OF CONCRETE ON SITE

##### 4. SITE PROCEDURES

- a. Batching
- b. Mixing
- c. Transporting
- d. Placing and Compaction and Finishing
- e. Curing procedures on site
- f. Mix design fundamentals.
- g. Concreting in cold and hot weather

##### 5. TESTING PROCEDURES.

- a. Testing procedures of fresh concrete and hardened concrete.
- b. Acceptance criteria fresh and hardened concrete.

### ***COSTS Including VAT***

**SARF/IRF Members US\$ 260**

**Non SARF/IRF Members US\$ 275**

Register online at: <http://www.sarf.org.za>  
***Terms and conditions***

***Closing date: Monday 18<sup>th</sup> April 2022***

***SARF Contact: Sybul / Tshidi  
Tel: 011 394 9025 / 1459***

**E-mail: [sybul@sarf.org.za](mailto:sybul@sarf.org.za) / [tshidi@sarf.org.za](mailto:tshidi@sarf.org.za)**