# **COURSE DETAIL**

# STRUCTURAL ANALYSIS I

### **Country**

South Africa

#### **Host Institution**

University of Cape Town

### Program(s)

University of Cape Town

#### **UCEAP Course Level**

**Upper Division** 

### **UCEAP Subject Area(s)**

Civil Engineering

### **UCEAP Course Number**

108

#### **UCEAP Course Suffix**

#### **UCEAP Official Title**

STRUCTURAL ANALYSIS I

### **UCEAP Transcript Title**

STRUCT ANALYSIS I

## **UCEAP Quarter Units**

5.00

#### **UCEAP Semester Units**

3.30

### **Course Description**

This course analyzes structural systems, conditions of equilibrium, and external and internal structural indeterminacies. Topics include analysis of statically determinate structures: determination of actions in trusses, beams, and frames; axial force, shearing force, and bending moment diagrams; calculation of displacements by the method of successive integration, virtual work method, buckling of struts and geometric instability, and thermal stresses. Computer-based methods for analyses of statically determinate structures are introduced.

### Language(s) of Instruction

English

### **Host Institution Course Number**

CIV2041S

#### **Host Institution Course Title**

STRUCTURAL ANALYSIS I

### **Host Institution Campus**

Engineering

# **Host Institution Faculty**

**Host Institution Degree** 

# **Host Institution Department**

Engineering

**Print**