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P-1065	2025	EOTSS1065-P	-1065 P/2025	00	CIVIL-p

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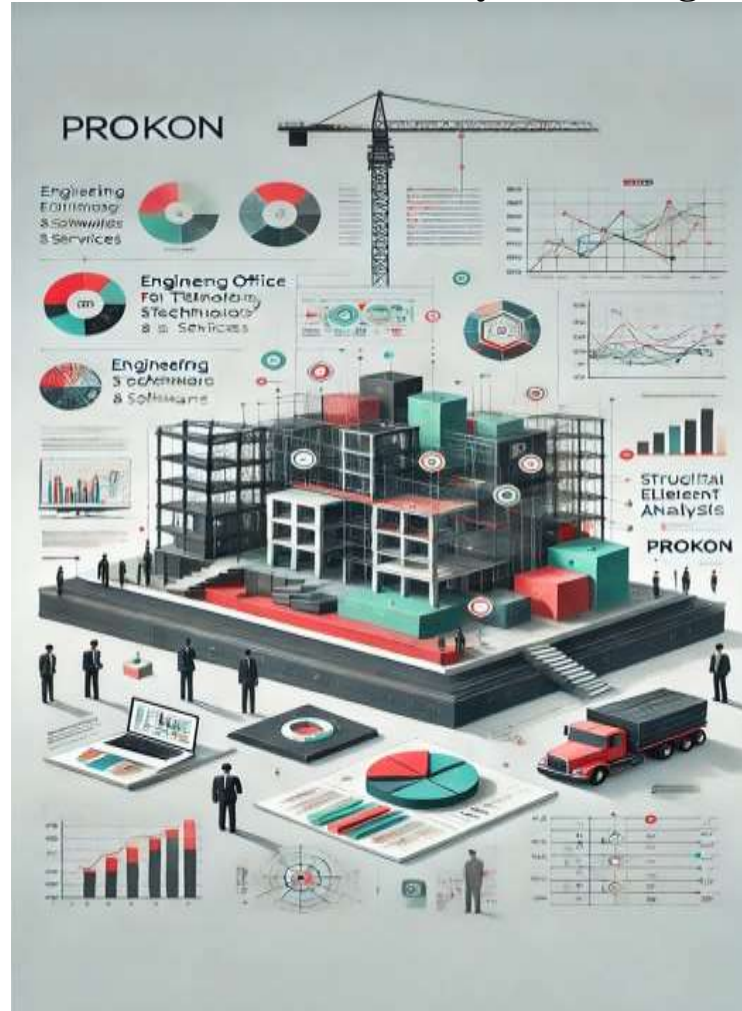
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المكتب الهندسي لخدمات التكنولوجيا والبرمجيات

Engineering office for Technology and Software Services

Prokon Structural Analysis & Design



Training Plan: Prokon Structural Analysis & Design Course Course Code: 1065-P

Course Objective:

To enable engineers to proficiently use **Prokon** software for **structural analysis and design**, including force analysis and structural modeling using both **traditional methods** and **Finite Element Analysis (FEA)**.

Main Branch: United building – E Shams –Front NBE
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Introduction:

Prokon is a versatile tool used in the analysis and design of structural systems. It supports both traditional and modern methods, including **frame analysis**, **FEA**, and design modules for concrete and steel structures. This course equips engineers to apply Prokon in compliance with global standards, making their workflow more efficient and compliant with modern codes.

Course Description:

This course is designed to provide engineers with comprehensive skills in using **Prokon**, a powerful structural analysis and design software. Starting with the basics of the interface and progressing to advanced topics like **FEA**, **foundation design**, and **reinforcement calculations**, this course will guide you through real-world applications and ensure you can confidently handle a wide range of engineering projects using Prokon.

Outlines:

Phase 1: Introduction to Prokon & Working Environment

Session 1: Introduction to Prokon

- What is Prokon and why is it used?
- Comparison with other structural software such as **SAP2000** and **ETABS**
- Overview of the user interface

Session 2: Exploring Core Tools

- Project setup and data input
- Load settings and structural specifications
- Types of analysis supported in Prokon

Phase 2: Basic Structural Analysis

Session 3: Load and Force Analysis

- Types of loads (Dead, Live, Seismic, Wind)
- Methods of load distribution across structural elements

Session 4: Analysis Using Finite Element Method (FEA)

- Modeling and analyzing structural frames
- Analyzing moments, internal forces, and deformations

Phase 3: Structural Elements Design

Session 5: Concrete Section Design

- Designing columns, beams, and slabs

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- Reinforcement calculations based on international codes (ACI, BS, Eurocode)

📌 Session 6: Steel Structures Design

- Calculations and design of steel sections
- Stability analysis and buckling design

📌 Phase 4: Advanced Analysis & Reporting

📌 Session 7: Foundation and Special Structures Analysis

- Analysis and design of shallow and deep foundations
- Design of retaining walls, isolated, and combined footings

📌 Session 8: Report Generation & Result Presentation

- Generating professional engineering reports
- Validating results and optimizing designs

✅ Course Outcomes:

- 🎯 **Mastering Prokon** for structural analysis and design
- 🏗️ Ability to execute projects according to international design codes
- 📊 Capable of performing advanced internal force analysis
- 📜 **Certified completion** to boost employability in the engineering field
- 🚀 Start now and level up your structural design and analysis skills!

🕒 Time Frame:

Total Duration: 8 Sessions (2 hours each)

Recommended Pace: 2 sessions per week

Total Weeks: 4 Weeks

Final Practical Assessment: Session 8

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