CIVIL ENGINEERING CHEAT SHEET

Basic formulas

Stress (σ) = F / A

Strain (ε) = ΔL / L

Hooke's Law: σ = E × ε

Bending Stress: σ = M × y / I

Torsional Stress: τ = T × r / J

Materials

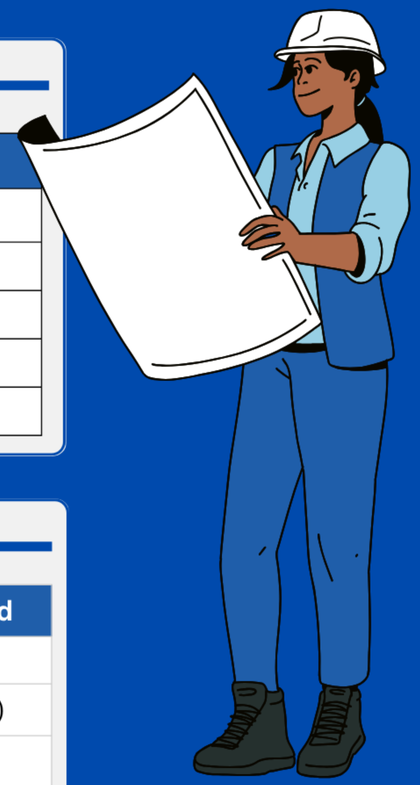
Material	Density (kg/m³)	Comp. Strength (MPa)
Concrete (C25/30)	2400	25
Steel (S355)	7850	355
Brick	1800 - 2000	2.5 - 10
Timber	500 – 1000	5–50

Units

From	To	Multiply By
1 m	3.28084 ft	× 3.28
1 ft²	0.0929 m²	× 0.0929
1 m³	35.3147 ft³	× 35.31
1 kg	2.20462 lb	× 2.20
1 MPa	145.038 psi	× 145

Design Codes

Purpose	Eurocode	ACI/U.S. Standard
Concrete Design	EN 1992 (Eurocode 2)	ACI 318
Steel Design	EN 1993 (Eurocode 3)	ACI 360-16(Steel)
Timber Design	EN 1995 (Eurocode 5)	NDS for Wood Construction
Geotechnical Design	EN 1997 (Eurocode 7)	ACI 336
Earthquake Loads	EN 1998 (Eurocode 8)	ACI 341 - 16
Wind Loads	EN 1991-1-4	ASCE 7



Software & Apps

Drawing/Drafting

- AutoCAD
- ArchiCAD

Project Scheduling

- Primavera P6
- MS Project

BIM Modelling

- Revit
- Trimble connect

Structural Design

- Telka Structures
- Prota Structures
- Prokon
- STAAD

Reports & Collaboration

- MS Word & Excel
- Adobe Acrobat
- BlueBeam

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