

Technician membership IPD core objectives Background reading list

This reading list has been prepared by the Institution library manager and is intended to be helpful for candidates preparing for their IPD professional review. It is intended to provide suggestions for background reading for each of the core objectives and does not constitute recommended reading formally approved by the Institution. It is not a prescribed list and having read everything on the list in itself does not demonstrate an understanding of each of the objectives.

There may be parts of the list that are aimed primarily at engineers in the UK. The Library Manager welcomes suggestions for variations to the list to suit members based in other countries.

1. PERSONAL

1.1 Institution

The Institution of Structural Engineers. **Royal charter, bye-laws, regulations, standing orders**

www.istructe.org/about/files/charter/RoyalCharter2009.pdf

The Institution of Structural Engineers. **Code of conduct and guidance notes,**

www.istructe.org/about/files/charter/Code_of_Conduct_and_Guidance_Notes.pdf

The Institution of Structural Engineers. **Annual Report,**

www.istructe.org/about/files/AnnualReport2007.pdf

The Institution of Structural Engineers. **Website,** www.istructe.org

Morton, R. and Ross, A. **Construction UK: introduction to the industry** (Blackwell, 2008)

1.2 Communication

Cresswell, H.B. **The Honeywood file: an adventure in building** (Academy Chicago, 2000)

The Institution of Structural Engineers. **Communication of structural design.** (The Institution of Structural Engineers, 1975)

Sayce, K. **What not to write: a guide to the dos and don'ts of good English** (Words at Work, 2006)

Scott, W and Billing, B. **Communication for professional engineers.** 2nd ed. (Thomas Telford, 1998)

Tunstall, G. **Managing the building design process.** 2nd ed. (Butterworth-Heinemann, 2006)

2. ENGINEERING

2.1 Structural solutions: conceptual design

Millais, M. **Building structures: from concepts to design.** 2nd ed. (Spon, 2005)

Popovic Larsen, O and Tyas, A. **Conceptual structural design: bridging the gap between architects and engineers** (Thomas Telford, 2003)

Wilson, R. **'Conceptual design'**. *The Structural Engineer*, 82 (4), 17 February 2004, pp17-19

2.2 Structural solutions: analysis and design

Arya, C. **Design of structural elements: concrete, steelwork, masonry and timber design to British Standards and Eurocodes.** 2nd ed (Spon, 2003)

Brohn, D. **Understanding structural analysis.** 3rd ed (New Paradigm Solutions, 2005)

Brooker, O. **Concrete buildings scheme design manual: a handbook for the IStructE chartered membership examination** (Concrete Centre, 2006)

Hambly, E C. **Structural analysis by example** (Archimedes, 1994)

IStructE. **The Achievement of structure adequacy in buildings** (IStructE, 1990)

IStructE. **Aims of structural design.** 2nd ed. (IStructE, 1987)

Jennings, A. **Structures: from theory to practice** (Spon, 2004)

MacKenzie, W.M.C. **Design of structural elements** (Palgrave Macmillan, 2004)

MacKenzie, W.M.C. **Examples in structural analysis** (Taylor & Francis, 2006)

MacLeod, I. **Modern structural analysis: modelling process and guidance** (Thomas Telford, 2005)

2.3 Production of engineering documents

Christy, C.T. **Engineering with the spreadsheet: structural engineering templates using Excel** (ASCE, 2006)

Goodchild, C.H. and Webster, R.M. **User guide to RC spreadsheets. V3.** (Concrete Centre, 2006)

Hayward, A, and Weare, F. **Steel detailers' manual.** 2nd ed (Blackwell Scientific, 2002)

IStructE. **Guidelines for the use of computers for engineering calculations** (IStructE, 2002)

IStructE. **Standard method of detailing structural concrete: a manual for best practice.** 3rd ed (IStructE, 2006)

Kyles, S.R. **AutoCAD workbook for architects and engineers** (Blackwell, 2008)

2.4 Materials

Cobb, F. **Structural engineer's pocket book** (Elsevier Butterworth-Heinemann, 2004)

Doran, D. ed. **Construction materials reference book** (Butterworth-Heinemann, 1994)

2.5 Environment

Addis, W. **Building with reclaimed components and materials: a design handbook for reuse and recycling** (Earthscan, 2006)

Beckmann, P. and Bowles, R. **Structural aspects of building conservation.** 2nd ed (Elsevier Butterworth-Heinemann, 2004),

Strange, J. and Langdon, N. **Contaminated land: investigation, assessment and remediation. ICE design and practice guide.** 2nd ed (Thomas Telford, 2008)

2.6 Construction

Doran, D. ed. **Site engineers manual** (Whittles, 2004)

IStructE. **Design and construction of deep basements including cut-and-cover structures** (IStructE, 2004)

Pitman, P. **External works and drainage: a practical guide** (Spon, 2001)

3. MANAGEMENT AND COMMERCIAL

3.1 Management skills

Fewings, P. **Construction project management: an integrated approach.** (Taylor & Francis, 2005)

Fryer, B. **The Practice of construction management: people and business performance.** 4th ed (Blackwell, 2004)

Harris, F. and others. **Modern construction management.** 6th ed (Blackwell, 2006)

3.2 Health and safety

CIRIA. **Site health handbook.** CIRIA Report C629 (CIRIA, 2004)

Construction (Design and Management) Regulations 2007. SI 2007/320

Health and Safety Commission. **Managing health and safety in construction: Construction (Design and Management) Regulations 2007. Approved code of practice. L144** (HSE Books, 2007)

Hughes, P and Ferrett, E. **Introduction to health and safety in construction.** 2nd ed (Elsevier Butterworth-Heinemann, 2006)

Masons. **Health and safety law for the construction industry.** 2nd ed. (Thomas Telford, 2004)

RIBA. **The Architect's plan of work** (RIBA, 2000)

Standing Committee on Structural Safety (SCOSS). **Biennial report** [<http://www.scoss.org.uk>]

3.3 Commercial awareness

Reinforced Concrete Council. **Economic concrete frame elements: a pre-scheme design handbook for the rapid sizing and selection of reinforced concrete frame elements in multi-storey buildings** (BCA, 1997; new edition due 2009)

SCI. **Comparative structure cost of modern commercial buildings. SCI Publication 137** (SCI, 2004)

3.4 Quality systems

Oakland, J and Marosszeky, M. **Total quality in the construction supply chain** (Butterworth-Heinemann, 2006)

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