

**Reading List  
2007-2008  
Level 3  
Recommended books for reference**

*<back to L3 main>*

***BEng Civil Design Project - (38 Hours)***  
**Recommended Reference Books**  
*All the following are published by BSI.*

General Guidance:-

PP 1990:2004 Guide to the structural Eurocodes for students of structural design  
ISBN 0 580 43575 X

Eurocodes:-

BS EN 1990:2002 Eurocode. Basis of structural design  
ISBN 0 580 40186 3

BS EN 1991-1-1:2002 Eurocode 1. Actions on structures. General actions. Densities, self-weight, imposed loads for buildings  
ISBN 0 580 40187 1

BS EN 1991-1-3:2002 Eurocode 1. Actions on structures. General actions. Snow loads  
ISBN 0 580 42307 7

BS EN 1991-1-4:2005 Eurocode 1. Actions on structures. General actions. Wind actions

BS EN 1991-2:2003 Eurocode 1. Actions on structures. Traffic loads on bridges  
ISBN 0 580 42879 6

BS EN 1992-1-1:2004 Eurocode 2. Design of concrete structures. General rules and rules for buildings  
ISBN 0 580 45191 7

BS EN 1993-1-1:2005 Eurocode 3. Design of steel structures. General rules and rules for buildings  
ISBN 0 580 46078 9

BS EN 1997-1:2004 Eurocode 7. Geotechnical design. General rules.  
ISBN 0 580 45212 3

### **BEng Electronic CAD (8 hours)**

#### **Recommended Books:**

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### ***BEng Mechanical CAD (9 hours)***

#### **Recommended Books:**

Sham, Tickoo, **Solidworks for Designers**, Release 2005, CAD/CIM Technologies, Shreveville, IN 46375USA, ISBN 1-932709-04-05

Lueptow, R. & Minbiolo, M, **Graphics Concepts with SolidWorks**, Prentice-Hall, 2004

### ***Civil and Structural Design (20 hours)***

#### **Recommended Books**

Designers' Guide to EN 1992-1-1. Eurocode 2: Design of Concrete Structures. Common rules for buildings and civil engineering structures. Beeby A.W. and Narayanan N, Thomas Telford, 2005, ISBN 0 7277 3105 X

Designers' Guide to EN 1993-1-1. Eurocode 3: Design of Steel Structures. General rules and rules for buildings. Gardner L and Nethercot D.A., Thomas Telford, 2004, ISBN 0 7277 3163 7

### ***MEng Civil Design Project - (38 Hours)***

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#### General Guidance:-

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ISBN 0 580 43575 X

#### Eurocodes:-

BS EN 1990:2002 Eurocode. Basis of structural design  
ISBN 0 580 40186 3

BS EN 1991-1-1:2002 Eurocode 1. Actions on structures. General actions. Densities, self-weight, imposed loads for buildings  
ISBN 0 580 40187 1

BS EN 1991-1-3:2002 Eurocode 1. Actions on structures. General actions. Snow loads  
ISBN 0 580 42307 7

BS EN 1991-1-4:2005 Eurocode 1. Actions on structures. General actions.  
Wind actions

BS EN 1991-2:2003 Eurocode 1. Actions on structures. Traffic loads on  
bridges

ISBN 0 580 42879 6

BS EN 1992-1-1:2004 Eurocode 2. Design of concrete structures.  
General rules and rules for buildings

ISBN 0 580 45191 7

BS EN 1993-1-1:2005 Eurocode 3. Design of steel structures. General rules  
and rules for buildings

ISBN 0 580 46078 9

BS EN 1997-1:2004 Eurocode 7. Geotechnical design. General rules.

ISBN 0 580 45212 3

### ***Coastal Engineering - (10 hours)***

#### **Reading List:**

Chadwick, A. & Morfett, J., *Hydraulics in Civil and Environmental Engineering*,  
2nd Edition, E. & F.N. Spon, 1996

### ***Communications - (20 hours)***

#### **Recommended Books:**

Green, **Radio Communication**, Longman, 2<sup>nd</sup> Edition, ISBN 0582369088  
Glover, I.A., and Grant, P.M., **Digital Communications**, Prentice Hall, 1998

### ***Compressible Flow - (10 hours)***

#### **Recommended Books for reference:**

Houghton, E.L. & Brock, A.E., **Tables for the Compressible Flow of Dry Air**  
White, F.M., **Fluid Mechanics**, McGraw Hill

### ***Control - (20 hours)***

#### **Recommended reading**

Wilkie, J., Johnson, M., Katebi, R., **Control Engineering: An introductory  
Course**, Palgrave, 2002

***Digital Electronics - (20 hours)***

**Recommended Books:**

Roth, C.H., **Fundamentals of Logic Design**, 4th Edition, West Publishing Company, 1992. ISBN 0 314 92218 0.

McCluskey, E.J., **Logic Design Principles: with Emphasis on Testable Semicustom Circuits**, Prentice Hall International, 1986, ISBN 013 5397685.

Lewin, D. and Protheroe D., **Design of Logic Systems**, 2nd Edition, Chapman and Hall, 1992, ISBN 0 412 42890 3

***Dynamics - (20 hours)***

**Recommended books:**

Jacques Grosjean, J., **Kinematics and Dynamics of Mechanisms**, 1<sup>st</sup> Edition, McGraw-Hill, 1991, ISBN 0-07-707242-1

Thomson, W.T., **Theory of Vibration with Applications**, 4<sup>th</sup> edition, Chapman & Hall, 1993, ISBN 0-412-54620-5

Rao, S.S., **Mechanical Vibrations**, 4<sup>th</sup> edition, Pearson, 2004, ISBN 0-13-10768-7

***Electrical Machines and Drives - (20 hours)***

**Recommended Books:**

Wildi, Theodore: **Electrical machines, drives, and power systems**. Prentice Hall International, ISBN0-13-571333-1

***Electronic CAD - (8 hours)***

**Recommended Books:**

None

***Electronic Circuits - (20 hours)***

**Recommended Books:**

Rashid, MH, **Microelectronic Circuits, Analysis and Design**, PWS Publishing Company,

Sedra AS, Smith KC, **Microelectronic Circuits**, Oxford University Press

***Electronic Manufacture - (20 hours)***

**Recommended Books:**

For reference:

Coombs, Clyde F., **Printed Circuits Handbook**, McGraw Hill 2001, ISBN 0071350160

***Finite Element Analysis Exercise - (15 hours)***

**Recommended book:**

Cook, R D, Malkus, D S and Plesha, M E  
Concepts and Applications of Finite Element Analysis  
John Wiley and Sons

***Geology for Engineers - (10 hours plus 4 field trips)***

**Recommended Books:**

Kearey, P., **The New Penguin Dictionary of Geology**, London: Penguin, 2001

Waltham, Tony. **Foundations of Engineering Geology**, London: Spon, 2002

***Hydraulics - (10 hours)***

**Recommended reading list for reference**

Henderson, F.M., **Open Channel Flow**, Macmillan, 1966

White, F.M., **Fluid Mechanics**, 3rd Ed., McGraw Hill, 1994

Chadwick, A. and Morfett, J., **Hydraulics in Civil and Environmental Engineering**, 2<sup>nd</sup> Edition, E. & F.N. Spon, 1996

***MANAGEMENT - (30 hours)***

***Finance (10 hours)***

***Quantitative Decision-Making (10 hours)***

***Technology Management (5 hours)***

***Entrepreneurship (5 hours)***

Recommended Books (for reference):

- Watson, D. and Head, A. **Corporate Finance: Principles and Practice**, FT Prentice Hall, 2003.
- Eckbo, B. E. **Handbook of Corporate Finance**, Elsevier, 2007.
- Clemen, R.T. **Making Hard Decisions: An Introduction to Decision Analysis**, Thomson Learning, 1997.
- Anderson, D.R., Sweeney, D.J. and Williams, T.A. **An Introduction to Management Science: Quantitative Approaches to Decision Making**, Thomson Learning, 2004.
- Render, B., Stair, R.M. and Hanna, M.E. **Quantitative Analysis for Management**, Prentice Hall, 2006.

- Harrison, N. and Samson, D. **Technology Management: Text and International Cases**, McGraw-Hill, 2001.
- Chell, E. **Entrepreneurship: Globalization, Innovation and Change**, Thomson Learning, 2000.
- Wickham, P.A. **Strategic Entrepreneurship**, FT Prentice Hall, 2006.
- Kuratko, D.F. and Hodgetts, R.M. **Entrepreneurship**, Thomson Learning, 2007.

### **Manufacture - (20 hours)**

#### **Recommended Books:**

Main texts:

Dieter, G.E., **Engineering Design - A Materials and Processing Approach**, McGraw-Hill, (2nd edition), 1991.

Boothroyd, G., Dewhurst and Knight, **Product Design for Manufacture and Assembly**, Marcel Dekker, 1994.

Boothroyd, G. and Knight, W.A., **Fundamentals of Machining and Machine Tools**, 3rd Edition, Marcel Dekker, 1989.

Boothroyd, G., **Assembly Automation and Product Design**, Marcel Dekker, 1992.

Oakland, J.S., **Total Quality Management**, Butterworth-Heinemann, 1989.

Pande, P.S., Neuman, R.P., Cavanagh, R.R., **The Six Sigma Way**, McGraw-Hill, 2000, ISBN 0-07-135806-4.

Further Reading:

Kalpakian, S., **Manufacturing Engineering and Technology**, 3rd edition, Addison

Wesley, 1995.

Rembold, Nnaji and Storr, **Computer Integrated Manufacturing and Engineering**, Addison Wesley, 1993.

**Materials - (10 hours)**

**Recommended Books:**

Higgins, R.A., **Properties of Engineering Materials**, Edward Arnold, 1994

OR

Callister, W.D., **Materials Science and Engineering – An Introduction**, John Wiley and Sons, 1996

**Microelectronics - (20 hours)**

**Recommended Books:**

Streetman, B.G., and Banerjee, S., **Solid State Electronic Devices**, 6<sup>th</sup> edition, Pearson Prentice-Hall, 2006, ISBN 0-13-149726-X

Sze, S.M., **Semiconductor Devices: Physics and Technology**, 2<sup>nd</sup> edition, John Wiley, 2001, ISBN 0-471-83704-0.

**Polluted Environments and Sustainability - (19 hours + 6 hours labs)**

**Reading list:**

Jackson, Tim. *Material concerns: pollution, profit and quality of life*, Routledge, 1996

Alloway, B.J. and Ayres, D.C. *Chemical principles of environmental pollution*, Blackie Academic and Professional, 1997

Hill, M.K. *Understanding environmental pollution*. Cambridge University Press, 1997

Azapagic et al. (Editors) *Sustainable development in practice: Case studies for Engineers and Scientists*. Wiley Press, 2004.

**Syllabus (10 lectures + 8x2 hours Laboratories)**

**Recommended Books:**

Kernighan, B.W., and Ritchie, D.M., **The Programming Language**, 2nd edition, Prentice Hall, 1988.

Alcock, D., **Illustrating C**, Cambridge University Press, 1992.

Bramer, B. and Bramer, S., **C for Engineers**, Edward Arnold, 1993.

### **Renewable Energy and the Environment - (20 hours)**

#### **Recommended Books for reference:**

Boyle, G., Everett, B. & Ramage, J., **Energy Systems and Sustainability: Power for a Sustainable Future**, Oxford University Press, ISBN 0-19-926179-2

Wildi, T., **Electrical Machines, Drives and Power Systems**, (5<sup>th</sup> Edition), Prentice Hall, ISBN 0-13-093083-0 (Note: The 6<sup>th</sup> Edition will be available soon)

Sen, P.C., **Principles of Electrical Machines and Power Electronics**, (2<sup>nd</sup> Edition), Wiley, ISBN 0-471-02295-0

### ***RF Engineering - (20 hours)***

#### **Recommended books:**

To be announced.

### ***Signal Processing - (20 hours)***

#### **Reading List**

Meade and Dillon, **Signals and Systems**, Chapman and Hall, Second Edition, 1995.

**Probability, Random Variables and Random Signal Principles**, Peyton Peebles J R, McGraw Hill. Second Edition.

**Signals and Systems**. Oppenheim, Willsky, Young. Second Edition.

### ***Software Engineering - (20 hours)***

#### **Recommended Books for reference:**

Sommerville, I., **Software Engineering**, 4th Edition, Addison-Wesley, 1992.

Stroustrup, B., **C++ Programming Language**, Addison-Wesley, 1997

### ***Stress Analysis - (10 hours)***

#### **Recommended Reading:**

Introduction to the Finite Element Method, Ottosen, N S and Petersson, H, Prentice Hall, 1992.

Getting Started with MATLAB: A Quick Introduction for Scientists and Engineers, Pratap, R, Oxford University Press, 2002.

### ***Structural Analysis - (24 hours)***

#### **Recommended Books:**

Coates, R.C., Coutie, M.G. and Kong, F.K., **Structural Analysis**, 3<sup>rd</sup> Edition, Chapman & Hall, ISBN 0-412-37980-5, reprinted 1996 (Durham Library shelfmark 624.04 COA).

Gere, J.M., **Mechanics of Materials** 5th edition (2000) Brooks Cole; ISBN: 0534371337 , or earlier editions by Gere & Timoshenko, (Durham Library shelfmark 593.3/.5 GER).

Astley, R.J., **Finite Elements in Solids and Structures**, Kluwer Academic Publishers; 1992, ISBN: 0412441608, (not in the library).

Ottosen, N.S. & Petersson, H., **Introduction to the finite element method**; Prentice Hall, 1992, ISBN: 0134738772, (Durham Library shelfmark 624.04.OTT).

#### **Available software:**

STRAND7, a high-quality commercial package available on the School and ITS PC's

OASYS GSA

### ***Surveying - (8 hours and field courses)***

#### **Recommended Books**

Bannister, A. and Raymond, S., **Surveying**, Harwell: Longman, ISBN 0470218452, Classmark 528.4 BAN

Bannister, A. and Baker, R., **Solving Problems in Surveying**, Longman, ISBN 0582236444

### ***Thermodynamics - (15 hours)***

#### **Recommended Books for reference:**

Haywood, J.B., **Internal Combustion Engines Fundamentals**, McGraw-Hill Book Company, 1988

Rogers, G. and Mayhew, Y., **Engineering Thermodynamics Work and Heat Transfer**, Longman, 4<sup>th</sup> Edition, 1992

***Turbomachinery - (15 hours)***

**Recommended Books:**

The use of books will be discussed at the start of the course

***Turbomachinery Project - (BEng Only)***

**Recommended Books:**

Further details will be provided when the assignment is set.