Level 7 Post Graduate Diploma in Engineering (9210-02)

Reading list
Civil Engineering
Electrical/Electronic Engineering
Mechanical Engineering
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Reading list
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1 About this document

This document contains the recommended reading materials learners can refer to when studying for the Level 7 Post Graduate Diploma in Engineering (9210-02).

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2 Recommended reading list for the Level 7 Post Graduate Diploma in Engineering (9210-02)

The reading materials are listed in the following format:

Title – Author(s) – Publisher – ISBN (where available)

Unit 111 Structural Analysis

- Elements of theory of structures; Hayman
- Fundamentals of structural analysis; West H.H.
- Understanding Structures; Seward D; Macmillan, 2nd edition, 1999
- Structures: Theory and Analysis; Williams M, Todd J; Macmillan, 1st edition, 1999

Additional Reading

- Students’ structural handbook; Morgan W.
- Structural engineering handbook; Gaylord, Edwin H
- Foundation analysis and design; Bowel J.E.

Unit 138 Quality and Reliability Engineering

- Practical Reliability Engineering; O’Connor; John Wiley; 0470844639
- Reliability Engineering: Theory and Practice; Alessandro Birolini
- Total Quality Management; Oakland; Butterworth-Heinemann; 0750609931
- Metrology for Engineers; Gayler; Shotbolt; 0304306126
- Practical Approach to Quality Control; Caplen; Random House; 0091735815
- Statistical Methods for Quality Improvement; Ryan; John Wiley; 0471197750
- Quality Management for Software; Daily; Blackwell NCC; 1855540827

Unit 200 Engineering Analysis

- Advanced Engineering Mathematics; Erwin Kreyszig; John Wiley and Sons; 0470119160
- Advanced Modern Engineering Mathematics; Glyn James, David Burley; Addison Wesley; 0201565196

Unit 201 Construction Engineering and Management

- Civil Engineering Construction Design and Management; Warren, Dene R
- Construction methods and Management; Nunnally SW
Additional Reading

- Heavy construction-planning, equipment and methods; Singh, Jagman; A. A. Balkema,
- Civil engineering building practice; Singh, Suraj
- Civil Engineering management; Wakhulu ON

Unit 202 Environmental Engineering

- Principles of environmental engineering and science; Davis Masten; McGraw-Hill
- Introduction to Environmental Engineering and Science; Masters; Prentice-Hall

Unit 203 Computational Mechanics using Finite Element Method

- Computational methods for transient analysis; Belytzchko Ted
- Computational Statistical Mechanics; Hoover Wm G

Additional Reading

- Boundary element methods in engineering; Brebbia CA
- Finite Element Methods; Superconvergence; Krizeg M

Unit 204 Geotechnical Engineering

- Foundation analysis and design; Bowles; McGraw Hill; 0079122477
- Principles of foundation Engineering; Das; PWS; 0534954030

Unit 205 Built Environment 1

- Building Services Engineering; Chadderton; Spon Press; 0415315352
- Heat and mass transfer in Building Services Design; Moss; Spon Press; 0419226508
- Engineering principals of Industrial Ventilation; RJ John Wiley; 0471637033
- Fire from first principles; Abrahams; Spoon Press; 0419152806
- Lamps and Lighting; Marsden; Butterworth-Heinemann; 0340646187

Additional Reading

- Thermal Comfort; Humphreys; MA Building Research
Unit 206 Structural Design

- Design of structural elements: Concrete, Steelwork, Masonry and timber Designs to British Standards and Eurocodes; Chanakya Arya
- Principles of Structural Design: Wood, Steel and concrete; Ram S, Gupta

Additional Reading

- Steel designers’ manual; Owens, Graham W., 2nd edition; Blackwell Science Pub.
- Concrete construction handbook; Waddell, Joseph J.; McGraw-Hill
- Concrete manual; CBS Pub
- Foundation design simply explained; Faber J.

Unit 207 Fluid Mechanics and Coastal Engineering

- Hydraulics in Civil and; Chadwick; Spon Press
- Environmental Engineering; Morfett
- Basic Coastal Engineering; Sorensen; Springer; 0387233326; 9780387233321
- Introduction to Nearshore; Svendsen; World scientific; 9789812561428
- Hydrodynamics; Imperial press; 9789812562043

Unit 208 Built Environment 2

- Building Services Engineering; Chadderton; Spon Press; 0415315352
- Heat and mass transfer in Building Services Design; Moss; Spon Press; 0419226508
- Engineering Principals of Industrial Ventilation; RJ John Wiley; 0471637033
- Fire from first principles; Abrahams; Spoon Press; 0419152806
- Lamps and Lighting; Marsden; Butterworth-Heinemann; 0340646187

Additional Reading

- Thermal Comfort; Humphreys; MA Building Research

Unit 209 Power System Economics and Planning

- Modern Power System Planning; X. Wang, J. R. McDonald; McGraw- Hill Publishing; 0-07- 707414-9
- Generation of Electrical Energy; Gupta BR; S. Chand Group Publications; 812190122
- Electrical Economics and Planning; T.W. Berrie; Peter Peregrinus Ltd; 0863412823
- Electrical Power Distribution; Publa A; McGraw Hill Publishing Company Ltd; 0071447830
Unit 210 High Voltage Engineering

- High Voltage Engineering -3rd edition; M.S. Naidu, V. Kamaraju; TMH Publications, e-book
- High Voltage Engineering Fundamentals; E. Kuffel, W.S. Zaengl, J. Kuffel; 0750636343

Unit 211 Fields and Network Theory

- Network Theory : Analysis and synthesis; Samarajith Gosh; Prentice –Hall of India Private Ltd; 81-203-2638-5, 2005
- Network Analysis; Van Valkenburg; Prentice Hall of India Pvt Ltd; e-book
- Electromagnetics; John Kraus; McGraw-Hill; 0-07-035621-1

Unit 212 Data Communication

- Data Communications and Networking (4th Edition); Behrouz A. Forouzan; McGraw Hill; 0-07-296775-7
- Data Communications, Computer Networks and Open Systems (3rd Edition); Halsall Fred; Addison-Wesley Publishing Company; 0201565064
- Computer Networks; Andrews S.Tannenbaum; Pearson Education; 0-13-066102-3
- ISDN and Broadband ISDN with Frame Relay and ATM (4th Edition); Stallings William; Prentice Hall International, Inc.; 0139737448

Unit 213 Digital System Design

- Digital Design; M Morris Mano, Michael D Ciletti; Prentice Hall; 0131989243
- Digital Design; Frank Vahid; Wiley, John and Sons; 0471467847

Unit 214 Telecommunication Systems Engineering

- Analog and Digital Communication Systems (4th Edition); Martin S. Roden; Prentice Hall; 0133720462
- Digital Communications; Peter Grant and Ian Glover; Prentice Hall; 13-9780135653913

Unit 215 Modern Control Systems

- Modern Control Systems; Dorf R and Bishop R; Pearson Education Inc.; 0132270285
- Modern Control Engineering; Katsuhiko Ogata; Prentice Hall; 013656738; 9780132270281
Unit 216 RF and Microwave Engineering

- Electromagnetic Field Theory Fundamentals; Guru and Hiziroglu; 0521116023
- Telecommunications Engineering; Dunlop and Smith; 0748740449
- Microwave Technology; Dennis Roddy; Prentice Hall; 0835943909;
- Microwave Devices and Circuits; Samuel Y Liao; Prentice Hall; 81-203-0699-6
- Antenna Theory: Analysis and Design; C A Balanis; John Wiley and Sons; 9971-51-233-5

Unit 217 Power Electronics

- Power Electronics: Circuits, Devices and Applications; Muhammad H. Rashid; Prentice Hal; 0131011405
- Power Electronics: Converters, Applications, and Design; Ned Mohan, Tore M, William P Robbins; Wiley, John and Sons, Incorporate; 0471226939

Unit 218 Internet Technologies

- The Internet – Illustrated Introductory (3rd edition); Perry J et al.; Course Technology; 0760061580
- Web Programming: Building internet applications (3rd edition); Bates C; John Wiley and Sons Inc; 0470017759
- Web security, Privacy and Commerce (2nd edition); Garfinkel S, Spafford G; O’Reilly UK; 0596000456
- PHP for the World Wide Web; Ullman L; Visual QuickStart Guide; March 2011
- Applied Cryptography: Protocols, Algorithms and Source Code in C; Schneier B; John Wiley and Sons Inc ; 0471117099
- Secrets and Lies: Digital Security in a Networked World; Schneier B; John Wiley and Sons Inc; 0471253111

Unit 219 Computer System Engineering

- 3D Computer Graphics; Watt; Addison Wesley; 0201398559
- ARM System-on-Chip Architecture; Furber; Addison Wesley; 0201675196
- Asynchronous Circuit Design; Myers; John Wiley and Sons Inc; 047141543X
- Asynchronous Digital Circuit Design; Birtwhistle, Davis; Springer-Verlag Berlin; 3540199012
- Computer Architecture: A Quantitative Approach; Hennessy, Patterson; Morgan Kaufmann; 1558603298
- Image Processing, Analysis and Machine Vision; Sonka et al; PWS Publishing; 053495393x
- Mobile Robotics: A Practical Introduction; Springer-Verlag UK; 1852331739
- Multiprocessor Methods for Computer Graphics Rendering; Whitman; Jones and Bartlett; 0867202297
Unit 220 Computational Mechanics Using FEM

- Introduction to Finite Elements in Engineering; Chandrupatla TR, Belegundu AD; Prentice Hall; 0131784536
- Finite Element Modelling for Stress Analysis; Cook RD; John Wiley and Sons Inc; 0471107743
- The Finite Element Method, A Practical Course; Liu GR, Quek SS; Butterworth-Heinemann; 0750658665

Additional Reading

- Finite Elements in Solids and Structure; Astley RJ Kluwer; Academic; 0412441608
- An Introductory Guide to Finite Element Analysis; Becker AA; Professional Engineering; 1860584101
- Solutions Manual for the Analytical Problems; Cook RD; John Wiley and Sons Inc; 0471111473
- Applied Numerical Analysis Gerald CF; Wheatley PO; Addison-Wesley; 0201474352

Unit 221 Heat and Mass Transfer

- Chemical Engineering: Fluid Flow, Heat Transfer and Mass Transfer v.1; Coulson, Richardson; Butterworth – Heinemann; 0750644443
- Problems in Heat and Mass Transfer; Backhurst, J.R., Harker, J.H., Porter; J.E. Edward Arnold; 0713133279
- Fundamentals of Heat and Mass Transfer, Incroperal; Frank P., Dewitt, David P.; John Wiley; 047130460

Additional Reading

- Transport Phenomena; Beek, Mutzall and Van Heuven; John Wiley; 0471999903
- Engineering Calculations in Radiative Heat Transfer; Gray, Muller; Pergamon Press; 0080177867

Unit 222 Mechanical Engineering Design

- Machine Design by P.C. Sharma and D.K Aggarwal
- Fundamentals of Machine Component Design by Robert B. Juvinall
- Shigley’s Mechanical Engineering; Design, Richard Budynas, Keith Nisbett; McGraw Hill
- Standard Handbook of Machine Design; Joseph Shigley, Charles Mischke; McGraw Hill

Additional Reading

- Viscosity Variations of Oils with Temperature; E.W. Dean and G.H.B. Davis
- Theory and practice of Lubrication for Engineers; D.D. Fuller
Unit 223 Mechatronics

- Mechatronics – Electronic Control Systems in Mechanical and Electrical Engineering; W Bolton
- Mechatronics: An Integrated Approach [Hardcover]; Clarence W. De Silva
- Mechatronics: Principles and Applications; Godfrey Onwubolu

Additional Reading

- Mechatronic systems: fundamentals; Rolf Isermann
- The Mechatronics handbook; Robert H. Bishop; ISA–The Instrumentation, Systems, and Automation Society
- Mechatronics in Engineering Design and Product Development; Dobrivoje Popović, Ljubo Vlačić

Unit 224 Dynamics of Mechanical Systems

- Theory of Machine; S S Rattan
- Mechanics of Machines; G H Ryder, M D Bennet
- Engineering Mechanics Statics and Dynamics; Irving H Shames
- Solution of Problems of Mechanics of Machines Volume I; Anvoner
- Digital Control Systems: Design, Identification and Implementation
- Modern Control Systems Solution manual; Richard C Dorf and Robert H Bishop
- Modern Control System Theory and Design; Stanley M. Shinners
- Modern Control Engineering, 5th Edition; Katsuhiko Ogata; Prentice Hall; 9780136156734

Unit 225 Advanced Manufacturing Technology

- Automation, Production Systems and Computer Integrated Manufacturing; Groover; US Import and PHIPEs; 0130546100
- Design for Manufacturing and Assembly: Concepts, Architectures; Kluwer; Academic Publishers Chapman, Hall; 0412781905
- Metal Cutting and High Speed Machining; Dudzinski, Molinari, Schulz, Kluwer, Academic/Plenum; 0306467259
- Rapid Prototyping and Manufacturing: Fundamentals of Stereo Lithography; Jacobs, P.; Society of Manufacturing Engineers; 0872634256
- Manufacturing Engineering and Technology; Serope Kalpakjianand Steven Schmid; Pearson; 978 981 068144 9

Additional Reading

- Laser Metrology and Machine Performance: VI; Ford; DG WIT Press; 1853129909
- Materials and Processes in Manufacturing; DeGarmo; John Wiley; 0471429449
Unit 226 Design and Operation of Marine Vehicles

- Basic Ship Theory, Vol. 1; Rawson and Tupper; Butterworth-Heinemann; 0750653965
- Basic Ship Theory, Vol. 2; Rawson and Tupper, Butterworth-Heinemann; 0750653973
- Introduction to Naval Architecture; Tupper, Butterworth-Heinemann; 0750625295
- Principles of Naval Architecture, Vol. 1; Lewis (Ed.); SNAME; 0939773007
- Principles of Naval Architecture, Vol. 2; Lewis (Ed.); SNAME; 0939773015
- Principles of Naval Architecture, Vol. 3; Lewis (Ed.); SNAME; 0939773023
- Ship Design and Construction, Vol. 1; Lamb (Ed.); The Society of Naval Architects; 0939773406
- Ship Design and Construction, Vol. 2; Lamb (Ed.); The Society of Naval Architects; 0939773414
- Marine Engineering; Harrington (Ed.); SNAME; 0939773104

Additional Reading

- Ship Design for Efficiency and Economy; Schneekluth, Bertram; Butterworth-Heinemann; 0750641339
- Elements of Shipping Branch; Nelson; Thornes; 0412604604

Unit 227 Automobile Engineering

- Advanced Vehicle Technology; Heinz Heisler
- The Motor Vehicle; T.K. Garrett, K. Newton, W. Steeds
- Understanding Automotive Electronics; William Ribbens
- Diagnosis and Troubleshooting of Automotive Electrical, Electronic, and Computer Systems; James D. Halderman

Unit 228 Aerospace Engineering

- Airplane Performance, Stability and Control; Perkins, C. D., and Hage, R. E.; Wiley Toppan, 1974
- Aircraft Stability and Response; Babister, A.W.; Pergamon Press, 1980
- Gas Turbines and Jet and Rocket Propulsion; Mathur, M., and Sharma, R. P.; Standard Publishers, New Delhi, 1988
- Aerothermodynamics of Gas Turbine and Rocket Propulsion; Gorden, C. V.; AIAA Education Series, New York, 1986

Additional Reading

- Aerodynamics, Aeronautics and Flight Mechanics; McCormik, B. W.; John Wiley, 1995