



# **AICTE RECOMMENDED LIST OF SUGGESTED BOOKS OF INDIAN AUTHORS & PUBLISHERS**

## **FOR UNDERGRADUATE DEGREE COURSES IN ENGINEERING & TECHNOLOGY [FEBRUARY 2018]**



**ALL INDIA COUNCIL FOR TECHNICAL EDUCATION  
Nelson Mandela Marg, Vasant Kunj, New Delhi 110 070**

[www.aicte-india.org](http://www.aicte-india.org)



# FIRST YEAR UNDERGRADUATE DEGREE COURSES

## BASIC SCIENCE COURSES

### List of Recommended Books:

#### **BSC101 – Physics**

1. Engineering Physics, Malik and Singh, Tata Mc Graw Hill
2. Engineering Physics, Naidu, Pearson
3. Mechanics, Mathur, S.Chand Publishing
4. Classical Mechanics, Upadhyaya, Himalaya Publishing House
5. Classical Mechanics, G. Aruldas, PHI
6. Engineering Physics, Gupta & Gaur, Dhanpat Rai
7. Quantum Mechanics, Ajay Ghatak S. Lokanathan, Trinity
8. Quantum Mechanics: A Text Book for undergraduates, Mahesh C Jain, TMH
9. Text Book of Ruantum Mechanics, M. Mathews & Venkatesan, TMH
10. Electromagnetic Theory, Prabir K. Basu & Hrishikesh Dhasmana, AneBooks
11. Fundamentals of Electromagnetic Theory, Khunita, PHI
12. A Text Book of Optics, Avadhanulu, S. Chand
13. Optics, Ajoy Ghatak, TMH
14. Modern Physics for Engineers, S.P. Taneja, R. Chand
15. The Physics of waves and Oscillations, N.K. Bajaj, TMH

#### **BSC102 – Chemistry-I**

1. Engineering Chemistry, Satyaprakash & Manisha Agrawal, Khanna Book Publishing, Delhi
2. A Text Book of Engg. Chemistry, Shashi Chawla, Dhanpat Rai & Co. (P) Ltd.
3. Essentials of Physical Chemistry, Bahl&Tuli, S.Chand Publishing
4. Applied Chemistry, Sunita Rattan, Kataria
5. Engineering Chemistry, Baskar, Wiley
6. Engineering Chemistry – I, D. Groukrishana, Vikas Publishing
7. Laboratory Manual Engg. Chemistry, Anupma Rajput, Dhanpat Rai & Co.

#### **BSC103 – Mathematics – I**

1. Advanced Engineering Mathematics, Chandrika Prasad & Reena Garg, Khanna Book Publishing Co. (P) Ltd., Delhi (ISBN: 9789386173522)
2. Engineering Mathematics for first year, Veerarajan T., Tata McGraw-Hill
3. Higher Engineering Mathematics, Ramana B.V., Tata McGraw
4. Differential Calculus Shanti Narayan & Dr. P.K. Mittal, S.Chand Publishing
5. A Course & Mathematical Analysis (ISBN: 9788121904728), Narayan & Mittal, S.Chand
6. Elements of Mathematical Analysis, R.Agor, (ISBN: 9789382609599)
7. Integral Calculus Shanti Narayan & Dr. P.K. Mittal, (ISBN: 9788121906814), S.Chand
8. A Textbook of Matrices, Narayan & Mittal, (ISBN: 9788121925969), S.Chand
9. Advanced Engineering Mathematics (ISBN: 9788120336094), Sashtry, PHI
10. Engineering Mathematics – I, Reena Garg, Khanna Book Publishing



### **BSC103 – Mathematics – II**

1. Advanced Engineering Mathematics, Chandrika Prasad & Reena Garg, Khanna Book Publishing
2. Higher Engineering Mathematics, Ramana B.V., Tata McGraw Hill
3. Advanced Engineering Mathematics (ISBN:9788120336094), Sashtry, PHI

## **ENGINEERING SCIENCE COURSES**

### **List of Recommended Books:**

#### **ESC101 – Basic Electrical Engineering**

1. Basic Electrical Engineering, Ritu Sahdev, (ISBN: 9789386173492), Khanna Book Publishing
2. Basic Electric Engineering, DP Kothari & Nagrath, Tata McGraw Hill
3. Basic Electrical Engineering, Mittle & Mittal, Tata McGraw Hill
4. Basic Electric Engineering, DC Kulshrehtra, Tata McGraw Hill

#### **ESC102 – Engineering Graphics and Design**

1. Engineering Graphics & Design, Jain, Maheshwary, Gautam, Khanna Publishing House
2. Engineering Drawing, ND Bhat, Charotar Publishing House
3. Engineering Drawing and Computer Graphics, Shah, Pearson
4. Textbook on Engineering Drawing, Narayana, Scitech Publishers
5. Engineering Graphics, Agarwal & Agarwal, TMH

#### **ESC103 – Programming for Problem Solving**

1. Programming in ANSI in C, E Balaguruswamy, Tata McGraw Hill
2. Computer Concepts and Programming in C, R.S. Salaria, Khanna Publishing
3. Let us C, Yashavant P. Kanetkar, BBP Publications, Delhi

## **HUMANITIES & SOCIAL SCIENCES**

### **List of Recommended Books:**

#### **ESC104- Workshop Manufacturing Practices**

1. Basic Manufacturing Process, Mehta & Gaira, Viva Books
2. Elements of Workshop Technology, Hajra & Choudhary, Media Promoters
3. Workshop Practices, HS Bawa, Tata Mc Graw Hill
4. Manufacturing Technology, Vol.1,2 and 3, PN Rao, TMH

#### **HSMC101 – English**

1. Technical Communication, Meenakshi Raman & Sangeeta Sharma, Oxford University Press
2. Effective Communication Skills, Kulbushan Kumar, Khanna Publishing House, Delhi
3. Communication Skills, Pushplata, Sanjay Kumar, Oxford University Press



# CIVIL ENGINEERING

## SEMESTER – III (SECOND YEAR)

### List of Recommended Books:

#### **ESC202 – Basic Electronics**

1. Basic Electronics, Santiram Kal, Prentice Hall
2. Basic Electronics, BL Thareja, S.Chand Publishing
3. All-in-One Electronics Simplified, A.K. Maini, Khanna Book Publishing

#### **ESC109 – Biology for Engineers**

1. Biology for Engineers (ISBN: 9781121439931), TMH

#### **ESC203 – Computer Aided Civil Engineering Drawing**

1. Civil Engineering Drawing, Sharma & Gurucharan Singh, Standard Publishers
2. A Course in Civil Engineering Drawing, Sikka, S.K. Kataria & Sons
3. Engineering Drawing, Dhanarajay A Jolhe, Tata McGraw Hill

#### **ESC205 – Engineering Mechanics**

1. Engineering Mechanics, D.S. Bedi, Khanna Book Publishing Co. (P) Ltd., Delhi
2. Engineering Mechanics, R. S. Khurmi, S.Chand Publishing
3. A Textbook of Engineering Mechanics, R.K. Bansal, Laxmi Publications
4. Engineering Mechanics, Sharma, Pearson

#### **ESC212 – Energy Science & Engineering**

1. Energy Technology, OP Gupta, Khanna Book Publishing Co. (P) Ltd., Delhi
2. Energy Engineering & Management, Chakrabarti A, PHI

#### **BSC225 – Life Science**

1. Life Sciences, Vol-I, II, Pranav Kumar, Pathfinder Publication

#### **BSC201 – Mathematics – III**

1. Advanced Engineering Mathematics, Chandrika Prasad & Reena Garg, Khanna Publishing
2. Higher Engineering Mathematics, Ramana B.V., Tata McGraw Hill
3. Advanced Engineering Mathematics (ISBN:9788120336094), Sashtry, PHI
4. Discrete Mathematics and Its Applications, S. Chakraborty & B.K. Sarkar, Oxford

#### **HSMC251 – Introduction to Civil Engineering**

1. Basic Civil Engineering, Palanichamy, McGraw Hill
2. Basic Civil Engineering, Satheesh Gopi, Pearson Publishers



## SEMESTER – IV (SECOND YEAR)

### List of Recommended Books:

#### **ESC209 – Mechanical Engineering**

1. Basic Mechanical Engineering, M.P. Poonia, S.C. Sharma & T.R. Banga, Khanna Publishing House
2. Basic Mechanical Engineering, G. Shanmugam & S. Ravindran, Mc Graw Hill
3. Basic Mechanical Engineering, Pravin Kumar, Pearson

#### **PCC-CE201 – Instrumentation & Sensor Technologies for Civil Engineering Applications**

1. Electronics Measurements & Instrumentation, J.G. Joshi, Khanna Publishing House
2. A Course in Electronics Measurements and Instrumentation, A.K. Sahwney, Dhanpat Rai

#### **PCC-CE202 – Engineering Geology**

1. Text Book of Engineering Geology, N. Chenna Kesavulu, Macmillan Publishers
2. Engineering Geology for Civil Engineers, Varghese P.C, PHI
3. Engineering and General Geology, Parbin Singh, SK Kataria & Sons
4. Engineering Geology, Subinoy Gangopadhyay, Oxford University

#### **PCC-CE203 – Disaster Preparedness & Planning**

1. Disaster Management, S.C. Sharma, Khanna Publishing House
2. Disaster Management, Ghosh G.K., APH Publishing Corporation
3. Handbook of Disaster Management, Singh B.K., Rajat Publication
4. Disaster Management in India, A.K. Singh, New Royal Book Company

#### **PCC-CE204 – Introduction to Fluid Mechanics**

1. Fluid Mechanics, Sadhu Singh, Khanna Books, Delhi
2. Fluid Mechanics, RK Bansal, Laxmi Publications
3. Fluid Mechanics, Modi & Seth, Standard Publishers
4. Fluid Mechanics, Hydraulics and Hydraulic Machines, KR Arora, Standard Publishers Distributors

#### **PCC-CE205 – Introduction to Solid Mechanics**

1. Strength of Materials, D.S. Bedi, Khanna Publishing House
2. Strength of Materials, R Subramanian, Oxford University Press
3. Strength of Materials, RK Bansal, Laxmi Publications

#### **PCC-CE206 – Surveying & Geomatics**

1. Advanced Surveying, Madhu & Gobi, Pearson India
2. Geomatics Engineering, Arora & Badjatia, Nem Chand & Co.
3. Surveying Vol.-I, II, III, BC Punamia, Laxmi Publications
4. Surveying, Vol.-I, II, III, K.R. Arora, Standard Book House

#### **PCC-CE206 – Materials, Testing & Evaluation**

1. Highway Materials and Pavement, Khanna & Justo, Nemchand & Bros.



### **MC-CE207– Management – I (Organizational Behaviour)**

1. A Textbook of Organizational Behaviour, CB Gupta, S.Chand Publications
2. Organizational Behaviour, LM Prasad, Sutan Chand and Sons

### **SEMESTER – V (THIRD YEAR)**

#### **List of Recommended Books:**

#### **PCC-CE301 – Mechanics of Materials**

1. Structural Analysis, R. Agor, Khanna Publishing House
2. Mechanics of Materials, BC Punmia & A.K. Jain, Laxmi Publications

#### **PCC-CE302 – Hydraulic Engineering**

1. Fluid Mechanics & Hydraulic Machines, SS Rattan, Khanna Publishing House
2. Hydraulic and Fluid Mechanics, PN Modi & SM Seth, Standard Book House
3. Fluid Mechanics, Dr K Subramanya, TMH
4. Fluid Mechanics and Machinery, CSP Ojha, R Berndtsson & P.N. Chandramouli, Oxford University
5. Fluid Machinery, Sadhu Singh, Khanna Publishing House, Delhi

#### **PCC-CE303 – Structural Engineering**

1. Advanced Structural Analysis, A.K. Jain, Nem Chand Bros.
2. Prestressed Concrete, Srikant B. Vanakudre, Khanna Publishing House
3. Design of Prestressed Concrete, Krishnan Raju, Tata McGraw Hill
4. Design of Steel Structures, N. Subramanian, Oxford University Press
5. Reinforced Concrete Vol. II, H.J. Shah, Charotar Publications
6. Structural Analysis, R. Agor, Khanna Publishing House

#### **PCC-CE304 – Geotechnical Engineering**

1. Principles of Geotechnical Engineering, Braja Das, Cengage
2. Basic and applied Soil Mechanics, Rajan & Rao, New Age International Publishers
3. Soil Mechanics & Foundation Engineering, Arora KR, Standard Publishers

#### **PCC-CE305 – Hydrology & Water Resources Engineering**

1. Engineering Hydrology, Subramanayan, McGraw Hill
2. Applied Hydrology, KN Muthreja, McGraw Hill

#### **PCC-CE306 – Environmental Engineering**

1. Environmental Engineering, S.C. Sharma, Khanna Publishing House
2. Basic Environmental Engineering, R.C. Gaur, Newage Publications
3. Water Resources Engineering, PN Modi, Standard Publishers
4. Environmental Engineering, Dr. AK Jain (ISBN: 978-93-86173560), Khanna Publishers
5. Irrigation Water Power & Water Resource Engineering, Arora, Standard Publishers

#### **PCC-CE307 – Transportation Engineering**

1. Transportation Engineering, L.R. Kadiyali, (ISBN: 978-93-82609-85-8), Khanna Publishing
2. Principles of Transportation Engineering, Chakrobarty, PHI Learning
3. Highway Engineering, Khanna & Justo, Nemchand & Bros.
4. Principles of Transportation Engineering, Partha Chakraborty, PHI Learning



### **HSMC255 – Professional Practice, Law & Ethics**

1. A Foundation Course in Human Values and Professional Ethics, R.R. Gaur, R. Sangal, G.P. Bagaria, Excel Books, Delhi
2. Professional Ethics and Human Values, Premvir Kapoor, Khanna Book Publishing

### **MC-1 – Constitution of India**

1. Introduction to Constitution of India, D.D. Basu, Lexis Nexus
2. The Constitution of India, PM Bhakshi, Universal Law

## **SEMESTER – VI (THIRD YEAR)**

### **List of Recommended Books:**

#### **PCC-CE308 – Construction Engineering & Management**

1. Construction Engineering & Management, S.C. Sharma & S.V. Deodhar, Khanna Book Publishing
2. Construction Project Management, Jha, Pearson
3. Building Construction, Varghese PC, Prentice Hall India

#### **PCC-CE309 – Engineering Economics, Estimation & Costing**

1. Estimating and Costing in Civil Engineering, BN Dutta, UBS Publishers
2. Estimating, Costing Specifications & Valuation, M Chakraborty
3. Handbook of Construction Management, Joy PK, Macmillan

### **List of Some Other Useful Books:**

1. Concrete: Microstructure, Properties & Materials, PK Mehta, Tata McGraw
2. Air Pollution Control Engineering, Keshav Kant, Khanna Publishing House
3. Design of Bridge Structures, T.R. Jagadeesh & M.A. Jayaram, Phi
4. Project Management with CPM /PERT, Punmia, Laxmi Publications
5. Introductory Methods of Numerical Analysis, Sashty, PHI
6. Basics of Remote Sensing & GIS, S. Kumar, University Sc. Press
7. Theory of Structures, Punmia, Laxmi Publications
8. Civil Engineering Construction Materials, S.K. Sharma, KBP House
9. Ground Improvement Techniques, Purushottam Raj, Tata McGraw Hill
10. Elements of Land/Soil Pollution, O.P. Gupta, Khanna Publishing House
11. Water Supply and Sanitary Engineering, Rangwala, Charotar Publications
12. Harbour, Dock and Tunnel Engineering, Srinivasan, Charotar Publications
13. Airport Engineering, Rangwala, Charotar Publications



# ELECTRICAL ENGINEERING

## SEMESTER – III (SECOND YEAR)

### List of Recommended Books:

#### **PCC-EE01 – Electrical Circuit Analysis**

1. Networks and Systems, Asfaq Hussain, Khanna Publishing House, Delhi
2. Networks and systems, D. Roy Choudhary, New Age International Publishers
3. Problems and Solutions of Electrical Circuit Analysis, R.K. Mehta & A.K. Mal, CBS Publishers

#### **PCC-EE02 – Analog Electronics**

1. Analog Electronics, L.K.Maheshwari, Laxmi Publications
2. Analog Electronics, A.K. Maini, Khanna Publishing House
3. Analog Electronics, I.G.Nagrath, PHI

#### **PCC-EE04 – Electrical Machines - I**

1. Electrical Machines-I, GC Garg, (ISBN: 978-93-86173-447), Khanna Book Publishing, Delhi
2. Electrical Machines, Kothari & Nagrath, TMH
3. Electrical Machines, Mehta & Mehta, S.Chand Publications

#### **ESC201 – Engineering Mechanics**

1. Engineering Mechanics, D.S. Bedi, Khanna Book Publishing Co. (P) Ltd.
2. Engineering Mechanics, R.S. Khurmi, S.Chand Publishing
3. A Textbook of Engineering Mechanics, R.K. Bansal, Laxmi Publications
4. Engineering Mechanics, Sharma, Pearson

## SEMESTER – IV (SECOND YEAR)

### List of Recommended Books:

#### **PCC-EE07 – Digital Electronics**

1. Digital Electronics, A. Anand Kumar, PHI
2. Modern Digital Electronics, R.P. Jain, TMH
3. Digital Electronics, R.Anand Khanna Publishing House

#### **PCC-EE09 – Electrical Machines - II**

1. Electrical Machines - II, GC Garg, (ISBN: 978-93-86173-60-7), Khanna Book Publishing, Delhi
2. The Performance & Design of Alternating Current Machines, Say, CBS Publishers
3. Principle of Electrical Machine Design with Computer Programs, S.K. Sen, Oxford & IBH

#### **PCC-EE11 – Power Electronics**

1. Modern Power Electronics, P.C. Sen., Chand & Co.
2. Power Electronics, V.R.Moorthi, Oxford University Press
3. Power Electronics, Muhammad H. Rashid, Pearson





### **PCC-EE13 – Signals and Systems**

1. Signals and Systems, A. Anand Kumar, Phi
2. Signals and Systems, Rishabh Anand, Khanna Book Publishing Co., Delhi
3. Signals and Systems, Tarun Rawat, Oxford University Press
4. Signal Processing and Linear Systems, B.P. Lathi, Oxford University Press
5. Signals and Systems, J. Nagrath, S. N. Sharan, R. Ranjan, S. Kumar, TMH

### **BSC201 – Mathematics - III**

1. Advanced Engineering Mathematics, Chandrika Prasad & Reena Garg, Khanna Book Publishing Co. (P) Ltd., Delhi
2. Higher Engineering Mathematics, Ramana B.V., Tata McGraw Hill
3. Advanced Engineering Mathematics (ISBN:9788120336094), Sashtry, PHI
4. Discrete Mathematics and Its Applications, S. Chakraborty & B.K. Sarkar, Oxford

## **SEMESTER – V (THIRD YEAR)**

### **List of Recommended Books:**

#### **PCC-EE14 – Power Systems – I**

1. Modern Power System Analysis, Kothari Nagrath, McGraw Hill Education
2. Power System Operation and Control, S. Sivanagaraju & G. Sreenivasan, Pearson
3. Electrical Power Systems, C.L. Wadhwa, Newage Publishers

#### **PCC-EE16 – Control Systems**

1. Control System Engineering, Nagrath & Gopal, Newage Publishers
2. Control Systems, Ambikapathy, Khanna Book Publishing Co. (P) Ltd., Delhi

#### **PCC-EE17 – Microprocessors**

1. Microprocessors, Ramesh Gaonkar, Penram Publications
2. Advanced Microprocessors and Peripherals, Burchandi, TMH
3. Advanced Microprocessors, AK Gautam, Khanna Publishing House

## **SEMESTER – VI (THIRD YEAR)**

### **List of Recommended Books:**

#### **PCC-EE20 – Power Systems – II**

1. Modern Power System Analysis, Kothari & Nagrath, McGraw Hill Education
2. Power System Operation and Control, Sivanagaraju & Sreenivasan, Pearson
3. Electrical Power Systems, C.L. Wadhwa, Newage Publishers

### **List of Recommended Books for Elective Courses:**

1. Electromagnetic Waves, Shevgaonkar, R, McGraw Hill
2. Electrical Power Generation, Transmission and distribution, Singh, PHI
3. Electrical Power Generation, Tanmoy Deb, Khanna Publishers
4. HVDC Power Transmission System, K. R. Padiyar, Wiley
5. Introduction to Fuzzy Logic using MATLAB, S. N. Sivanandam, S. Sumati & S. N. Deepa, Springer
6. High Voltage Engineering, C.L. Wadhwa, Newage Publishers
7. Introduction to Neural Networks using MATLAB, Sivanandam, TMH
8. Electric Drives, N.K. De & P.K. Sen, PHI
9. Fundamentals of Electrical Drives, Dubey, Narosa Publishing House



# MECHANICAL ENGINEERING

## SEMESTER – III (SECOND YEAR)

### List of Recommended Books:

#### **BSC201 – Physics -II**

1. Engineering Physics, Garg & Singh
2. Mechanics, Mathur, S.Chand Publishing
3. Classical Mechanics, Upadhyaya, Himalaya Publishing House
4. Classical Mechanics, G. Aruldas, PHI
5. Engineering Physics, Gupta & Gaur, Dhanpat Rai
6. Quantum Mechanics, Ajay Ghatak S. Lokanathan, Trinity
7. Quantum Mechanics: A Text Book for undergraduates, Mahesh C Jain, TMH
8. A text Book of Ruantum Mechanics, M. Mathews & K. Venkatesan, TMH
9. Electromagnetic Theory, Prabir K. Basu & Hrishikesh Dhasmana, Ane Books
10. Fundamentals of Electromagnetic Theory, Khunita, PHI
11. A Text Book of Optics, Avadhanulu, S. Chand
12. Optics, Ajoy Ghatak, TMH
13. Modern Physics for Engineers, S.P. Taneja, R. Chand
14. The Physics of waves and Oscillations, N.K. Bajaj, TMH

#### **BSC202 – Mathematics - III**

1. Advanced Engineering Mathematics, Chandrika Prasad & Reena Garg, Khanna Book Publishing
2. Higher Engineering Mathematics, Ramana B.V., Tata McGraw Hill
3. Advanced Engineering Mathematics (ISBN:9788120336094), Sashty, PHI
4. Discrete Mathematics and Its Applications, S. Chakraborty & B.K. Sarkar, Oxford

#### **ESC201 – Basic Electronics Engineering**

1. Basic Electronics, Santiram Kal, Printice Hall
2. Basic Electronics, B.L. Thareja, S.Chand Publishing
3. Basic Electronics, S. Biswas, Khanna Publications

#### **ESC202 – Engineering Mechanics**

1. Engineering Mechanics, D.S. Bedi, Khanna Book Publishing Co. (P) Ltd.
2. Engineering Mechanics, R.S. Khurmi, S.Chand Publishing
3. A Textbook of Engineering Mechanics, R.K. Bansal, Laxmi Publications
4. Engineering Mechanics, DP Sharma, Pearson

#### **PCC-ME201– Thermodynamics**

1. Engineering Thermodynamics, P.K. Nag, Tata McGraw Hill
2. Basic and Applied Thermodynamics, P.K. Nag, Tata McGraw Hill



## SEMESTER – IV (SECOND YEAR)

### List of Recommended Books:

#### **PCC-ME202– Applied Thermodynamics**

1. Engineering Thermodynamics, Nag P.K, Tata McGraw Hill
2. Basic and Applied Thermodynamics, PK Nag, Tata McGraw Hill

#### **PCC-ME203– Fluid Mechanics and Fluid Machines**

1. Fluid Mechanics, Sadhu Singh, Khanna Publishing House, Delhi
2. Fluid Mechanics, Modi & Seth, Standard Publishers

#### **PCC-ME204– Strength of Materials**

1. Strength of Materials, D.S. Bedi, Khanna Publishing, Delhi
2. Strength of Materials, R.K. Rajput, Laxmi Publications
3. Strength of Materials, R. Subramanian, Oxford Publications

#### **PCC-ME205– Materials Engineering**

1. Engineering Materials Properties and Selection, Budinski and Budinski, PHI
2. Material Science & Engineering, R. Balasubhramanium, Wiley India

#### **MC - II– Environmental Science**

1. Textbook of Environmental Studies, Erach Bharucha, University Press
2. Environmental Studies, MP Poonia & SC Sharma, Khanna Publishing House
3. Environmental Studies, Rajagopalan, Oxford University Press

## SEMESTER – V (THIRD YEAR)

### List of Recommended Books:

#### **PCC-ME301– Heat Transfer**

1. Fundamental of Heat and Mass Transfer, M.Thirumaleshwar, Pearson
2. Computational Heat Transfer and Fluid Flow, Murlidhar & Sunder Rajan, Narosa
3. Thermal Engineering, M.L. Mathur & F.S. Mehta, Jain Publications
4. A Course in Heat & Mass Transfer, V.M. Domkundwar, Dhanpat Rai & Co.

#### **PCC-ME302– Solid Mechanics**

1. Strength of Materials, D.S. Bedi, Khanna Publishing House
2. Strength of Materials, R Subramanian, Oxford University Press
3. Strength of Materials, RK Bansal, Laxmi Publications
4. Mechanics of Materials, Punmia, Jain and Jain, Laxmi Publications

#### **PCC-ME304– Kinematics & Theory of Machines**

1. Theory of Machines, SS Rattan, Tata McGraw Hill
2. Kinematics & Theory of Machines, Sadhu Singh, Pearson



## SEMESTER – VI (THIRD YEAR)

### List of Recommended Books:

#### **PCC-ME307– Manufacturing Technology**

1. Manufacturing Technology, Vol. 1, 2, 3, PN Rao, TMH
2. Manufacturing Technology, RK Rajput, Laxmi Publications
3. Production and Operations Management, S.N.Chary, TMH

#### **PCC-ME308– Design of Machine Elements**

1. Machine Design (ISBN: 9789382609575), Sadhu Singh, Khanna Publishing House, Delhi
2. Machine Design Data Book, Sadhu Singh, Khanna Publishing House
3. Design Data Book, Mahadevan, CBS Publishers & Distributors
4. Introduction to Machine Design, V.B. Bhandhari, McGraw Hill
5. A Textbook of Machine Design, RS Khurmi, S.Chand Publications

## SEMESTER – VII (FOURTH YEAR)

### List of Recommended Books:

#### **PCC-ME401– Automation in Manufacturing**

1. Modern Machining Process, Pandey and Shan, TMH
2. Manufacturing Automation Metal Cutting Mechanics, Machine Tool Vibrations, CNC Design, Yusuf, Cambridge University Press

### List of Recommended Books for Other Courses:

#### **Mechatronics**

1. A Textbook of Mechatronics, RK Raput, S.Chand Publishing
2. Mechatronics: Principles, Concepts and applications, Mahalik N.P, Tata McGraw Hill
3. Introduction to Mechnotronics, Kuttan, Oxford University

#### **Finite Element Analysis**

1. A Text Book of Finite Element Analysis, Seshu, Phi
2. The Finite Element Methods in Engineering, SS Rao, Butterworth
3. An Introduction to Finite Element Methods, J Reddy, Tata McGraw Hill

#### **Power Plant Engineering**

1. Power Plant Engineering, P.K. Nag, TMH
2. Power Plant Engineering, S.C. Sharma, Khanna Publications

#### **Refrigeration and Air Conditioning**

1. Refrigeration and Air Conditioning, C.P. Arora, TMH
2. Refrigeration and Air Conditioning, Sadhu Singh, Khanna Publishing House
3. A Course in Refrigeration & Air Conditioning, Domkundwar, Dhanpat Rai

#### **Machine Drawing**

1. Machine Drawing, PS Gill, Katsons
2. Machine Drawing, O.P Jahkar, Amit Mathur, Khanna Publishing House



### **Gas Turbines**

1. Gas Turbines, Ganeshan, Tata McGraw Hill
2. Internal Combustion Engines, Mathur & Sharma, Dhanpat Rai
3. Steam, Gas Turbine and Power Plant Engineering, Yadav, CPH, Allahabad

### **Total Quality Management**

1. Total Quality Management, Poonia & Sharma, Khanna Publishing House
2. Total Quality Management, Gopal, PHI

### **Engineering Management**

1. Engineering Management: Industrial Engineering & Management, SC Sharma, Khanna Publishing House, Delhi
2. Industrial Engineering & Operations Management, SK Sharma

### **Automobile Engineering**

1. Automotive Engineering, Kirpal Singh, Standard Publishers
2. Automobile Mechanics, A.K. Babu & S.C. Sharma, T.R. Banga, Khanna Book Publishing
3. Automotive Electricals and Electronics, A.K. Babu, Khanna Publishing House
4. A Textbook of Automobile Engineering, R.K. Rajput, Laxmi Publications

### **Reliability Engineering**

1. Reliability Engineering, E. Balaguruswamy, Tata McGraw Hill
2. Reliability Engineering, L.S. Srinath, Affiliated East-West Press
3. Industrial Maintenance Management, S.K. Srivastava, S.Chand & Co.

### **List of Some Other Useful Books:**

1. Robotics and Control, Mittal & Nagrath, Tata McGraw Hill
2. Robotics Technology, Satyarajan Deb, TMH
3. Practical Non-Destructive Testing, Baldev Raj, T. Jay Kumar, M. Thavasimuthu, Narosa
4. Mechanical Vibrations, S.S. Rao, Addison Wesley Longman
5. Principles and Practice of Management, Prasad, L.M, Sultan Chand
6. Mechanical Vibrations, SS Rao, Pearson
7. Mechanical Vibrations, GK Grover, Nem Chand Bros.
8. Transducers and Instrumentation, V.S. Murthy, PHI
9. Transducers and Instrumentation, Nakra & C.Houdhary, TMH
10. Fundamentals of Industrial Drives, Sarkar, PHI
11. Automotive Engines, A.K. Babu, Khanna Publications
12. Modern Machining Process, Pandey & Shan, Tata McGraw Hill



# COMPUTER SCIENCE ENGINEERING

## SEMESTER – III (SECOND YEAR)

### List of Recommended Books:

#### **ESC201 – Analog Electronic Circuits**

1. Analog Electronics, L.K. Maheshwari, Laxmi Publications
2. Analog Electronics, A.K. Maini, Khanna Publishing House
3. Analog Electronics, I.G. Nagrath, PHI

#### **PCC-CS301 – Data Structures & Algorithms**

1. Fundamentals of Data Structures, Sartaj Sahni, University Press
2. Data Structures, RS Salaria, Khanna Publishing House
3. Data Structures through C, Yashwant Kanetkar, BPB Publications
4. Expert Data Structures with C++, RB Patel, Khanna Publications

#### **ESC302– Digital Electronics**

1. Digital Electronics, A. Anand Kumar, PHI
2. Modern Digital Electronics, R.P. Jain, TMH
3. Digital Electronics, Rishabh Anand, Khanna Publishing House

#### **BSC301 – Mathematics – III**

1. Advanced Engineering Mathematics, Chandrika Prasad & Reena Garg, Khanna Book Publishing
2. Higher Engineering Mathematics, Ramana B.V., Tata McGraw
3. Higher Engineering Mathematics, Ramana B.V., Tata McGraw Hill
4. Advanced Engineering Mathematics (ISBN:9788120336094), Sashty, PHI

## SEMESTER – IV (SECOND YEAR)

### List of Recommended Books:

#### **PCC-CS401 – Discrete Mathematics**

1. Discrete Mathematics and Its Applications, Chakraborty & Sarkar, Oxford
2. Discrete Structures, S.B. Singh, Khanna Book Publishing, Delhi
3. Discrete Mathematics, T. Veerarajan, Tata McGraw-Hill

#### **PCC-CS402– Computer Organization & Architecture**

1. Computer Fundamentals Architecture and Organization, B. Ram, New Age International
2. Computer Organization & Architecture, Rajaraman, PHI Learning

#### **PCC-CS403 – Operating Systems**

1. Operating Systems, Ekta Walia, Khanna Publishing House, Delhi
2. Operating Systems A Concept-Based Approach, Dhananjay M. Dhamdhare, McGraw Hill



### **PCC-CS404– Design & Analysis of Algorithms**

1. Design & Analysis of Algorithms, S. Sridhar, Oxford
2. Design & Analysis of Algorithms, Sharma, Khanna Publishing House, N.Delhi

### **HSMC401 – Management – I**

1. A Textbook of Organizational Behaviour, CB Gupta, S.Chand Publications
2. Organizational Behaviour, LM Prasad, Sultan Chand and Sons

### **MC – Environmental Sciences**

1. Textbook of Environmental Studies, Erach Bharucha, University Press
2. Environmental Studies, MP Poonia & SC Sharma, Khanna Publishing House
3. Environmental Studies, Rajagopalan, Oxford University Press

## **SEMESTER – V (THIRD YEAR)**

### **List of Recommended Books:**

#### **ESC501 – Signals and Systems**

1. Signals and Systems, A. Anand Kumar, Phi
2. Signals and Systems, Tarun Rawat, Oxford University Press
3. Signals and Systems, Rishabh Anand, Khanna Book Publishing Co., Delhi
4. Signal Processing and Linear Systems, B.P. Lathi, Oxford University Press
5. Signals and Systems, J. Nagrath, S. N. Sharan, R. Ranjan, S. Kumar, TMH

#### **PCC-CS501- Database Management Systems**

1. Fundamental of Database Systems, E. Ramez and Navathe, Pearson
2. Database Management Systems, R.P. Mahapatra & Govind Verma, Khanna Publishing House
3. Database Management Systems, Raghurama Krishan, McGraw Hill

#### **PCC-CS502 - Formal Language & Automata Theory**

1. Theory of Computer Science: Automata, Languages and Computation, Mishra, Phi
2. Theory of Computation, RB Patel & Prem Nath, Khanna Publications

#### **PCC-CS503 - Object Oriented Programming**

1. Object Oriented Programming with C++, Balaguruswamy, TMH
2. Mastering Object-Oriented Programming with C++, R.S. Salaria, Khanna Book Publishing, N.Delhi
3. Programming with Java, Balaguruswamy, TMH
4. Object Oriented Programming in C++ and Java, D.Samantha, PHI
5. Internet and Java Programming, Tanweer Alam, Khanna Publishing House

#### **MC- Constitution of India**

1. Introduction to Constitution of India, D.D. Basu, Lexis Nexus
2. The Constitution of India, PM Bhakshi, Universal Law



## SEMESTER – VI (THIRD YEAR)

### List of Recommended Books:

#### **PCC-CS602 - Computer Networks**

1. Computer Networks, M. Dave, Cengage
2. An Engineering Approach to Computer Networking, Keshav, Pearson
3. An Integrated Approach to Computer Networks, Bhavneet Sidhu, Khanna Publications
4. Telecommunication Switching System and Networks, Viswanathan, PHI

### List of Recommended books for Additional Courses:

#### **Graph Theory**

1. Graph Theory, Deo and Narsingh, PHI Publications
2. Combinatorics & Graph Theory, Singh, Khanna Publishing House

#### **Software Engineering**

1. A concise introduction to software Engineering, Pankaj Jalote, Springer
2. Software Engineering, Nasib Singh Gill, Khanna Publishing House
3. Software Engineering, K.K. Aggarwal & Yogesh Singh, New Age International

#### **Python Programming**

1. Taming Python by Programming, Jeeva Jose, Khanna Publishing House
2. Introduction to Computing and Problem Solving with Python, J. Jose, Khanna Publications
3. Python Programming, Seema Thareja, Pearson

#### **Artificial Intelligence**

1. A classical approach to Artificial Intelligence, Munesh Chandra Trivedi, Khanna Publications
2. Artificial Intelligence and Machine Learning, Chandra S.S. & H.S. Anand, PHI Publications
3. Machine Learning, Rajiv Chopra, Khanna Publishing House

#### **Cryptography & Network Security**

1. Cryptography & Network Security, Atul Kahate, McGraw Hill
2. Cryptography & Network Security, V.K. Jain, Khanna Publishing House

#### **Internet of Things**

1. Internet of Things, Jeeva Jose, (ISBN: 978-93-86173-591), Khanna Publishing House
2. Internet of Things, Arsheep Bahga and Vijay Madiseti

#### **Software Testing**

1. Software Testing, Yogesh Singh, University Press
2. Fundamentals of Software Testing, AB Mathur, Pearson
3. Software Testing Principles and Practices, Chauhan, Oxford University Press

#### **Data Analytics**

1. Big Data & Hadoop, V.K. Jain, Khanna Publishing House
2. Big Data Black Book, DT Editorial Services, Wiley India
3. Data Science & Analytics, V.K. Jain, Khanna Publishing House
4. Beginner's Guide for Data Analysis using R Programming, Jeeva Jose, ISBN: 978-93-86173454





## **Numerical Methods**

1. Numerical Methods, E.Balaguruswamy, TMH
2. Introductory Methods of Numerical Analysis, S.S.Sastry, PHI
3. Computer Oriented Numerical Methods, R.S. Salaria, Khanna Publishing House

## **List of Some Other Useful Books:**

1. Information Systems Security, Nina Godbole, Wiley
2. Introduction to Embedded Systems, K.V. Shibu, McGraw Hill
3. Introduction to Embedded Systems, Raj Kamal, Tata McGraw Hill
4. Fundamentals of Computers, Ravichandran, Tata McGraw Hill
5. Fundamentals of Computers, Rajaraman, PHI
6. Computer Fundamentals and Programming in C, Nasib Singh Gill, KBP
7. Hacking, Harsh Bothra, Khanna Publishing House
8. Cryptography and Information Security, V. K. Pachghare, PHI Learning
9. Information Security & Cyber Laws, Gupta, Khanna Publishing House
10. Ad hoc Wireless Networks Architectures, C.Siva Ram Murthy, Pearson
11. Multimedia Systems Concepts Standards and Practices, Ramesh, PHI
12. Multimedia and Animation, V.K. Jain
13. Information Theory, R Ash, Dover Science Publications
14. Essentials of Cloud Computing, K. Chandrasekaran
15. Cloud Computing, Pandey & Choudhary



# ELECTRONICS & COMMUNICATION ENGINEERING

## SEMESTER – III (SECOND YEAR)

### List of Recommended Books:

#### **EC01 – Electronic Devices**

1. Solid State Electronic Devices, G. Streetman, and S. K. Banerjee, Pearson
2. Semiconductor Physics and Devices, D. Neamen, D. Biswas, McGraw Hill
3. All-in-One Electronic Simplified, A.K. Maini, Khanna Publishing House

#### **EC03 – Digital System Design**

1. Modern Digital Electronics, RP Jain, TMH
2. Digital System Design using VHDL, R. Anand, Khanna Publishing House
3. A VHDL Primer, Bhaskar, Pearson
4. A VHDL Synthesis, Bhaskar, Pearson

#### **EC05 – Signals and Systems**

1. Signals and Systems, A. Anand Kumar, Phi
2. Signals and Systems, Tarun Rawat, Oxford University Press
3. Signals and Systems, Rishabh Anand, Khanna Book Publishing Co., Delhi
4. Signal Processing and Linear Systems, B.P. Lathi, Oxford University Press
5. Signals and Systems, J. Nagrath, S. N. Sharan, R. Ranjan, S. Kumar, TMH

#### **EC05 – Network Theory**

1. Networks and Systems, Asfaq Hussain, Khanna Publishing House, Delhi
2. Circuits and Network, Sudhakar & Shyammohan, Tata McGraw-Hill
3. Networks and systems, D. Roy Choudhary, New Age International Publishers

## SEMESTER – IV (SECOND YEAR)

### List of Recommended Books:

#### **EC07 – Analog & Digital Communication**

1. Analog & Digital Communication, B.P. Lathi, Gupta, Oxford University Press
2. Analog & Digital Communications, Debajani Mitra, TMH
3. Digital Design, Natrajan Ananda, PHI Publications

#### **EC09 – Analog Circuits**

1. Analog Electronics, L.K. Maheshwari, Laxmi Publications
2. Analog Electronics, A.K. Maini, Khanna Publishing House
3. Analog Electronics, I.G. Nagrath, PHI

#### **EC11 – Microcontrollers**

1. R. S. Gaonkar, Microprocessor Architecture: Programming and Applications with the 8085/8080A, Penram International Publishing
2. Microprocessors and Microcontrollers, Krishna Kant, PHI
3. 8051 Microcontrollers, Rajakamal, TMH



## SEMESTER – V (THIRD YEAR)

### List of Recommended Books:

#### **EC13 – Electromagnetic Waves**

1. Electromagnetic Fields & Waves, R.L. Yadava, Khanna Publishing House
2. Electromagnetic Waves, R.K. Shevgaonkar, Tata McGraw Hill India
3. Engineering Electromagnetics, Narayana Rao, PHI

#### **EC15 – Computer Architecture**

1. Computer Fundamentals Architecture and Organization, B. Ram, New Age
2. Computer Organization & Architecture, Rajaraman, PHI Learning

#### **EC17 – Digital Signal Processing**

1. Digital Signal Processing, S. Salivahanan, McGraw Hill
2. Digital Signal Processing, S.K. Mitra, TMH
3. Digital Signal Processing, Ashok Ambardar, Cengage
4. Digital Signal Processing, A. Anand Kumar, PHI

## SEMESTER – VI (THIRD YEAR)

### List of Recommended Books:

#### **EC19 – Control Systems**

1. Control Systems, Gopal, Tata McGraw-Hill
2. Modern Control Engineering, Nagrath & Gopal, New Age International
3. Control Systems, A. Ambikapathy, Khanna Publishing House

#### **EC20 - Computer Networks**

1. Computer Networks, M. Dave, Cengage
2. An Integrated Approach to Computer Networks, Bhavneet Sidhu, Khanna Publications
3. Telecommunication Switching System and Networks, Viswanathan, PHI
4. An Engineering Approach to Computer Networking, Keshav, Pearson

### List of Recommended books for Additional Courses:

#### **ECEL02 – Fiber Optic Communication**

1. Integrated Optics, T. Tamir, Springer-Verlag,
2. Nonlinear Fiber Optics, G. Agrawal, Academic Press
3. Fiber optic Communication Systems, G. Agrawal, Wiley India

#### **ECEL05 – Introduction to MEMS**

1. Micro and Smart Systems, Ananthasuresh & Gopalkrishnan, Wiley India
2. Microsystem Design, S. D. Senturia, Kluwer Academic Publishers

#### **ECEL07 – Antennas and Propagation**

1. Micro Strip Antennas, J. Bahl and P. Bhartia, Artech House
2. Electromagnetic Waves, R.K. Shevgaonkar, Tata McGraw Hill
3. Electromagnetic Waves, R.L. Yadav, Khanna Publishing House



### **ECEL14 – Power Electronics**

1. Modern Power Electronics, P.C. Sen, Chand & Co.
2. Power Electronics, V.R.Moorthi, Oxford University Press.
3. Power Electronics, Muhammad H. Rashid, Pearson
4. Power Electronics, Joseph Vithyalthil, TMH

### **List of Some Other Useful Books:**

1. Microwave Circuits, K.C. Gupta, Newage Publishers
2. Fundamentals of Digital Image Processing, Anil Kumar Jain, PHI
3. Fundamentals of Digital Processing, Tamal Bose, Wiley
4. Electronic Product Design, G. Kaduskar and V.B. Baru, Wiley India
5. Information Theory, R.B. Ash, PHI
6. Telecommunication Switching Systems and Networks, T. Viswanathan, PHI
7. Elements of Electronic Navigation Systems, N.S. Nagaraja, Tata McGraw Hill
8. Control in Robotics and Automation, Ghosh, Allied Publishers
9. Robotics Technology, Deb, Wiley India
10. Switchgear & Protection, Haroon Asfaq, Khanna Book Publishing



# CHEMICAL ENGINEERING

## SEMESTER – II (FIRST YEAR)

### List of Recommended Books:

#### **BS105 – Mathematics – II**

1. Advanced Engineering Mathematics, Chandrika Prasad & Reena Garg, Khanna Book Publishing
2. Higher Engineering Mathematics, Ramana B.V., Tata McGraw
3. Advanced Engineering Mathematics (978-81-203-3609-4), Sashtry, PHI
4. Advanced Engineering Mathematics, Jain & Iyer, Narosa Publications

#### **ESC-GES102 – Thermodynamics - I**

1. An Introduction to Thermodynamics, Rao, John Wiley
2. Chemical Technology Volume – I, Pandey, Lion Press

#### **PCC-GES103 – Electrical & Electronics Engineering**

1. Basic Electrical and Electronics Engineering, Sukhija and Nagsarkar, Oxford
2. Basic Electrical and Electronics Engineering, Kothari & Nagrath, TMH
3. All-in-One Electronics Simplified, A.K. Maini, Khanna Book Publishing Co., Delhi

#### **PCC-CS101 – Material & Energy Balance Computation**

1. Basic Principles and Calculations in Chemical Engineering, Himmelblau, Phi
2. Stoichiometry, Bhatt & Vora, TMH
3. Stoichiometry and Process Calculations, Narayanan & Lakshmikutty, PHI

## SEMESTER – III (SECOND YEAR)

### List of Recommended Books:

#### **ESC-GES105 – Engineering and Solid Mechanics**

1. Mechanics of Materials, Punmia & Jain, Laxmi Publications
2. Strength of Materials, D.S. Bedi, Khanna Publishing House
3. Strength of Materials (Mechanics of Solid), R.S. Khurmi, S.Chand Publications

#### **BS107 - Chemistry – II**

1. Engineering Chemistry, Satyaprakash & Manisha Agrawal, Khanna Book Publishing, Delhi
2. A Text Book of Engg. Chemistry, Shashi Chawla, Dhanpat Rai & Co. (P) Ltd.
3. Essentials of Physical Chemistry, Bahl & Tuli, S.Chand Publishing
4. Applied Chemistry, Sunita Rattan, Kataria
5. Engineering Chemistry, Baskar, Wiley
6. Engineering Chemistry – I, D. Grouv Krishana, Vikas Publishing
7. Laboratory Manual Engg. Chemistry, Anupma Rajput, Dhanpat Rai & Co.



### **PC-CS103 - Thermodynamics - II**

1. Chemical Engineering Thermodynamics, YVC Rao, University Press

### **SEMESTER – IV (SECOND YEAR)**

#### **List of Recommended Books:**

#### **PCC-CS104 – Heat Transfer**

1. Process Heat Transfer and Chemical Equipment Design, D.C.Sikdar, Khanna Publishing House
2. Heat Transfer: Principles and Applications, B.K. Dutta, PHI

#### **PCC-CS105 - Mass Transfer – I**

1. Principles of Mass Transfer and Separation Processes, B.K. Dutta, PHI

#### **PCC-CS106 - Fluid Mechanics**

2. Fluid Mechanics, Sadhu Singh, Khanna Book Publishing
3. Introduction to Fluid Mechanics and Fluid Machines, Som & Biswas, TMH

#### **ESC-GES107 - Material Science**

1. Materials Science and Engineering, Raghavan, V, PHI
2. Material Science & Engineering, Upadhyaya, Anshan Publications
3. Testing of Metallic Materials, Suryanarayanan, A.V.K., Tata McGraw

#### **PCC-CS107 - Numerical Methods in Chemical Engineering**

1. Numerical Methods for Engineers, Gupta, Newage Publishers
2. Numerical Methods for Engineers with Personal Computer Applications, S.C. Chapra, McGraw

#### **MC - Environmental Sciences**

1. Textbook of Environmental Studies, Erach Bharucha, University Press
2. Environmental Studies, MP Poonia & SC Sharma, Khanna Publishing House
3. Environmental Studies, Rajagopalan, Oxford University Press

### **SEMESTER – V (THIRD YEAR)**

#### **List of Recommended Books:**

#### **PCC-CS108 - Chemical Reaction Engineering – I**

1. Principles of Chemical Reaction Engineering, Dawande S.D, Central Techno Publications, Nagpur
2. Chemical Reaction Engineering - I, K A Gavhane, Nirali Prakashan

#### **PCC-CS109 - Mass Transfer – II**

1. Principles of Mass Transfer and Separation Processes, B.K. Dutta, PHI

#### **PC-CS1111- Particle & Fluid Particle Processing**

1. Unit Operations-I, Fluid Flow & Mechanical Operation, Gavhane, Nirali Prakashan
2. Unit Operations Vol.-I, K. A. Gavhane, Nirali Prakashan
3. Chemical Process Simulation, Husain, Wiley Eastern India



## SEMESTER – VI (THIRD YEAR)

### List of Recommended Books:

#### **PCC-CS112 - Chemical Reaction Engineering – II**

1. Principles of Chemical Reaction Engineering, Dawande S.D, Central Techno Publications, Nagpur
2. Chemical Reaction Engineering Vol. - II, K. A. Gavhane, Nirali Prakashan

#### **PCC-CS113 – Process Technology & Economics**

1. Dryden's Outlines of Chemical Technology, Rao, Affiliated Press
2. Chemical Process Technology, O.P. Gupta, Khanna Publishing House
3. Chemical Project Economics, Mahajani, McMillan

#### **PCC-CS114–Process Control**

1. Instrumentation and Process Control, D.C. Sikdar, Khanna Publishing House
2. Instrumentation, Measurement and Analysis, Nakra, TMH

## SEMESTER – VII (FOURTH YEAR)

### List of Recommended books for Additional Courses:

#### **Water Conservation & Management**

1. Elements of Water Pollution Control Engineering, OP Gupta, Khanna Publishing House, Delhi
2. Water Supply and Sanitary Engineering, Rangwala, Charotar Publications

#### **Advanced Separation Process**

1. Process Design of Equipments, Dawande, S.D., Central Techno, Nagpur

#### **Environmental Pollution and Control**

1. Elements of Environmental Pollution Control, OP Gupta, Khanna Publishing House
2. Environmental Pollution Control Engineering, C.S. Rao, Newage Publications

#### **Energy Resources (Conventional & Non-Conventional)**

1. Elements of Fuels & Combustion Technology, Gupta, Khanna Publishing House
2. Energy Audit and Management, Teri Press
3. Energy Conservation, Diwan & Dwivedi, Pentagon Press
4. Non-Conventional Energy Resources, Chandra, Khanna Publishing House

#### **Optimization Methods**

1. Optimization Techniques, SS Rao, Wiley Eastern India

#### **Petroleum Engineering**

1. Elements of Petroleum Refinery Engineering, Gupta, (ISBN: 9789382609728)
2. Outlines of Chemical and Petroleum Engineering, Suryanaryana & Mahto, Khanna Publishing



## **METALLURGICAL ENGINEERING & MATERIAL SCIENCE**

### **SEMESTER – III (SECOND YEAR)**

#### **List of Recommended Books:**

##### **BS201 – Biology**

1. Biology for Engineers (ISBN: 9781121439931), TMH

##### **BS203 – Mathematics - III**

1. Advanced Engineering Mathematics, Chandrika Prasad & Reena Garg, Khanna Book Publishing
2. Higher Engineering Mathematics, Ramana B.V., Tata McGraw Hill
3. Advanced Engineering Mathematics (ISBN:9788120336094), Sashtry, PHI

##### **PCC-MM201 – Introduction to Materials Engineering**

1. Materials Science and Engineering, Raghavan, V, PHI
2. Material Science & Engineering, Upadhyaya, Anshan Publications
3. Testing of Metallic Materials, Suryanarayanan, A.V.K., Tata McGraw

##### **PCC-MM203 – Phase Transformation**

1. Solid State Phase Transformations, V. Raghavan, PHI

##### **ESC201 – Materials Thermodynamics**

1. Metallurgical Thermodynamics, S.K. Dutta, S.Chand Publications
2. Essentials of Metallurgical Thermodynamics, R.H. Tupkary, Khanna Publishing House

##### **ESC201 – Engineering Mechanics**

1. Engineering Mechanics, D.S. Bedi, Khanna Book Publishing Co. (P) Ltd.
2. Engineering Mechanics, R.S. Khurmi, S.Chand Publishing
3. A Textbook of Engineering Mechanics, R.K. Bansal, Laxmi Publications
4. Engineering Mechanics, Sharma, Pearson
5. Applied Mechanics and Strength of Materials, Jindal, Galgotias

##### **MC – Environmental Sciences**

1. Textbook of Environmental Studies, Erach Bharucha, University Press
2. Environmental Studies, MP Poonia & SC Sharma, Khanna Publishing House
3. Environmental Studies, Rajagopalan, Oxford University Press

### **SEMESTER – IV (SECOND YEAR)**

#### **List of Recommended Books:**

##### **PCC-MM202 - Mechanical Properties for Materials**

1. Engineering Materials, Budinski & Narasimhulu, Pearson

##### **PCC-MM206 - Physical Metallurgy**

1. Physical Metallurgy: Principles and Practice, V. Raghavan, PHI Learning





### **PC-MM208 - Physics of Materials**

1. Physics of Materials, Essential concepts of Solid State Physics, Prathap Haridoss, Wiley India

### **HSMC202 - Economics for Engineers**

1. Sociology & Economics for Engineers, Premvir Kapoor, Khanna Publishing House, Delhi

## **SEMESTER – V (THIRD YEAR)**

### **List of Recommended Books:**

#### **PCC-MM301 - Materials Characterization**

1. Materials Characterization, P.K. Maitra, PHI

#### **PCC-MM303 - Environmental Degradation of Materials**

1. Elements of Environmental Pollution Control, OP Gupta, Khanna Publishing House
2. Environmental Pollution Control Engineering, C.S. Rao, Newage Publications

## **SEMESTER – VII (FOURTH YEAR)**

### **List of Recommended Books:**

#### **ESC401 - Introduction to Instrumentation**

1. Instrumentation and Process Control, DC Sikdar, Khanna Publishing House

### **List of Recommended books for Additional Courses:**

#### **Energy Materials**

Energy Technology, O.P. Gupta, Khanna Book Publishing House, Delhi

#### **Biomaterials**

Introduction to Biomaterials, Agrawal & Gopinath, Cambridge University Press

#### **Electronic Materials**

Semiconductor Materials, Devices and Fabrication, Swaminathan, Wiley India

#### **Fatigue and Fracture Mechanics**

Fatigue of Materials, Suresh, Cambridge India

#### **Failure Analysis**

Failure Analysis of Engineering Materials, Ashok Choudhury, McGraw-Hill

#### **Powder Metallurgy**

Powder Metallurgy, Upadhyaya & Upadhyaya, Universities Press

Power Metallurgy, Subramanian, PHI



AICTE Recommended Books for Postgraduate Degree Courses as per Model Curriculum 2018

# LIST OF SUGGESTED BOOKS OF INDIAN AUTHORS

## FOR POSTGRADUATE DEGREE COURSES IN ENGINEERING & TECHNOLOGY [May 2018]



**ALL INDIA COUNCIL FOR TECHNICAL EDUCATION**  
Nelson Mandela Marg, Vasant Kunj, New Delhi 110 070  
[www.aicte-india.org](http://www.aicte-india.org)



<b>COMPUTER SCIENCE &amp; ENGINEERING</b>			
<b>SEMESTER -I</b>			
<b>S.No.</b>	<b>COURSES</b>	<b>S.No.</b>	<b>LIST OF SUGGESTED BOOKS/ PUBLICATIONS</b>
1	Mathematical Foundations for Computer Science	1.	K.Trivedi, Probability and Statistics with Reliability, Queuing, and Computer Science Applications, Wiley
		2.	V. Balakrishnan, Schaum's Outlines of Combinatorics, TMH
		3.	Mansih Sharma & Amit Gupta, The Practice of Business Statistics, KPH, New Delhi
2	Advanced Data Structures	1.	E. Balaguruswamy, Data Structures Using C, TMH
		2.	R.B. Patel, Expert Data Structures with C++, Khanna Book Publishing
		3.	Yashwant Kanetkar, Data Structures Through C, BPB
3	Data Science	1.	V.K. Jain, Data Science & Analytics, Khanna Book Publishing, New Delhi
		2.	Dinesh Kumar, Business Analytics, Wiley India
4	Machine Learning	1.	V.K. Jain, Machine Learning, Khanna Publishing House
		2.	Vinod Chandra S.S., Artificial Intelligence & Machine Learning, PHI
		3.	Rajiv Chopra, Deep Learning
5	Research Methodology and IPR	1.	Ranjit Kumar, Research Methodology: A Step by Step Guide for beginners, Sage Publishing
		2.	T. Ramappa, Intellectual Property Rights Under WTO, S. Chand
		3.	Gupta, Business Research Methods, McGraw Hill Education
6	Ethical Hacking	1.	Harsh Bothra, Hacking, Khanna Book Publishing, New Delhi
		2.	Prateek Shukla & Navneet Mehra, The Unrevealed Secrets of Hacking and Cracking, Unicorn
		3.	Ankit Fadia, The Unofficial Guide to Ethical Hacking, Laxmi Publications
8	Introduction to Intelligent Systems	1.	M.C.Trivedi, Artificial Intelligence, Khanna Publishing House
		2.	Rich, Knight, Shivshankar, Artificial Intelligence, TMH
		3.	Deepak Khemani, A First Course in Artificial Intelligence, McGraw Hill
9	Distributed Systems	1.	Pradeep K. Sinha, Distributed Operating Systems, PHI
		2.	Ikvinderpal Singh, Distributed Systems, Khanna Book Publishing
10	Advanced Wireless and Mobile Networks	1.	Pandya Raj, Mobile, Personal Communications Systems and Services, PHI
		2.	Talukdar, Mobile Computing, TMH
		3.	Brijesh K. Gupta, Mobile Computing, Khanna Publications
11	Operating System Design	1.	M. Singhal, N.G. Shivratri, Advanced Concept in Operating System, McGraw Hill Education
		2.	Ekta Walia, Operating Systems, Khanna Book Publishing Co. (P) Ltd., Delhi
		3.	Godbole, Operating Systems, TMH
12	Cluster and Grid Computing	1.	Janakiram, Grid Computing Models, TMH
		2.	Buyya, High Performance Cluster Computing, Pearson
13	Wireless Access	1.	Singal, Wireless Communications, TMH



AICTE Recommended Books for Postgraduate Degree Courses as per Model Curriculum 2018

	Technologies	2.	Jaganatham, Principles of Modern Wireless Communications Systems, TMH
14	Smart Sensors and Internet of Things	1.	Jeeva Jose, Internet of Things, Khanna Publishing House
		2.	Raj Kamal, Internet of Things, TMH
		3.	Bahga, Internet of Things, University Press
15	Logic and Functional programming	1.	Saroj Kaushik, Logic and Prolog Programming, New Age International Ltd
16	Recommender System	1.	Charu C. Aggarwal, Recommender Systems: The Textbook, Springer
<b>SEMESTER-II</b>			
17	Soft Computing	1.	Sivanandam & Deepa, Principles of Soft Computing, Wiley India
		2.	S. Rajasekaram & G.A. Vijyalakshmi Pai, Neural Networks, Fuzzy Logic and Genetic Algorithms, PHI
18	Big Data Analytics	1.	V.K. Jain, Big Data and Hadoop, Khanna Book Publishing, Delhi
		2.	Maheshwari, Data Analytics, McGraw
		3.	V.K. Jain, Data Science and Analytics, Khanna Publications, Delhi
19	Web Analytics and Development	1.	Avinash Kaushik, Web Analytics: The Art of Online Accountability, Wiley
		2.	Godbole, Web Technologies, TMH
		3.	Rajkamal, Internet and Web Technologies, TMH
20	Advance Algorithms	1.	Gajendra Sharma, Design & Analysis of Algorithms, Khanna Book Publishing, New Delhi
		2.	Udit Agarwal, Algorithms Design and Analysis, Dhanpat Rai
21	Information Theory & Coding	1.	Monica Borda, Fundamentals in Information Theory and Coding, Springer
		2.	Singh & Sapre, Communication Systems, TMH
		3.	Bose, Information Theory, Coding and Cryptography, THM
22	Security Assessment and Risk Analysis	1.	Dwivedi, Mobile Application Security, TMH
23	Biometrics	1.	Anil Jain, Karthik Nanda Kumar, Introduction to Biometric, Springer
		2.	A. K. Jain, and S. Prabhakar, Handbook of Fingerprint Recognition, Springer
24	Secure Software Design & Enterprise Computing	1.	Feroz Khan, SMAC: Digital Discipline Building Digital Enterprise, TMH
		2.	Rajesh Ray, Enterprise Resource Planning: Text & Cases, TMH
25	Concurrence,	1.	Elmars, Navathe, Somayajulu, Gupta, Fundamentals of Database



AICTE Recommended Books for Postgraduate Degree Courses as per Model Curriculum 2018

	Parallelism and Distributed System		Systems, Pearson Education
26	Parallel Algorithms	1.	Pai, Data Structures and Algorithms, TMH
		2.	Salaria, Data Structures using C, Khanna Publishing House
		3.	Yashwant Kanitkar, Data Structures Through C, BPB
27	IoT Application and Communication Protocol	1.	Raj Kamal, Internet of Things, TMH
		2.	Jeeva Jose, Internet of Things, Khanna Book Publishing
		3.	Bahga, Internet of Things, University Press
28	Network Security	1.	V.K. Jain, Cryptography and Network Security, Khanna Publishing House
		2.	Atul Kahate, Cryptography and Network Security, TMH
29	Advanced Machine Learning	1.	Rajiv Chopra, Deep Learning, Khanna Book Publishing Co., New Delhi
		2.	V.K. Jain, Machine Learning, Khanna Book Publishing Co., New Delhi
<b>SEMESTER-III</b>			
30	Cloud Computing	1.	Buyya, Cloud Computing, TMH
		2.	Janakiram, Grid and Cloud Computing, TMH
31	Distributed Databases	1.	Channda Ray, Distributed Database Systems, Pearson
		2.	Saheed K. Rahimi, Distributed Database Systems, Wiley India
32	Business Analytics	1.	Business Analytics, U. Dinesh Kuamr, Wiley India
		2.	Krishnan, Bhambri & Chopra, Business Analytics, Khanna Publications
		3.	V.K. Jain, Data Science and Analytics, Khanna Publishing House
33	Industrial Safety	1.	S.C. Sharma, Industrial Safety, Khanna Book Publishing
		2.	H. P. Garg, Maintenance Engineering, S. Chand and Company
		3.	A.K. Gupta , Industrial Safety and Environment, Laxmi Publications
34	Operations Research	1.	J.C. Pant, Introduction to Optimisation: Operations Research, Jain Brothers, Delhi,
		2.	Pannerselvam, Operations Research, Prentice Hall of India
34	Cost Management of Engineering Projects	1.	Ashish K. Bhattacharya, Principles & Practices of Cost Accounting, A. H. Wheeler publisher
		2.	N.D. Vohra, Quantitative Techniques in Management, Tata McGraw Hill Book Co. Ltd.
		3.	Rangwala, Estimation, Costing and Valuation, Charotar Publishing House
35	Composite Materials	1.	K.K. Chawla, Composite Materials, Springer
		2.	Balasubramaniam, Composite Materials, John Wiley & Sons, Indian Ed.
		3.	Narula & Narula, Material Science, TMH
36	Waste to Energy	1.	O.P. Gupta, Energy Technology, Khanna Publishing
		2.	Khandelwal, K. C., Mahdi, Biogas Technology - A Practical Hand Book,



AICTE Recommended Books for Postgraduate Degree Courses as per Model Curriculum 2018

			TMH
		3.	Waste to Resources, TERI Press, New Delhi
37	Data Warehousing & Mining	1.	Vipin Kumar, Introduction to Data Mining, Pearson
		2.	Ikvinderpal Singh, Data Mining & Warehousing, Khanna Publishing House
38	Web Search & Information Retrieval	1.	Chakrabarti, Mining the Web, Elsevier India Pvt. Ltd
		2.	Avinash Kaushik, Web Analytics, Sybex
39	Compiler for HPC	1.	Raghavan, Principles of Compiler Design, TMH
		2.	A.V. Aho, Principles of Compiler Design, Narosa
40	Optimization Techniques	1.	C.B. Gupta, Optimization Techniques, IK International Publications
		2.	Mohan & Deep, Optimization Techniques, Newage Publications
41	Quantum Computing	1.	Singh & Singh, Elements of Quantum Mechanics, S.Chand Publications
		2.	C.T. Bhunia, Introduction to Quantum Computing, Newage Publishers
42	DNA Computing	1.	Rajagopal, Recombinant DNA & Genetic Engineering, TMH
43	IOT and Smart Cities	1.	Jeeva Jose, Internet of Things, Khanna Book Publishing
		2.	Raj Kamal, Internet of Things, TMH
		3.	Bahga, Internet of Things, University Press
44	Emulation and Simulation Methodologies	1.	Averill M Law, Simulation Modeling and Analysis, TMH



<b>CIVIL ENGINEERING</b>			
<b>SEMESTER-I</b>			
<b>S.No.</b>	<b>COURSES</b>	<b>S.No.</b>	<b>LIST OF SUGGESTED BOOKS/ PUBLICATIONS</b>
1	Advanced Structural Analysis	1.	R. Agor, Structural Analysis, Khanna Publishing House, Delhi
		2.	Pandit, G. S. and Gupta S. P., Structural Analysis A Matrix Approach, TMH
		3.	Reddy, Basic Structural Analysis, McGraw Hill India
2	Advanced Solid Mechanics	1.	D.S. Bedi, Strength of Materials, Khanna Book Publishing
		2.	Ghosh D, Advanced Strength of Materials, New Age International
		3.	Kazimi, Advanced Mechanics of Solid, McGraw Hill
3	Theory of Thin Plates and Shells	1.	Chandrashekhara K, Theory of Plates, Universities Press
		2.	Ramaswamy G.S., Design and Construction of Concrete Shells, CBS Publishers
4	Theory and Applications of Cement Composites	1.	Swamy R.N., Blackie, New Concrete Materials, Academic & Professional Publishers
		2.	S.K. Sharma, Civil Engineering Construction Materials, Khanna Books
5	Theory of Structural Stability	1.	Iyengar, N. G. R., Structural Stability of columns and plates, Eastern West
		2.	Ashwini Kumar, Stability Theory of Structures, Allied Publishers
6	Analytical and Numerical Methods for Structural Engineering	1.	Sastry S. S, Introductory Methods of Numerical Analysis, PHI
		2.	RS Salaria, Computer Oriented Numerical Methods, Khanna Publishing
9	Advanced Hydrology	1.	Ojha & Bhunya, Engineering Hydrology, Oxford University Press
		2.	K. Subramanya, Engineering Hydrology, TMH
10	Advanced Fluid Mechanics	1.	SS Rattan, Fluid Mechanics, Khanna Publishing House
		2.	Ojha & Chandaramouli, Fluid Mechanics, Oxford University Press
		3.	Subramanya, Fluid Mechanics and Hydraulic Machines: Problems and Solutions, TMH
11	Fluvial Hydraulics	1.	R.J. Garde, History of Fluvial Hydraulics, Newage Publications
12	Hydraulic Structures	1.	Singh, B., and Varshney, R.S., Embankment Dam and Engineering, Nemchand & Bross
13	Systems Engineering	1.	Rao, S.S., Engineering Optimization, New Age International (P) Ltd., Delhi



14	Water Resources Systems Planning	1.	Vedula S. and Mujumdar, P.P., Water Resources Systems, Tata McGraw
		2.	O. P. Gupta, Elements of Water Pollution Control Engineering, Khanna Publishing House
15	Irrigation and Drainage	1.	Asawa, G.L., Irrigation Engineering, New Age International Publishers
		2.	Majumdar, D.K., Irrigation Water Management, PHI Learning
<b>SEMESTER-II</b>			
16	FEM in Structural Engineering	1.	Singiresu S. Rao, The Finite Element Method in Engineering, Elsevier India, Fifth Edition
		2.	Chandrupatla T. R. and Belegundu A.D., Introduction to Finite Elements in Engineering, PHI
17	Structural Dynamics	1.	Chopra A. K., Structural Dynamics and Introduction to Earthquake Engineering, Pearson
		2.	Manish S, Finite Element Methods and Computational Structural Dynamics, PHI
18	Advanced Steel Design	1.	Subramaniam N., Design of Steel Structures, Oxford University Press
		2.	Ramchandra, Design of Steel Structures - Vol. II, Standard Book House, Delhi
		3.	Arya A. S., Ajmani J. L., Design of Steel Structures, Nemchand and Bros.
19	Design of Formwork	1.	Kumar Neeraj Jha, Formwork for Concrete Structures, Tata McGraw Hill
20	Design of High Rise Structures	1.	Taranath B. S., Structural Analysis and Design of Tall Buildings, TMH
		2.	Manohar S. N., Tall Chimneys, Tata Mc Graw Hill Publishing Company,
21	Design of Masonry Structures	1.	Narendra Taly, Design of Reinforced Masonry Structures, ICC, 2nd Edition
22	Design of Advanced Concrete Structures	1.	Varghese P. C., Advanced Reinforced Concrete Design, PHI Learning
		2.	Krishna Raju N., Advanced Reinforced Concrete Design, CBS Publishers
23	Advanced Design of Foundations	1.	Varghese P. C., Design of Reinforced Concrete Foundations, PHI
24	Soil Structure Interaction	1.	Kurian N. P., Design of Foundation System- Principles & Practices, Narosa Publishing
		2.	Desai C.S., Numerical Methods in Geotechnical Engineering, McGraw Hill
25	Design of Industrial	1.	Punmia, Design of Steel Structures, Laxmi Publications
		2.	Subramaniam N., Design of Steel Structures, Oxford University Press





AICTE Recommended Books for Postgraduate Degree Courses as per Model Curriculum 2018

	Structures		
26	Ground Water Engineering	1.	O. P. Gupta, Elements of Water Pollution Control Engineering, Khanna Publishing House
		2.	H.M. Raghunath, Ground Water, Newage Publishers
27	Free Surface Flows	1.	Choudhary, M.H., Open-Channel Flows, Prentice-Hall
		2.	Ranga Raju, K.G., Flow Through Open Channels, Tata McGraw Hill
		3.	Saiful Islam, Open Channel Flow, Khanna Book Publishing
28	Computational Methods in Fluid Mechanics	1.	Chaudhary, H. M., Applied Hydraulic Transient, McGraw Hill India
		2.	SS Rattan, Fluid Mechanics and Hydraulic Machines, Khanna Publications
29	Theory and Applications of GIS	1.	Ghosh, S.K. and Chandra, A.M., Remote Sensing and GIS, Narosa Publishing House
30	Advanced Numerical Analysis	1.	R.S. Salaria, Computer Oriented Numerical Methods, Khanna Publishing House
		2.	S.S. Sastry, Introductory Methods of Numerical Analysis, PHI
<b>SEMESTER-III</b>			
31	Design of Prestressed Concrete Structures	1.	S.B. Vanakudre, Prestressed Concrete, Khanna Books, Delhi
		2.	Krishnaraju N., Prestressed Concrete, Tata McGraw Hill, New Delhi
32	Analytical and Finite Element Analysis of Laminated Composite Plates	1.	Reddy J. N., Mechanics of Laminated Composites Plates and Shells, CRC Press
33	Fracture Mechanics of Concrete Structures	1.	Suryja Kuamar Maiti, Fracture Mechanics, Cambridge University Press
		2.	Prashant Kumar, Elements of Fracture Mechanics, Tata McGraw Hill
34	Design of Plates and Shells	1.	Ramaswamy G. S., Design and Construction of Concrete Shell Roofs, PHI
		2.	Varghese P. C., Design of Reinforced Concrete Shells & Folded Plate, PHI
35	Business Analytics	1.	U. Dinesh Kumar, Business Analytics, Wiley India
		2.	Krishnan, Bhambri & Chopra, Business Analytics, Khanna Publishing House
		3.	V.K. Jain, Data Science and Analytics, Khanna Publishing House
36	Industrial Safety	1.	S.C. Sharma, Industrial Safety, Khanna Book Publishing
		2.	H. P. Garg, Maintenance Engineering, S. Chand and Company
		3.	A.K.Gupta, Industrial Safety and Environment, Laxmi Publications
37	Operations Research	1.	J.C. Pant, Introduction to Optimisation: Operations Research, Jain Brothers, Delhi



## AICTE Recommended Books for Postgraduate Degree Courses as per Model Curriculum 2018

		2.	Pannerselvam, Operations Research, Prentice Hall of India
		3.	Iyer, Operation Research, TMH
38	Cost Management of Engineering Projects	1.	Ashish K. Bhattacharya, Principles & Practices of Cost Accounting, A. H. Wheeler Publisher, Delhi
		2.	N.D. Vohra, Quantitative Techniques in Management, Tata McGraw Hill Book Co. Ltd.
		3.	Rangwala, Estimation, Costing and Valuation, Charotar Publishing House
39	Composite Materials	1.	K.K. Chawla, Composite Materials, Springer India
		2.	Balasubramaniam, Composite Materials, John Wiley & Sons, Indian Ed.
40	Waste to Energy	1.	O.P. Gupta, Energy Technology, Khanna Publishing House
		2.	Khandelwal, K. C. and Mahdi, Biogas Technology - A Practical Hand Book, TMH
		3.	Waste to Resources, TERI Press New Delhi
41	Computer Methods in Hydraulics and Hydrology	1.	Chaudhry M.H., Open-Channel Flow-2nd Edition, Springer Verlag
		2.	Saiful Islam, Open Channel Flow, Khanna Book Publishing
42	Stochastic Hydrology	1.	P.J.R. Reddy, Stochastic Hydrology, Laxmi Publications, Delhi



<b>MECHANICAL ENGINEERING</b>			
<b>SEMESTER-I</b>			
<b>S.No.</b>	<b>COURSES</b>	<b>S.No.</b>	<b>LIST OF SUGGESTED BOOKS/ PUBLICATIONS</b>
1	Advanced Stress Analysis	1.	Arbind Kumar Singh, Mechanics of Solids, Prentice-Hall of India
		2.	Srinath S L, Advanced Mechanics of Solids, Tata McGraw Hill Education, New Delhi
		3.	M. L. Munjal, Noise and Vibration Control, IISc Press, World Scientific
2	Advanced Vibrations and Acoustics	1.	S.S. Rao, Mechanical Vibrations, Pearson
		2.	Grover G K, Mechanical Vibrations, Nemchand Publishers, Roorki
		3.	Sujatha, Vibrations and Acoustics, TMH
3	Advanced Machine Design	1.	Sadhu Singh, Machine Design, Khanna Publishing House, New Delhi
		2.	Khurmi & Gupta, A Textbook of Machine Design, S.Chand Publications, New Delhi
		3.	Bhandari, Introduction to Machine Design, TMH
4	Design for Manufacturing and Assembly	1.	S.S. Rao, Engineering Optimization, Newage Publications
5	Mathematical Methods in Engineering	1.	J. B. Doshi, Differential Equations for Scientists and Engineers, Narosa, New Delhi
		2.	Chandrika Prasad, Advanced Engineering Mathematics, Khanna Book Publishing Co. (P) Ltd.
		3.	S. P. Gupta, Statistical Methods, S. Chand & Sons
6	Advanced Engineering Materials	1.	Rangwala, Engineering Materials, Charotar Publishing House
		2.	Agarwal, Introduction to Engineering Materials, TMH
7	Mechanics of Composite Materials	1.	Bhagwan D. Agarwal, Analysis and Performance of Fiber, Wiley India
		2.	Madhujit Mukhopadhyay, Mechanics of Composite Materials and Structures, University Press
8	Analysis and Synthesis of Mechanisms	1.	R.V. Dukkipati, Spatical Mechanism, Narosa Publications
9	Thermodynamics and Combustion	1.	Nag, Engineering Thermodynamics, TMH
		2.	Rao Y.V.C., Postulational and Statistical Thermodynamics, Allied Publishers India
		3.	Anil Date, Analytical Combustion, Cambridge India
10	Advanced Fluid Dynamics	1.	S.S. Rattan, Fluid Mechanics, Khanna Book Publishing Co. (P) Ltd.
		2.	Pijush K. Kundu, Ira M Kohen and David R. Dawaling, Fluid Mechanics, Fifth Edition
11	Nuclear Engineering	1.	Vaidyanathan, Nuclear Reactor Engineering, S.Chand
		2.	R.K. Singhal, Nuclear eactors, Newage Publications, New Delhi



AICTE Recommended Books for Postgraduate Degree Courses as per Model Curriculum 2018

12	Energy Conservation and Management	1.	O.P. Gupta, Energy Technology, Khanna Book Publishing House
		2.	A. Chakrabarti, Energy Engineering and Management, PHI
		3.	O.P. Jahkar, Energy Conservation in Buildings, Khanna Publications
13	Air Conditioning System Design	1.	Sadhu Singh, Refrigeration and Air Conditioning, Khanna Publishing House
		2.	Arora, Refrigeration and Air Conditioning, TMH
		3.	Manohar Prasad, Refrigeration & Air Conditioning, New Age Publishers
14	Gas Turbines	1.	V. Ganesan, Gas Turbines, Tata McGraw Hill
		2.	R. Yadav, Steam and Gas Turbines and Power Plant Engineering, Central Publishing House
15	Research Methodology and IPR	1.	Ranjit Kumar, Research Methodology: A Step by Step Guide for Beginners, Sage India
		2.	Panneerselvam R., Research Methodology, PHI
		3.	Srivatatava, Business Research Methodology, TMH
<b>SEMESTER-II</b>			
16	Finite Element Method	1.	Chandrupatla & Belegundu, Introduction to Finite Elements in Engineering, PHI
		2.	S.S. Bhavikati, Finite Element Analysis, Newage Publications
		3.	Krishnamurthy, Finite Element Analysis, TMH
17	Computer Aided Design	1.	Anil Kumar, Chemical Process Synthesis and Engineering Design, TMH
		2.	Rao, Computer Aided Manufacturing, TMH
		3.	O.P. Gupta, Chemical Process Technology, KBP, Delhi
18	Robotics	1.	S. Mukherjee, Robotics, Khanna Book Publishing Co., New Delhi
		2.	S.K. Saha, Introduction to Robotics, TMH
		3.	T.C. Manjunath, Fundamentals of Robotics, Nandu Printers and Publishers Private Limited, Mumbai
19	Fracture Mechanics	1.	Prashant Kumar, Elements of Fracture Mechanics, McGraw Hill Education
		2.	Surjya Kumar Maiti, Fracture Mechanics: and applications Fundamentals; Cambridge University Press
		3.	K Ramesh, Engineering fracture Mechanics, NPTEL
20	Multi-body Dynamics	1.	Nikraves, P.E., Computer Aided Analysis of Mechanical Systems, PHI
21	Optimization Techniques in Design	1.	J. S. Arora, Introduction to Optimum Design, McGraw Hill
22	Advanced Heat Transfer	1.	Gupta and Prakash, Engineering Heat Transfer, New Chand and Bros, Roorkee
		2.	R.C. Sachdeva, Fundamentals of Engineering Heat and Mass Transfer, Wiley Eastern Ltd., India
		3.	PK Nag, Heat and Mass Transfer, TMH



AICTE Recommended Books for Postgraduate Degree Courses as per Model Curriculum 2018

23	Steam Engineering	1.	P.K. Nag, Power Plant Engineering, TMH
		2.	Domkundwar, A Course in Power Plant Engineering, Dhanapat Rai
24	Refrigeration and Cryogenics	1.	P. Chatopadhyay, Boiler Operation Engineering: Questions and Answers, Tata McGrawHill
		2.	Sadhu Singh, Refrigeration and Air Conditioning, Khanna Publishing House
		3.	Arora, Refrigeration and Air Conditioning, TMH
25	Design of Heat Exchangers	1.	Ramesh K. Shah, Fundamentals of Heat Exchanger Design, Wiley India
26	Computational Fluid Dynamics	1.	Murlidhar and Sundarrajan, Computational Fluid Flow & Heat Transfer, Narosa Publication
		2.	Dr. Suhas Patankar, Numerical Methods in Fluid Flow & Heat Transfer, CRC Press
27	Modelling of IC Engines	1.	V. Ganesan, Gas Turbines, Tata McGraw Hill
		2.	R. Yadav, Steam and Gas Turbines And Power Plant Engineering, Central Publishing House
<b>SEMESTER-III</b>			
28	Advanced Finite Element Method	1.	Chandrupatla and Belegundu, Introduction to Finite Elements in Engineering, PHI
		2.	S.S. Bhavikati, Finite Element Analysis, Newage Publications
		3.	Krishnamurthy, Finite Element Analysis, TMH
29	Advanced Metallurgy	1.	O.P. Khanna, Text book of Material Science and Metallurgy, Dhanpat Rai
		2.	O.P. Gupta, Objective Type Questions & Answers in Metallurgical Engineering, Khanna Book Publishing
30	Industrial Safety	1.	S.C. Sharma, Industrial Safety, Khanna Book Publishing
		2.	H. P. Garg, Maintenance Engineering, S. Chand and Company
		3.	A.K.Gupta Industrial Safety and Environment, Laxmi Publications
31	Operations Research	1.	J.C. Pant, Introduction to Optimisation: Operations Research, Jain Brothers, Delhi
		2.	Pannerselvam, Operations Research, Prentice Hall of India
		3.	Iyer, Operation Research, TMH
32	Cost Management of Engineering Projects	1.	T.S. Grewal, Cost Accounting, S.Chand Publications
		2.	Ashish K. Bhattacharya, Principles & Practices of Cost Accounting, A. H. Wheeler publisher
		3.	N.D. Vohra, Quantitative Techniques in Management, Tata McGraw Hill Book Co. Ltd.
33	Composite Materials	1.	K.K. Chawla, Composite Materials, Springer
		2.	Balasubramaniam, Composite Materials, John Wiley & Sons, Indian edition



## AICTE Recommended Books for Postgraduate Degree Courses as per Model Curriculum 2018

34	Waste to Energy	1.	A. Chandra, Non-Conventional Energy, Khanna Book Publishing Co. Delhi
		2.	O.P. Gupta, Energy Technology, Khanna Publishing House
		3.	Khandelwal, K. C. and Mahdi, Biogas Technology - A Practical Hand Book, TMH
35	Design of Solar and Wind System	1.	Khandelwal, K. C. and Mahdi, S. S., Biogas Technology - A Practical Hand Book-Vol. I & II, Tata
		2.	O.P. Gupta, Energy Technology, Khanna Publishing House
36	Advanced Mathematical Methods in Engineering	1.	J. B. Doshi, Differential Equations for Scientists and Engineers, Narosa, New Delhi
		2.	Chandrika Prasad, Advanced Engineering Mathematics, Khanna Book Publishing Co. (P) Ltd.
		3.	S. P. Gupta, Statistical Methods, S. Chand & Sons
37	Business Analytics	1.	U. Dinesh Kumar, Business Analytics, Wiley India
		2.	Krishnan, Bhambri & Chopra, Business Analytics, Khanna Publishing House
		3.	V.K. Jain, Data Science and Analytics, Khanna Publishing House



<b>TELECOMMUNICATION &amp; ELECTRICAL ENGINEERING</b>			
<b>SEMESTER-I</b>			
<b>S.No.</b>	<b>COURSES</b>	<b>S.No.</b>	<b>LIST OF SUGGESTED BOOKS/ PUBLICATIONS</b>
1	Advanced Digital Signal Processing	1.	Shaila D. Apte, Advanced Digital Signal Processing, Wiley India
		2.	Vijay Madiseti, The Digital Signal Processing Handbook, CRC Press
		3.	Salivahanan, Digital Signal Processing, TMH
2	Digital Image and Video Processing	1.	S.Shridhar, Digital Image Processing, Oxford University Press
		2.	M.C. Trivedi, Digital Image Processing, Khanna Book Publishing House
3	DSP Architecture	1.	Venkatraman B. & Bhaskar M., Digital Signal Processors: Architecture, Programming & Applications, TMH
		2.	V. Udayashankara, Modern Digital Signal Processing, PHI
		3.	Jayaraman, Digital Signal Processing, TMH
4	Computer Vision	1.	Dictionary of Computer Vision, Wiley
		2.	Rajiv Chopra, Deep Learning, Khanna Publishing House
		3.	A.Ravichandran, Computers Today
5	Remote Sensing	1.	Chandra, A.M., Remote Sensing and GIS, Ghosh, Narosa Publishing
		2.	Manugula & Bommakanti, Photogrammetry, GIS & Remote Sensing, Educreation Publishing
6	Voice and Data Networks	1.	Kumar, D. Manjunath and J. Kuri, Communication Networking, Elsevier India
		2.	Bhavneet Sidhu, An Integrated approach to Computer Networks, Khanna Book Publishing, Delhi
		3.	Sanjay Sharma, A course in Computer Networks, Katsons, New Delhi
7	Audio Video Coding & Compression	1.	Mohammed Ghanbari, Standard Codecs: Image Compression to Advanced Video, Institution of Engineering and Technology
		2.	Ranjan Bose, Information Theory, Coding and Cryptography, TMH
8	Advanced Communication Networks	1.	Nader F. Mir, Computer and Communication Networks, Pearson
		2.	ITI Saha Misra, Wireless Communications and Networks, McGraw Hill
9	Wireless and Mobile Communication	1.	V.K. Garg, Principles and Applications of GSM, Pearson
		2.	V.K. Garg, IS-95 CDMA and CDMA 2000, Pearson
10	Wireless Sensor Networks	1.	C.S. Raghavendra, K. M. Sivalingam, T. Znati, Editors, Wireless Sensor Networks, Springer India
		2.	Misra, Wireless Communication and Networks, McGraw Hill
11	Optical Networks	1.	Rajiv Ramaswami, Sivarajan, Sasaki, Optical Networks, MK, Elsevier India
		2.	Siva Ram Murthy, WDM Optical Networks, Pearson
		3.	Chakrabarti, Optical Fiber Communications, TMH



12	RF and Microwave Circuit Design	1.	R.S. Rao, Microwave Engineering, PHI
		2.	Das, Microwave Engineering, TMH
13	DSP Architecture	1.	Venkatramani B., Bhaskar M., Digital Signal Processors: Architecture, Programming and Applications, McGraw India
		2.	M. Sasikumar, D. Shikhare, Ravi Prakash, Introduction to Parallel Processing, PHI,
		3.	Salivahanan, Digital Signal Processing, TMH
14	Microcontrollers and Programmable Digital Signal Processors	1.	Venkatramani B. and Bhaskar M. Digital Signal Processors: Architecture, Programming and Applications, Mcgraw Higher Ed
		2.	Nagoorkani, Microprocessors and Microcontrollers, TMH
15	Digital Signal and Image Processing	1.	S. K. Mitra, Digital Signal Processing – A Computer based Approach, TMH
		2.	A. K. Jain, Fundamentals of Digital Image Processing, Prentice Hall
16	Programming Languages for Embedded Software	1.	Shibu, Introduction to Embedded Systems, McGraw Hill
		2.	R.B. Patel, Expert Data Structures with C, Khanna Publishing House
		3.	R.S. Salaria, Data Structures using C++, Khanna Publishing House
17	VLSI Signal Processing	1.	Rishabh Anand, Digital System Design Using VHDL, Khanna Book Publishing, Delhi
		2.	Virendra Kumar, Parallel Algorithms and Computation, BPB
18	Parallel Processing	1.	V. Rajaraman, L. Sivaram Murthy, Parallel Computers, PHI
		2.	Virendra Kumar, Parallel Algorithms and Computation, Khanna Publishing House
19	System Design with Embedded Linux	1.	Karim Yaghmour, Building Embedded Linux Systems, Orielly Publishers
		2.	R. Bhardwaj, Mastering Linux Kernel Development, Packt India
20	CAD of Digital System	1.	N.A. Sherwani, Algorithms for VLSI Physical Design Automation, Springer India
		2.	P.P. Sahu, VLSI Design, TMH
<b>SEMESTER-II</b>			
21	Pattern Recognition and Machine Learning	1.	Khandelwal, K. C., Mahdi, S. S., Biogas Technology - A Practical Hand Book-Vol. I & II, Tata
		2.	M. Narasimha Murty, V. Susheela Devi, Pattern Recognition, Springer
		3.	Rajiv Chopra, Machine Learning, Khanna Book Publishing, New Delhi
22	Advanced Compute Architecture	1.	Ikvinderpal Singh, Advanced Computer Organisation Architecture, Khanna Publishing House
		2.	Rajiv Chopra, Advanced Computer Architecture, S.Chand Publications





AICTE Recommended Books for Postgraduate Degree Courses as per Model Curriculum 2018

23	IOT and Applications	1.	Jeeva Jose, Internet of Things, Khanna Book Publishing Co., New Delhi
		2.	Vijay Madiseti and Arshdeep Bahga, Internet of Things, VPT
		3.	Raj Kamal, Internet of Things, First edition, McGraw Hill India
24	Digital Design and Verification	1.	Samir Palnitkar, Verilog HDL: A guide to Digital Design and Synthesis, Prentice Hall
25	Multispectral Signal Analysis	1.	Pramod K. Varshney, Manoj K. Arora, Advanced Image Processing Techniques for Remotely Sensed Hyperspectral Data, Springer India
26	Audio Processing	1.	Shaila D. Apte, Speech and audio processing, 2nd Edition, Wiley India
		2.	Bali & bali, Audio Video Systems, Khanna Publishing House
27	Biomedical Signal Processing	1.	D C Reddy, Biomedical Signal Processing, McGraw Hill
		2.	R.M. Rangayyan, Biomedical Signal Analysis, Wiley India
28	Antennas and Radiating Systems	1.	I.J.Bhal and P.Bhartia, Micro-strip antennas, Artech House
		2.	T. K. Sarkar, Smart Antennas, Wiley
29	Advanced Digital Signal Processing	1.	Shaila D. Apte, Advanced Digital Signal Processing, Wiley, India
		2.	Salivahanan, Digital Signal Processing, TMH
30	Satellite Communication	1.	S. K. Raman, Fundamentals of Satellite Communication, Pearson
		2.	Pritchard, Satellite Communications, Pearson
31	Internet of Things	1.	Jeeva Jose, Internet of Things, Khanna Book Publishing Co., New Delhi
		2.	Raj Kamal, Internet of Things, First edition, McGraw Hill
		3.	A Bahaga, V. Madiseti, Internet of Things- Hands on approach, VPT
32	Voice and Data Networks	1.	Bhavneet Sidhu, An Integrated approach to Computer Networks, Khanna Book Publishing
		2.	Vijay Ahuja, Design and Analysis of Computer Communication Networks, McGraw Hill
33	MIMO System	1.	R.S. Kshetrimayum, Fundamentals of MIMO Wireless Communications, Cambridge University Press
34	Programmable Networks – SDN, NFV	1.	Vivek Tiwari, SDN and OpenFlow for Beginners, Kindle Edition



AICTE Recommended Books for Postgraduate Degree Courses as per Model Curriculum 2018

35	Analog and Digital CMOS VLSI Design	1.	P Rabaey, A P Chandrakasan, B Nikolic, Digital Integrated Circuits: A Design, PHI
36	VLSI Design Verification and Testing	1.	Vijay Ahuja, Communications Network Design and Analysis of Computer Communication Networks, McGraw Hill
		2.	Bhavneet Sidhu, An Integrated approach to Computer Networks, Khanna Book Publishing
		3.	P.P. Sahu, VLSI Design, TMH
37	Memory Technologies	1.	Ashok K Sharma, Advanced Semiconductor Memories: Architectures, Designs and Applications, Wiley India
38	SoC Design	1.	P Mishra and N Dutt, Processor Description Languages, Morgan Kaufmann
39	Low Power VLSI Design	1.	Kaushik Roy, Sharat C.Prasad, Low Power CMOS VLSI Design, Wiley India
		2.	P. Rashinkar & Singh, Low Power Design Methodologies
		3.	P.P. Sahu, VLSI Design, TMH
40	Network Security and Cryptography	1.	V.K. Jain, Crptography and Network Security, Khanna Book Publishing
		2.	Atul Kahate, Crptography and Network Security, McGraw Hill
41	Physical Design Automation	1.	N.A. Sherwani, Algorithms for VLSI Physical Design Automation, Springer India
		2.	V.K. Jain, Cryptography and Network Security, Khanna Book Publishing
		3.	Atul Kahate, Cryptography and Network Security, McGraw Hill India
<b>SEMESTER-III</b>			
42	Artificial Intelligence	1.	M.C. Trivedi, Artificial Intelligence, Khanna Publishing House, Delhi
		2.	P.Joshi, P.Kulkarni, Artificial Intelligence: Building Intelligent Systems, PHI
		3.	R.B. Mishra, Artificial Intelligence, PHI
43	Optimization Techniques	1.	J. S. Arora, Introduction to Optimum Design, McGraw Hill India
44	Business Analytics	1.	U. Dinesh Kumar, Business Analytics, Wiley India
		2.	Krishnan, Bhambri & Chopra, Business Analytics, Khanna Publishing House
		3.	V.K. Jain, Data Science and Analytics, Khanna Publishing House
45	Industrial Safety	1.	L.M. Deshmukh, Industrial Safety Management, Tata McGraw Hill
		2.	S.C. Sharma, Industrial Safety, Khanna Book Publishing
		3.	H. P. Garg, Maintenance Engineering, S. Chand and Company



## AICTE Recommended Books for Postgraduate Degree Courses as per Model Curriculum 2018

46	Operations Research	1.	J.C. Pant, Introduction to Optimisation: Operations Research, Jain Brothers, Delhi
		2.	Pannervelam, Operations Research, Prentice Hall of India
		3.	Iyer, Operation Research, TMH
47	Cost Management of Engineering Projects	1.	Ashish K. Bhattacharya, Principles & Practices of Cost Accounting, A. H. Wheeler Publisher, Delhi
		2.	N.D. Vohra, Quantitative Techniques in Management, Tata McGraw
		3.	Rangwala, Estimation, Costing and Valuation, Charotar Publishing House
48	Composite Materials	1.	K.K. Chawla, Composite Materials, Springer India
		2.	Balasubramaniam, Composite Materials, John Wiley & Sons, Indian Edition
49	Waste to Energy	1.	O.P. Gupta, Energy Technology, Khanna Publishing
		2.	Khandelwal, K. C. and Mahdi, Biogas Technology - A Practical Hand Book, TMH
		3.	Waste to Resources, TERI Press New Delhi
50	Pattern Recognition and Machine Learning	1.	Khandelwal, K. C. and Mahdi, S. S., Biogas Technology - A Practical Hand Book-Vol. I & II, TMH
		2.	M. Narasimha Murthy, V. Susheela Devi, Pattern Recognition, Springer India
		3.	Rajiv Chopra, Machine Learning, Khanna Book Publishing, New Delhi
51	Remote Sensing	1.	Basudeb Bhatta, Remote Sensing and GIS, Oxford Publications
		2.	BC Panda, Remote Sensing, Viva Books
52	Communication Network	1.	Vijay Ahuja, Communications Network Design and Analysis of Computer Communication Networks, TMH
		2.	Bhavneet Sidhu, An Integrated Approach to Computer Networks, Khanna Publishing House
53	Nano Materials and Nanotechnology	1.	T. Pradeep, A Textbook of Nanoscience and Nanotechnology, TMH
		2.	Murthy, Shankar, Raj, Textbook of Nanoscience and Nanotechnology, University Press
54	Disaster Management	1.	S.C. Sharma, Disaster Management, Khanna Publishing
		2.	R. Nishith, Singh AK, Disaster Management in India, New Royal Co.
		3.	Mukesh Kapoor, Disaster Management, Saurabh Publishing House



<b>ELECTRICAL ENGINEERING</b>			
<b>SEMESTER-I</b>			
<b>S.No.</b>	<b>COURSES</b>	<b>S.No.</b>	<b>LIST OF SUGGESTED BOOKS/ PUBLICATIONS</b>
1	Electric Drives System	1.	A.K. Babu, Electric & Hybrid Vehicles, Khanna Publishing House
		2.	R. Krishnan, Electric motor drives modeling, analysis and control, PHI
		3.	Subrahmanyam, Electric Drives, Concepts and Applications, TMH
2	Modeling and Analysis of Electrical Machines	1.	R. Krishnan, Electric Motor & Drives: Modeling, Analysis and Control, PHI
		2.	P.S. Bimbhra, Electrical Machines, Khanna Book Publishing Co., Delhi
		3.	Vedam Subryamanhyam, Thyristor Control of Electric Drives, Tata McGraw Hill
3	Advanced Power Electronic Circuits	1.	Rashid, Power Electronics, Prentice Hall India
		2.	G.K. Dubey & C.R. Kasaravada Power Electronics & Drives, Tata McGraw Hill
		3.	PC Sen, Modern Power Electronics, S.Chand Publishing
4	Optimal and Adaptive Control	1.	A.P. Sage, Optimal and Adaptive Control, PHI
5	Power Quality	1.	Simmi P Burman and Bipin Singh, Power Quality, S.K.Kataria and Sons
		2.	S.Chattopadhyay, Madhuchanda Mitra, Electric Power Quality, Springer
6	Dynamics of Electrical Machines	1.	G.C. Garg, Electrical Machines-I, II Khanna Book Publishing Co., New Delhi
		2.	R Krishnan, Electric Motor Drives, Modeling, Analysis, and Control, Pearson Education
		3.	Mulukutla Sarma, Electric Machines: Steady-State Theory and Dynamic Performance CL Engg., Cengage Learning
7	Static VAR Controllers and Harmonic Filtering	1.	Ned Mohan, Power Electronics, John Wiley and Sons
		2.	JC Das, Power System Harmonics and Passive Filter Design, Wiley IEEE Press
8	PWM converter and Applications	1.	Mohan, Undeland and Robbins, Power Electronics: Converters, Applications and Design, Wiley
		2.	Satish Kumar Pedapalli, Pulse Width Modulation: Analysis and Performance in Multilevel Inverters, De Gruyter Oldenbourg
9	Power Semiconductor Devices & Modeling	1.	Y P Abbi and Shashank Jain, Handbook on Energy Audit and Environment Management, TERI
		2.	B.Jayant Baliga, Power Semiconductor Devices, Pws Pub Co
		3.	B.J. Baliga, Fundamentals of Power Semiconductor Devices, Springer
10	Research Methodology and IPR	1.	Ranjit Kumar, Research Methodology, Sage Publishing
		2.	R. Pannerselvam, Research Methodology, PHI
		3.	D.Chawla and N.Sondhi, Research Methodology-Concepts & Cases, Vikas Publishing House



AICTE Recommended Books for Postgraduate Degree Courses as per Model Curriculum 2018

11	Mathematical Methods in Control	1.	Papoulis & Pillai, Probability, Random Variable and Stochastic Processes, McGraw Hill
		2.	K.B.Dutta, Mathematical Methods of Science and Engineering: Aided with MATLAB, Cengage Learning India Pvt. Ltd.
12	Non-Linear Systems	1.	V.Lakshminathan, Practical Stability of Non-Linear Systems, World Scientific
		2.	Khalil, Non-Linear Systems, Pearson
13	Robotics and Automation	1.	S. Mukherjee, Robotics, Khanna Book Publishing Co., New Delhi
		2.	Ghosh, Control in Robotics and Automation: Sensor Based Integration, Allied Publishers
		3.	K.Goyal and D.Bhandari, Industrial Automation and Robotics, S.K.Kataria and Sons
14	Digital Control	1.	Gopal, Digital Control and State Variable Methods, McGraw Higher Ed
		2.	A. Ambikapathy, Control Systems, Khanna Publishing House, Delhi
		3.	V.I. Goerge, Digital Control Systems, Cengage
15	Non-Linear CONTROL	1.	Khalil, Non-Linear Control, Pearson
		2.	B.N. Sarkar, Advanced Control Systems, PHI
		3.	Gopal, Control Systems, TMH
17	SCADA system and Applications	1.	Rajesh Mehra, PLCs and SCADA: Theory & Practice, Laxmi Publications
		2.	Bisht T k, Scada and Energy Management System, S. Kataria & Sons
18	Renewable Energy Systems	1.	Ranjan Rakesh, Kothari D.P, Singal K.C, Renewable Energy Sources and Emerging Technologies, PHI
		2.	A. Chandra, Non-Conventional Energy Resources, Khanna Book Publishing
		3.	D. Mukherjee, Fundamentals of Renewable Energy, New Age International Publishers
19	Engineering Optimization	1.	S.S. Rao, Engineering Optimization, New Age International (P) Ltd.
		2.	A.Ravindran, Engineering Optimization: Methods & Applications, Wiley
20	Power System Dynamics	1.	P.Kundur, Power System Stability and Control, McGraw Hill India
		2.	A.Chakraborti, Power System Dynamics and Simulation, PHI
21	High Voltage Engineering	1.	M. S. Naidu, V. Kamaraju, High Voltage Engineering, McGraw-Hill India
		2.	Wadhwa C L., High Voltage Engineering, Wiley Eastern Limited, NewDelhi
22	Switched Mode Power Control	1.	Ned Mohan, Undeland and Robbins, Power Electronics Converters, Applications and Design, Wiley
		2.	S.Manikantla, Switching Power Supply Design and Optimization, McGrawHill Indian Edition



Semester-II			
23	Power Electronic Converters	1.	Ned Mohan, Undeland and Robbin, Power Electronics: converters, Application and design, Wiley
		2.	M.H.Rashid, Power Electronics, Prentice Hall of India
		3.	L.Umanand, Power Electronics: Essentials & Applications, Wiley India
24	Digital Control of Power Electronic and Drive Systems	1.	D.P.Kothari, R.S.Lodhi, Electric Drives, I.K. International Publishing
		2.	Dubey, Doradla, Joshi, Thyristorized Power Controllers, Newage International Publisher
25	Switched Mode and Resonant Converters	1.	Ned Mohan, Power Electronics, John Wiley and Sons
		2.	V.Jagannatham, Power Electronics: Devices and Circuits, PHI
26	Industrial Load Modeling and Control	1.	I.J.Nagarath and D.P.Kothari, Modern Power System Engineering, Tata McGraw Hill
		2.	S.R. Paranjothi, Modern Power Systems, Newage Publishers
27	Advanced Digital Signal Processing	1.	Sanjit K Mitra, Digital Signal Processing: A computer-based approach, Tata McGraw
		2.	Shailaja Apte, Advanced Digital Signal Processing, Wiley India
28	Advanced Microcontroller based Systems	1.	B.P. Singh, Advanced Microprocessors and Microcontrollers, NewAge International Publishers.
		2.	D.P.Kothari, S.K.Vasudevan, Analysis of Microcontrollers, Medtech
		3.	A.K. Gautam, Advanced Microprocessors, Khanna Book Publishing
29	Distributed Generation	1.	K. Sukhatme, Solar Energy: Principles of Thermal Collection and Storage, Tata McGraw Hill
		2.	Rakesh Ranjan, Kothari, D.P.Singal, Renewable Energy Sources and Emerging Technologies, PHI
30	Smart Grids	1.	A.G.Phadke, Synchronized Phasor Measurement and their Applications, Springer
		2.	A.B.M Shawakat Ali, Smart Grids: Opportunities, Developments, and Trends, Springer
31	Stochastic Filtering and Identification	1.	Papoulis & Pillai, Probability, Random Variable and Stochastic Processes, McGraw Hill
		2.	D.Roy, G.Vishveshwara Rao, Stochastic Dynamics, Filtering and Optimization, Cambridge University Press
32	Advance Control System	1.	M. Gopal, Modern Control System Theory, New Age International (P) Limited
		2.	B.N. Sarkar, Advance Control Systems, PHI
33	Advanced Robotics	1.	Mittel & Nagrath, Robotics and Control, TMH
		2.	S. Mukherjee, Robotics and Automation, Khanna Book Publishing



AICTE Recommended Books for Postgraduate Degree Courses as per Model Curriculum 2018

34	Adaptive Learning and Control	1.	H. K. Khalil, Nonlinear Systems, Prentice Hall
		2.	S. Sastry and M. Bodson, Adaptive Control, Prentice-Hall
		3.	K. S. Narendra and A. M. Annaswamy, Stable Adaptive Systems, PHI
35	Advanced DSP	1.	Venkatramani B., Bhaskar M., Digital Signal Processors: Architecture, Programming and Applications, McGraw India
36	Digital Power System Protection	1.	A.G. Phadke and J. S. Thorp, Computer Relaying for Power Systems, Wiley India
		2.	S.R. Bhide, Digital Power System Protection, PHI
37	Non-Conventional Electrical Energy Systems	1.	B.H.Khan, Non-Conventional Energy Sources, Tata Mc Graw Hill
		2.	R.K.Rajput, Non-Conventional Energy Sources and Utilisation, S.Chand
		3.	A.Chandra, Non-Conventional Energy Resources, Khanna Book Publishing, New Delhi
38	Artificial Intelligence Techniques	1.	M.C. Trivedi, Artificial Intelligence, Khanna Publishing House, Delhi
		2.	P.Joshi, P.Kulkarni, Artificial Intelligence: Building Intelligent Systems, PHI
		3.	R.B. Mishra, Artificial Intelligence, PHI Learning Pvt. Ltd
39	Energy Conversion Processes	1.	O.P. Gupta, Energy Technology, Khanna Publishing House
		2.	Amlan Chakrabarti, Energy Engineering and Management, PHI
		3.	V.Kadambi, An Introduction to Energy Conversion: Turbomachinery, Newage Publishers
40	Electric and Hybrid Vehicles	1.	A.K. Babu, Electric and Hybrid Vehicles, Khanna Book Publishing, Delhi
		2.	Iqbal Husain, Electric and Hybrid Vehicles, CRC Press
<b>Semester-III</b>			
41	SCADA Systems and Applications	1.	Vikrant Vij, PLC & SCADA, Laxmi Publications
		2.	Tanuj Kumar Bisth, Scada and Energy Management System, SK Kataria & Sons
42	FACTS and Custom Power Devices	1.	R Mohan Mathur, Thyristor Based Facts Control System, Wiley India
		2.	K.R Padiyar, Facts Control in Power Transmission and Distribution system, Anshan
43	HVDC	1.	K. R. Padiyar, HVDC Power Transmission Systems, Wiley India
		2.	S Kamakshaiah, V. Kamaraju, HVDC Transmission, Tata McGraw Hill
44	Business Analytics	1.	U. Dinesh Kuamr, Business Analytics, Wiley India
		2.	Krishnan, Bhambri & Chopra, Business Analytics, Khanna Publishing
		3.	V.K. Jain, Data Science and Analytics, Khanna Publishing House



AICTE Recommended Books for Postgraduate Degree Courses as per Model Curriculum 2018

45	Industrial Safety	1.	S.C. Sharma, Industrial Safety, Khanna Book Publishing
		2.	H. P. Garg, Maintenance Engineering, S. Chand and Company
		3.	A.K. Gupta, Industrial Safety and Environment, Laxmi Publications
46	Operations Research	1.	J.C. Pant, Introduction to Optimisation: Operations Research, Jain Brothers, Delhi
		2.	Pannerselvam, Operations Research, Prentice Hall of India
		3.	Iyer, Operation Research, TMH
47	Cost Management of Engineering Projects	1.	Ashish K. Bhattacharya, Principles & Practices of Cost Accounting, A. H. Wheeler Publisher
		2.	N.D. Vohra, Quantitative Techniques in Management, Tata McGraw Hill Book Co. Ltd.
		3.	Rangwala, Estimation, Costing and Valuation, Charotar Publishing House
48	Composite Materials	1.	K.K. Chawla, Composite Materials, Springer India
		2.	Balasubramaniam, Composite Materials, John Wiley & Sons, Indian edition
49	Waste to Energy	1.	O.P. Gupta, Energy Technology, Khanna Book Publishing Co., New Delhi
		2.	Khandelwal, K.C. Mahdi, S.S., Biogas Technology A Practical Hand Book-Vol. I & II, TMH
50	Stochastic Control	1.	P.R. Kumar, P. Varaiya, Stochastic Systems, PHI
		2.	G. Visweswara Rao, Stochastic Dynamics, Filtering and Optimization, Debasish Roy, Cambridge University Press
51	Computational Methods	1.	R. B. Bapat, Graphs and Matrices, TRIM Series, Hindustan Book Agency
		2.	S.P. Venkateshan , Prasanna Swaminathan , Computational Methods in Engineering, Ane Books
		3.	R.S. Salaria, Computer Oriented Numerical Methods, Khanna Publishing House
52	Power System Analysis	1.	L.P. Singh, Advanced Power System Analysis and Dynamics, New Age International
		2.	A.Ambikapathy, Power System Analysis, Khanna Book Publishing Co., New Delhi
		3.	Kothari, Modern Power System Analysis, TMH
53	Power System Transients	1.	Indulkar C.S, Power System Transients: A Statistical Approach, PHI
		2.	Prabha Kundur, Power System Stability and Control, McGraw Hill
54	Reliability Analysis and Protection	1.	S.C. Sharma, Reliability Engineering, Khanna Publishing House
		2.	A.K. Gupta, Reliability, Maintenance and Safety Engineering, Laxmi Publications
		3.	Manna Alakesh, A Textbook of Reliability and Maintenance Engineering, I K International





<b>CHEMICAL ENGINEERING</b>			
<b>SEMESTER-I</b>			
<b>S.No.</b>	<b>COURSES</b>	<b>S.No.</b>	<b>LIST OF SUGGESTED BOOKS/ PUBLICATIONS</b>
1	Mathematical and Statistical Methods in Chemical Engineering	1.	Gupta, S.K., Numerical Methods for Engineers, Wiley Eastern, N. Delhi
		2.	R.S. Salaria, Computer Oriented Numerical Methods, Khanna Publishing House
		3.	Das, Statistical Methods, Vol.-I, II, TMH
2	Advanced Separation Processes	1.	Mihir K. Purkait, Randeep Singh, Membrane Technology in Separation Science, CRC Press
		2.	Kaushik Nath, Membrane Separation Processes, PHI Publications
3	Chemical Reactor Analysis	1.	L.K. Doraiswamy, Chemical Reaction Engineering: Beyond the Fundamentals, CRC Press
4	Industrial Pollution Control	1.	O.P. Gupta, Elements of Environmental Pollution Control, Khanna Book Publishing
		2.	Rao C.S., Environmental Pollution Control Engineering, Newage Publishing House
		3.	Gaikwad & Sapkal, Environmental Engineering, Denett Nagpur
5	Application of Nanotechnology in Chemical Engineering	1.	H.D.Kumar, Material Science: Nanotechnology and Applications, I.K. International Publishing
<b>SEMESTER-II</b>			
6	Advances in Transport Phenomena	1.	P. A. Ramachandran, Advanced Transport Phenomena: Analysis, Modeling, and Computations, Cambridge University Press
		2.	Geankopolis, Transport Processes and Unit Operations, PHI
7	Advanced Reaction Engineering	1.	L.K. Doraiswamy, Chemical Reaction Engineering: Beyond the Fundamentals, CRC Press
		2.	K.A. Gavhane, Chemical Reaction Engineering, Vol.-I, II, Nirali Prakashan
8	Modern concepts in Catalysis and Surface Phenomenon	1.	D.K. Chakrabarty, Heterogeneous Catalysis, New Age Science
		2.	B. Viswanathan, S. Kannan, R. c. Deka, Catalysts and Surfaces Characterization Techniques, Narosa Publications
9	Advanced Downstream Processes	1.	Sivshankar, Bioseparations: Principles and Techniques, PHI Publications
		2.	Prasad, Downstream Process Technology: A New Horizon in Biotechnology, PHI



AICTE Recommended Books for Postgraduate Degree Courses as per Model Curriculum 2018

10	Computational Fluid Dynamics	1.	Ranade V.V., Computational Flow Modeling for Chemical Reactor Engineering, Process Engineering Science, Academic Press
		2.	Tapas Sen gupta, Computational Fluid Dynamics, Universities Press
			-
11	Bioprocess Engineering	1.	Goutam Saha, Alok Barua, Satyabroto Sinha, Bioreactors: Animal Cell Culture Control for Bioprocess Engineering, CRC Press
		2.	D. Govardhan Rao, Introduction to Bio Chemical Engineering, Tata McGraw Hill (India)
12	Phase Transitions in Process Equipment	1.	Ragahavan V., Material Science and Engineering, PHI
13	Micro and Nano Fluidics	1.	T. Pradeep, A Textbook of Nanoscience and Nanotechnology, TMH
		2.	Sarit k.Das, Nanofluids, Wiley India
<b>SEMESTER-III</b>			
14	Business Analytics	1.	U. Dinesh Kumar, Business Analytics, Wiley India
		2.	Krishnan, Bhambri & Chopra, Business Analytics, Khanna Publishing House
		3.	V.K. Jain, Data Science and Analytics, Khanna Publishing House
15	Industrial Safety	1.	L.M. Deshmukh, Industrial Safety Management, Tata McGraw Hill
		2.	S.C. Sharma, Industrial Safety, Khanna Book Publishing
		3.	H. P. Garg, Maintenance Engineering, S. Chand and Company
16	Operations Research	1.	P K Gupta, Operations Research, S.Chand, New Delhi
		2.	J K Sharma, Operation Research -Theory & Application, Laxmi Publications
		3.	Pannerselvam, Operations Research, Prentice Hall of India
17	Cost Management of Engineering Projects	1.	Ashish K. Bhattacharya, Principles & Practices of Cost Accounting, A. H. Wheeler publisher
		2.	N.D. Vohra, Quantitative Techniques in Management, Tata McGraw
		3.	Rangwala, Estimation Costing and Valuation, Charotar Publishing House
18	Composite Materials	1.	K.K. Chawla, Composite Materials, Springer
		2.	Balasubramaniam, Composite Materials, John Wiley & Sons, Indian edition
19	Computer Aided Design	1.	Anil Kumar, Chemical Process Synthesis and Engineering Design, TMH
		2.	Srinivasa Prakash Regalla, Computer Aided Analysis and Design, I.K International Publishing
		3.	Rao, Computer Aided Design, TMH
20	Disaster Management	1.	S.C. Sharma, Disaster Management, Khanna Publishing
		2.	R. Nishith, Singh AK, Disaster Management in India, New Royal Co.
		3.	Mukesh Kapoor, Disaster Management, Saraubh Publishing House



## AICTE Recommended Books for Postgraduate Degree Courses as per Model Curriculum 2018

21	Process Modelling and Simulation	1.	R W Gaikawad, Dhirendra Process Modelling and Simulation, Denett Publication, Nagpur
		2.	Amiya K. Jana, Chemical Process Modelling and Computer Simulation, PHI
22	Waste to Energy	1.	O.P. Gupta, Energy Technology, Khanna Publishing House
		2.	Khandelwal, K. C. and Mahdi, Biogas Technology - A Practical Hand Book, TMH
		3.	Waste to Resources, TERI Press, New Delhi

### ADDITIONAL BOOKS SUGGESTED FOR AUDIT COURSES

1	Stress Management by Yoga	1.	Madhusudhan Penna, Yoga-The Heart of Living, Kavi Kulguru Kalidas Sanskrit University, Ramkete, Nagpur
2	Sanskrit for Technical Knowledge	1.	Mohan Khedkar, Kalyani Kale Sanskrit for Technical Knowledge, Kavi Kulguru Kalidas Sanskrit University, Ramkete, Nagpur
3	Personality Development through Life Enlightenment Skills	1.	Kalyani Kale, Masterstrokes for Life, Kavi Kulguru Kalidas Sanskrit University, Ramkete, Nagpur