

## **M.Tech. Polymer Technology**

### **AC 501 Polymer Technology**

1. Polymer Synthesis: theory & practice, Braun, Springer international
2. An introduction to plastics, Elias, Wiley Interscience
3. Principles of polymerization, G.Odion, Wiley Interscience
4. Synthetic polymers, Feldman & Barbalate, Chapman & Hall
5. Synthesis of polymers, D. Schluter, Wiley VCH

### **AC 502 polymer processing**

1. Plastics Engineering, R J Crawford, Butterworth's.
2. Handbook of plastic processes, Harper, Wiley Interscience.
3. Principles of polymer processing, Tadmor & Gogos, Wiley Interscience.
4. Handbook of plastic Technology, Allen & Baker, CBS publication.
5. Polymer Technology Handbook – Application & processing Operations, Stevens, Amazon.com

### **AC 503 RUBBER & TYRE TECHNOLOGY**

1. The Science & Technology of Rubber, Mark Erman & Eirich, Elsevier Academic press.
2. Handbook of Rubber Technology, R. Schuster, Wiley Interscience.
3. Physical testing of Rubber, Brown, Springer.
4. Rubber Materials, R. Kothandaraman, CRC Press.
5. Tyre Technology, S. N. Chakravarty, Indian Rubber Institute

### **AC 504 POLYMER SYNTHESIS LAB**

1. Practicals in polymer Science, Siddaramaiah, CBS Publishers.
2. Principles of synthesis of Macromolecules, H. G. Elias, Vol. II, Wiley-VCH.
3. Polymer science, Bahadur & Sastry, Narosa Publishers.
4. Experimental Plastics & synthetic Resins, D' Alebio, John Wiley.
5. Handbook of Vinyl Polymer, Mishra & Yagei, CRC press

### **AC 505 APPLIED CHEMISTRY**

1. CHEMISTRY, Raymond Chang, McGraw-Hill.
2. Introduction to polymers, Young & Lovell, Nelson Thorns.
3. Elements of polymer Science & Engineering, Rudin, Elseveir.
4. Principles of instrumental Analysis, Skoog, Thomson Press.
5. Introduction to Thermal Analysis, Brown, Springer India.

### **AC 506 polymerization**

1. Textbook of polymer Science, F. W. Billmeyer, John Wiley & Sons
2. Polymer Science & Technology, J. R. Fried, Prentice Hall
3. Polymer science, V.R. Gowariker, New Age International
4. Polymer science & Technology, P. Ghosh, Tata McGraw-Hill
5. Principles of polymerization, Odian, Wiley India.

**AC 507 UNIT OPERATIONS**

1. Elements of chemical Reaction Engineering, H. S. Fogler, Prentice-Hall
2. Principles of Unit operations, Foust, Wiley India
3. Chemical Reaction Engineering, Levenspiel, Wiley India
4. Fundamentals of Heat & Mass Transfer, Incropera, Wiley India
5. Encyclopedia of Chemical Technology, Kirk-Othmer, Wiley

**AC 508 UNIT PROCESSES**

1. Outlines of Chemical Technology, CE Dryden, East-west Press
2. Chemical Engineering Vol. 1, 2 & 3, Richardson, Elsevier
3. Encyclopedia of chemical Technology, Kirk-Othmer, Wiley
4. Process Dynamics & Control, Seborg, Wiley India
5. Biochemical Engineering, Inamdr, Prentice Hall

**AC 551 POLYMER TESTING & SPECIFICATION**

1. Handbook of Plastics Testing & Failure Analysis, Vishu Shah, Wiley Interscience.
2. Polymer testing & Evaluation of plastics, Mathur & Bhardwaj, Allied Publishers.
3. Encyclopedia of Polymer Science & Technology, Wiley (3<sup>rd</sup> ED)
4. Fatigue, Testing & Analysis, Lee, Elsevier.
5. Introduction to Plastics & Composites, E. Miller, Marcel Dekker
6. Handbook of Plastic Technol (Vol I & III), Allen & Baker, CBS Publication.

**AC 552 POLYMER PROCESSING II**

1. Injection Molding, Potsch & Michaeli, Hanser.
2. Blow Molding Handbook, Rosato, Hanser.
3. Plastics Engineering, R J Crawford, Butterworths.
4. Handbook of Plastic Processes, Harper, Wiley Interscience.
5. Principles of Polymer Processing, Tadmor & Gogos, Wiley Interscience

**AC 553 POLYMER TESTING LAB**

1. Understanding polymer Testing, Ulrich, Hanser.
2. Handbook on plastics, Indian Plastics institute, ChaACer 6, Significance on Testing.
3. Handbook of plastics Testing Technology, Vishu Shah, John Wiley.
4. Testing of Schmitz J. V., Interscience.
5. Encyclopedia of polymer Technology.

**AC 601 FIBER TECHNOLOGIES**

1. Man Made Fibers, R. W. Moncrieff, Butterwordhs.
2. Introduction to Fibre science & Technology, S. P Mishra, New Age.
3. Handbook of Fibre Chemistry, M Lewin, CRC press.
4. Chemical Testing of Textiles, Q Fan, CRC Press.
5. Manufactured Fibre Technology, V B GuACa, Chapman & Hall.

**AC 6021 Biopolymers**

1. Biomaterials-An Introduction, park, Springer.
2. Biomaterials, S. V. Bhat, narosa Publishing House.

3. Biopolymers, Gross & Scholz, Oxford University Press.
4. Biomaterials, Wong & Bronzino, CRC Press.
5. An Introduction to Biomaterials, Guelcher & Hollinger, CRC Press.

#### **AC 6022 SPECIALITY POLYMERS**

1. SPECIALITY Polymers, R.W. Dyson, Blackie Academic & Professional.
2. Functional Polymers, Bergbreiter & martin, Plenum.
3. Conducting Polymers, Wan, Springer.
4. Handbook of Conducting Polymers, Skotheim & Reynolds, CRC Press.
5. Conductive Electroactive polymers Wallace et al, CRC Press.

#### **AC 6023 Engineering Economics And Entrepreneurship**

1. Engineering Management, Fraidoon Mazda, Addison-Wesley.
2. Industrial Engineering and Management, O.P. Khanna, Dhanpat Rai Publication(P) Ltd.
3. Industrial Organisation and Engineering Economics, T.R. Banga & S.C. Sharma
4. Economics for Engineering Students, Seema Singh, IK Publication, New Delhi.
5. Managerial Economics keating, Willey India.

#### **AC 6024 Industrial Waste Management**

1. Handbook of Industrial Waste Treatment, Woodard, Elsevier Science.
2. Biological Waste Water Treatment, Vol. set Sperling, Elsevier Science.
3. Industrial Waste Management, Ekenfelder.
4. Encyclopedia of Chemical Technology, Kirk & Othmer, John Wiley.
5. Encyclopedia of Industrial Chemical Technology, Snell Wiley India.

#### **AC 6031 POLYMER CHARACTERIZATION**

1. INTRODUCTION TO Polymers, Young & Lovell, Nelson Thomes.
2. Handbook of plastic Technology, Allen & Baker, CBS Publication.
3. Thermal Analysis of Polymeric Materials, Wunderlich, Springer.
4. Polymer Testing & Evaluation of Plastics, Mathur & Bhardwaj, Allied Publishers.
5. Plastics Engineering, R.J. Crawford, Butterworths.

#### **AC 6032 ION EXCHANGE MATERIALS**

1. Ion Exchange, F.G. Helfferich, Mc Graw Hill.
2. Quantitative inorganic analysis, A.I. Vogel.
3. Ion-exchange materials, Zegorodni, Elsevier.
4. Inorganic to Exchanges in Chemical Analysis, Qureshi & Varshney, CRC Press.
5. Ion-exchange resins, R. Kunin, Wiley.

#### **AC 6033 Materials Science & Technology**

1. Materials Science & Engineering, Callister, Wiley india.
2. Materials Science & Engineering, V Raghavan, Prentice Hall of India.
3. Engineering Materials, Bhargava, Prentice Hall of India.
4. Engineering Materials, Budinski & Budinski, Prentice Hall.
5. Introduction of Materials Science for Engineers, James F. Shackelford, Macmillan.

**AC 6034 Management Concepts For Engineers**

1. Organizational theory, Jones G.R., Addison-Wesley.
2. Essentials of management, Koontz & O Donnell, Tata McGraw Hill.
3. Managerial Economics, Thomas & Mauvil, Tata McGraw Hill.
4. Marketing Management, Kotler, Prentice Hall.
5. Consumer Behaviour, Schiffman & Kanuk, Prentice Hall.

**AC 6511 POLYMER RHEOLOGY**

1. Plastics Engineering, R J Crawford, Butterworth.
2. Polymer Engineering Science & Viscoelasticity, Brinson, Springer.
3. Introduction to Polymer Viscoelasticity, Shaw, Wiley Blackwell.
4. Polymer Liquids & networks-Dynamics & Rheology, W.W. Graessley, Garland Science ( Taylor & Francis).
5. Introduction to polymer viscoelasticity, 3e, Shaw & Macknight, Wiley Interscience.

**AC 6512 FOOTWEAR TECHNOLOGY**

1. Polymers & Footwear Technology, P. Singh, Kumar Dhawan Publications.
2. Recent Developments in PVC Compounding, S.C.Rodrigues, ALA Chemicals Ltd. Mumbai.
3. Types of Adhesives, M.M. Granthier, Raytheon Company.
4. Engineered Materials Handbook, Adhesives & Sealants, ASM International.
5. Outlines of polymer Technology, Processing of Polymers, R. Sinha, prentice-Hall India.

**AC 6513 PLANT ENGINEERING & PROCESS ECONOMICS**

1. Plant Design & Economics for Chemical Engineers, Peters, Timmerhens, West, McGraw Hill.
2. Chemical Engineering Design, Towler & Sinnott, Elsevier.
3. Process Engineering Economics, J.P. Couper, Chemical Industries Publisher.
4. Ullmann's Chemical & Plant Design, 2 Vol. Set, Ullmann, John Wiley.
5. Project Management, Burke Willey India.

**AC 6514 POLYMER PRODUCT AND MOLD DESIGN**

1. PLASTICS Design Handbook, Rosato, Springer India.
2. Handbook of Plastic Technology, Vol.I, Allen & Baker.
3. Mold Engineering, H. Rees, Hanser.
4. Handbook of plastic Process, C A Harper, Wiley Interscience.
5. Injection Molding of Plastic Components, J. Brown, Mc Graw Hill.

**AC 6521 POLYMER COMPOSITES**

1. Polymer Composites, Friedrich, Springer.
2. Composite materials : Science & Engineering, Chawla, Springer India.
3. Polymer Blends & Composites, L.H. Sperling, Hanser.
4. Polymer Blends, Vol I & II , D.R. Paul, Academic Press.
5. Filled Polymers Science & Industrial Application, Leblanc, CRC press.

**AC 6522 POLYMER REACTION ENGINEERING**

1. Handbook of Polymer Reacting Engineering, Meyes, Wiley Interscience.
2. Macromolecular engineering, Leibler et al, Wiley Interscience.
3. Macromolecular Reacting Engineering, [www.mre-journal.de](http://www.mre-journal.de), Wiley Interscience.
4. Elements of Polymer Science & Engineering, A Rudin, Academic Press.
5. Polymer Reaction Engineering, Hublinger, VCH Publishers.

**AC 6523 INSTRUMENTATION & PROCESS CONTROL**

1. Chemical Process Control, George Stephanopolus, Prentice Hall India.
2. Instrumentation for process Measurement & Control, Norman A Anderson, CRC Press.
3. Process Control, Martin T E, McGraw Hill.
4. Process Control, P.Harriot, McGraw Hill.
5. Process Dynamics & Control, Seborg, Edgar & Mellichamp, John Wiley.

**AC 6524 Environment Audit & Impact Assessment**

1. Environment Impact Assessment, Lawrence, Willey-Blackwell.
2. Handbook of Environment Impact Assessment, Vol I & II, Petts, Blackwell.
3. Environment Impact statements, Eccleston, John Wiley.
4. Environment Impact Assessment, W.C. Larry, McGraw Hill.

**AC 7011 Biosensor Technology**

1. Biosensor Technology : Fundamentals, Applications & New Challengers, Pingarron & Luong, Taylor & Francis.
2. Smart Biosensor Biotechnology, Knopf & Bassi, Taylor & Francis.
3. Sensors nanoscience Biomedical engineering, R.C. Dorf, Taylor & Francis.
4. Fluorescence Sensors & Biosensors, R.B. Thompson, Taylor & Francis.
5. Handbook of conducting polymers, II<sup>nd</sup> Vol. Skotheim & Reynolds, CRC press.

**AC 7012 POLYMER COATINGS & ADHESIVES**

1. Coatings Technology Handbook, Tracton, CRC Press.
2. Coatings Technology, CRC Press.
3. Handbook of Adhesive Technology, Pizzi & Mittal, Marcel Dekker.
4. Organic Coatings, Wicks, Wiley-Blackwell.
5. Additives for Coatings, Bieleman wiley-Blackwell.

**AC 7013 POLYMER PACKAGINGS**

1. Encyclopedia of Packaging Technology, Brody, John Wiley.
2. Plastics Packaging, Piringner & Bauer, Wiley Interscience.
3. Adhesives & Adhesives Tapes, Gierenz, Wiley-Blackwell.
4. Materials for Advanced Packaging, Lu, Springer.
5. Nanopackaging, Morris, Springer.

**AC 7014 WIRE & CABLE TECHNOLOGY**

1. Electrical Power Cable Engineering, W.A Thue.
2. Encyclopedia of Polymer Technology, Vol. 17, John Wiley.
3. Electrical Wiring, Uppal, Khanna Publishers.

4. Developments in PVC Production & Processing, Whelan & Craft, Applied Science Publishers.
5. Basic Electrical Engineering, Kothari 7 Nagrett, Tata McGraw Hill.

#### **AC 7021 Application of Polymers in Biomedical Technology**

1. Biomedical Application, Abd-El\_Aziz, Wiley-Blackwell.
2. Biomedical Polymers, Jenkins, CRC Press.
3. Biomedical Technology & Devices Handbook, Moore & Zonriclakis, CRC Press.
4. Encyclopedia of Biomaterials & Biomedical Engineering 2 Vol. I & II, Set, Wnek, Marcel Dekker
5. Biopolymers for medical & Pharmaceutical applications, Vol. I & II, Stein buchel, CBS.

#### **AC 7022 COMPUTER INTEGRATED MANUFACTURING**

1. Computer Integrated manufacturing, Ted Loso, Prentice Hall.
2. Computer integrated manufacturing, J.A. Rehg, Prentice Hall.
3. Computer Integrated manufacturing S.R. Brown, Prentice Hall.
4. Comprehensive Text on CIM, P.Sorvari, Amazon.com.
5. Computer Integrated manufacturing, Nannu Singh, John Willey

#### **AC 7023 POLYMER DEGRADATION & STABILIZATION**

1. Polymer Degradation, W. Schnabel, Hanser.
2. Aspects of Degradation & Stabilization of Polymers, Jellinek, Elsevier.
3. Stabilization & Degradation of Polymers, Allara & Hawkins, American Chemical Society, Advances in Chemistry Series 169.
4. Chemistry of High Polymer Degradation Processes, Grassie, Butterworths.
5. Biodegradability of Synthetic Polymers, Potts et al, Plenum Press.

#### **AC 7024 WASTE PLASTICS RECYCLING**

1. Plastics Recycling; Ehrig, Hanser.
2. Rubber Recycling: De, Isayev, khait, CRC Press.
3. Feedstock Recycling & Pyrolysis of waste plastics, Scheirs & Kaminsky, Wiley Interscience
4. Handbook of plastic Technology, Vol. 2, Allen & Beker, CBS Publishers.
5. Plastic Fabrication & Recycling, Chanda & Roy, CRC Press.