**Textile Chemistry I**

**Maj/H.Eco/TC-304**

**Checklist of Course Content**

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| **Course Content** | **Sources of Course Material** |
| The Chemistry of Fibers | Book:<http://dl.booktolearn.com/ebooks2/engineering/textile/9781782620235_the_chemistry_of_textile_fibres_1628.pdf> |
| Polymerization | <https://www.slideshare.net/cc12rr/handbook-of-fiber-chemistry> |
| Addition Polymers; Condensation; Crystalline Structure of Polymers; Conditions for Crystalline ; Principles of packing of Polymer chain; | <https://www2.chemistry.msu.edu/faculty/reusch/VirtTxtJml/polymers.htm> |
| Fine Structure; Orientation and Crystalline ; Chain length and molecular slip; Effect of stretch on crystalline and amorphous regions; | <https://www.khanacademy.org/science/ap-chemistry-beta/x2eef969c74e0d802:intermolecular-forces-and-properties/x2eef969c74e0d802:solids-liquids-and-gases/v/crystalline-and-amorphous-polymers>  <https://www2.chemistry.msu.edu/faculty/reusch/VirtTxtJml/polymers.htm>  <https://eng.libretexts.org/Bookshelves/Materials_Science/Supplemental_Modules_(Materials_Science)/Polymer_Chemistry/Polymer_Chemistry%3A_Morphology/Polymer_Chemistry%3A_Polymer_Crystallinity> |
| Properties due to crystalline and amorphous regions. | <https://www.youtube.com/watch?v=9yVywEMutSY> |
| Chemistry of Cellulose: Purification of Cellulose materials; Chemical constitution of cellulose e.g. Structures of the molecule and groups, degree of polymerization; | <https://byjus.com/chemistry/cellulose/>  <https://www.intechopen.com/books/cellulose/an-update-on-overview-of-cellulose-its-structure-and-applications>  <https://core.ac.uk/download/pdf/14916693.pdf> |
| Cellulose Esters | <https://courses.lumenlearning.com/introchem/chapter/esters/> |
| Cellulose Ethers | <https://celluloseether.com/what-is-cellulose-ether/> |
| Hydrolysis of cellulose | <https://www.aidic.it/cet/14/38/073.pdf> |
| Oxidation of cellulose | <https://nvlpubs.nist.gov/nistpubs/jres/29/jresv29n2p131_A1b.pdf> |
| Attack of cellulose by alkali. | <https://bioenergycenter.org/besc/publications/bali_alkaline_yr8.pdf> |

Practical

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| **Course Content** | **Sources of Course Material** |
| Practical File |  |