

GUJARAT TECHNOLOGICAL UNIVERSITY

B.E. SEMESTER : VIII

RUBBER TECHNOLOGY

Subject Name: **BELTS, HOSE & FOOTWEAR TECHNOLOGY**

Sr. No.	Course Contents	Total Hrs
1.	Conveyer Belting: Functions of Conveyer belting, Components, driving gear, idlers, Conveyer belt design, Choice of belt width & Spread, Elevator belt design.	8
2.	Belt Construction: Cover, Carcass & insulation, effect of textile components of performance, Belt selection, Belt joining, Care & maintenance of belting. Belt properties, applications, belt quality grades.	6
3.	Power Transmission Belts: Flat belts v-belts-main types of power transmission belt- grouped v-forms, timing belts, out length belonging, flat belting, Belt tension, Cabled cord, Care & maintenance of power transmission belts. Materials in V-belt composition, Outline of material processing, Main points in rubber processing for V-belts. Characteristics & control factors of SFRR practice of rubber processing, Preparation for determining vulcanizing conditions. Cord properties, cord processing, practice of cord processing, post processing, canvas processing. Methods for processing unwrapped v-belts: building, skiving, wrapping, vulcanization, marking. Methods Raw edged v-belts: building, vulcanization, and cutting. Methods for processing v-ribbed belts: Control factors of grinding resistance, practice of grinding.	12
4.	Hoses: Hose design & construction, Mfg. Process, Hose fittings & Couplings, Hydraulic assemblies, Hose Standardization testing & specification, care & maintenance of hose. Different types of hoses and their manufacturing process.	20
5.	Footwear: Various mfg. processes, types of adhesives, Preparation & testing of various adhesives like solvent based rubber, mfg. of various components like soles, insoles, foot bed, counter, toe, puff, stiffeners, finishers etc. specialty.	8

Practical and Term work:

It should be based on theories

Textbooks:

- Hose Technology By Evans
- Rubber Products Manufacturing Technology By: Anil K. Bhowmick

Reference Books:

- Rubber Technology By: C. M. Blow
- Recent Advances in Rubber Technology Conference book