

MES KEVEEYAM COLLEGE

MALAPPURAM (Dist.),KERLA – Pin 676552.

Affiliated to university of Calicut

Accredited by NAAC with A Grade



CERTIFICATE COURSE

DEPARTMENT OF POLYMER CHEMISTRY

(Email: pgdchem@gmail.com)

CERTIFICATE COURSE IN RUBBER PROCESSING & TECHNOLOGY

A certificate course in rubber processing and technology is offered by chemistry department. It was started in the academic year 2016-17. It aims the final year degree students of our college. The applicants of the course are mainly undergraduates of Chemistry department. The course will equip them with additional qualification for their subsequent higher studies/professional life. It will enable them to apply for job opportunities in rubber and plastic industries and chemical labs. We have constituted a board of studies with eminent scholars in the field of rubber technology. And the syllabus is approved by Board of Studies and we conduct exams regularly towards the end course.

The course consists of basics of polymer science, polymer processing, and various methodology and entrepreneurship development.

Student found it interesting and they actively involved themselves in the course

MES KEVEEYAM COLLEGE VALANCHERY

Research and Post Graduate Department of Chemistry

CC/CHE/03 -Certificate Course on Rubber Processing and Technology

Objective

This objective of the course is to give the learner a fundamental understanding about the natural and synthetic rubbers, their processing techniques and the manufacturing of utility products. It also aims to give an idea about the markets available for rubber products and their marketing.

Course Contents

- Theory: 15 Hours duration
- Practical : 5 Hours duration

Scheme of Evaluation

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| • Written Examination (Conventional) | : 60 Marks |
| • Written Examination (Open Book) | : 20 Marks |
| • Assignment | : 5 marks |
| • Viva Voce | : 5 marks |
| • Performance in Practical (Internal Evaluation) | : 10 |
| Total | : 100 marks |

A Grade: 80% and above, B Grade: 60-79% %, C Grade: 40-59%%, Below 40% D Grade



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SYLLABUS

Unit I: Introduction to Rubbers (3 hours)

Natural Rubber-History, Synthetic rubbers-general and special purpose, Uses of natural and synthetic rubbers

Unit II: Rubber Latex (4 Hours)

Tapping, Preservation, Composition and Modification of Rubber Latex, Synthetic rubber latex, latex testing, development of products from latex

Unit III: Rubber Vulcanisation (3 hours)

Vulcanisation-Historical development-sulphur vulcanization-accelerators and activator-non sulphur vulcanising systems-Evaluation of vulcanization-Cure time-sorch time.

Unit IV: Rubber Technology (3 hours)

Rubber Blends and Composites, Processing methods, Compression moulding, Testing and characterization.

Unit V: Setting up of small scale rubber industry (3 hours)

Various utility products from rubbers, rubber products manufacturing methods, Market study, developing of entrepreneurship culture, financial support from various agencies for setting up of industry, marketing of the products.

Unit VI: Practical (5 hours)

- Latex Analysis
- Hands on experience in the operation of two roll rubber mixing mill and hydraulic press

References

1. An Introduction to Rubber Technology, Morton and Blow
2. Entrepreneurial Development, S S Khanka

