From,

HoD

Department of Chemistry

MES KVM College

Valanchery

To

The Principal

MES KVM College

Sir,

Sub:- permission for the conduct of certificate course on rubber processing.

We have planned to conduct a certificate course on rubber processing for the final year students of science stream. It is a course of 30 hours duration including a three days training programme. So please grant us permission to conduct the course.

Thanking you

Valanchery

14/10/2016

M.E.S. Kalvee Yam College Valanchery Date:

Yours faithfully

Rukkiya. KM

HoD

Dept. of Polymer chemistry

From
The Head of Department
Department of Chemistry
MES Keveeyam College, Valanchery

To
The Principal
MES Keveeyam College, Valanchery

Sir,

Sub: Request for the Approval of Board of Studies for the short term course.

The following academicians may be included in the Board of Studies for the short term course on "Rubber Processing and Technology (CC/CHE/03)"to be conducted by the department.

1. Dr. A Sujith (Associate Professor, Department of Chemistry, National Institute of Technology Calicut)-Chairman.
2. Prof. P Santhakumari (Associate Professor, Department of Chemistry, Majlis Arts and Science College Puramannur).
3. Dr. Prajithakumari (Asst. Professor, Department of Chemistry, PSMO College Tirurangadi).
4. Prof. K M Rukkiya (Head, Department of Chemistry, MES Keveeyam College Valanchery).
5. Dr. C Rajesh (Asst. Professor, Department of Chemistry, MES Keveeyam College Valanchery).

Kindly do the necessary action to constitute the Board of Studies with these members.

Thanking you.

Yours faithfully,
Prof. K M Rukkiya
Associate Professor
Department of Chemistry

Place: Valanchery
Date: 14/10/2016

M E S KEVEEYAM COLLEGE

Re-accredited by NAAC with A Grade
(Affiliated to the University of Calicut)
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Email:principal@meskvmcollege.org

Proceedings of the Principal, MES Keveeyam College Valanchery dated 26-10-2016

(Present: Capt Dr Mohammed Ali P)

Ref: (1)Request for the Approval of Certificate Course, dated 14/10/2016

(2) Request for the Approval of Board of Studies for the short term course, dated 14/10/2016

ORDER

As per reference cited (1) a request was received from the HOD, Department of Chemistry, for theconduct of a certificate course on "Rubber Processing and Technology." The course is meant for undergraduate students and is of 30 hours duration. The Head of the Department has also requested to constitute a Board of Studies for the course with the following members. (2)

1. Dr A Sujith (Associate Professor, Department of Chemistry, National Institute of Technology, Calicut)-Chairman
2. Prof. P Santhakumari (Associate Professor, Department of Chemistry, Majlis Arts and Science College, Puramannur)
3. Dr. Prajithakumari (Asst. Professor, Department of Chemistry, PSMO College Tirurangadi)
4. Prof. K M Rukkiya (Head, Department of Chemistry, MES Keveeyam College Valanchery)
5. Dr C Rajesh (Asst. Professor, Department of Chemistry, MES Keveeyam College Valanchery)

Sanction is hereby accorded to Department of Chemistry to conduct a certificate course on Rubber Processing and Technology. The board of studies for the course is constituted with the members listed above.

Order is issued accordingly.

M.E.S. Ke Vee Yam College Valanchery Date

Lt (Dr.) Mohamed Ali P

Principal

Minutes of the Meeting of the Board of Studies for Certificate Course in Rubber Processing and Technology on 1-11-2016

Agenda:

1. Discussion on the syllabus of the certificate course and its approval

Members present

1. Dr A Sujith (Associate Professor, Department of Chemistry, National Institute of Technology, Calicut)-Chairman
2. Prof. P Santhakumari (Associate Professor, Department of Chemistry, Majlis Arts and Science College, Puramannur)
3. Dr. Prajithakumari (Asst. Professor, Department of Chemistry, PSMO College Tirurangadi)
4. Prof. K M Rukkiya (Head, Department of Chemistry, MES Keveeyam College Valanchery)
5. Dr C Rajesh (Asst. Professor, Department of Chemistry, MES Keveeyam College Valanchery)

The chairman briefed about the objective, course content and scheme of evaluation of the certified course. The draft syllabus prepared was placed for discussion. The modifications suggested by the members were accommodated. It was decided to approve the syllabus for 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

• 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

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 vulvanising 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