



**DEPARTMENT OF PHYSICS**  
**MUHAMMED ABDURAHIMAN MEMORIAL**  
**ORPHANAGE (MAMO) COLLEGE**

[Govt. Aided First Grade College & Affiliated to University of Calicut.  
Re-Accredited by NAAC with A Grade]

**CURRICULUM FOR CERTIFICATE**  
**COURSE IN**

**CERPH004: PHYSICS FOR**  
**COMPETITIVE EXAMINATIONS**

**OFFERED DURING THE**  
**ACADEMIC YEAR 2018-19**  
**[APPROVED BY ACADEMIC COMMITTEE, MAMO COLLEGE]**



MANASSERY, MUKKAM POST,  
KOZHIKODE, KERALA, INDIA, 673 602.  
EMAIL: MAMOCOLLEGE@GMAIL.COM



OFFICE: 0495-2297319  
PRINCIPAL: 0495-2295121



[www.mamocollege.org](http://www.mamocollege.org)



# MUHAMMED ABDURAHIMAN MEMORIAL ORPHANAGE (MAMO) COLLEGE

[Govt. Aided First Grade College & Affiliated to University of Calicut.  
Re-Accredited by NAAC with A Grade]

## DEPARTMENT OF PHYSICS

### CURRICULUM FOR CERTIFICATE COURSE - CERPH004

CONTENTS		
1	INSTITUTIONAL VISION, MISSION & OBJECTIVES	3
2.	VISION, MISSION, OBJECTIVES & CORE VALUES OF THE DEPARTMENT	4
3.	B.Sc PHYSICS: PEOs	5
4.	B.Sc PHYSICS: PSOs	7
5.	B.Sc PHYSICS: POs	8
6.	CERPH004: COURSE CURRICULUM	11
6.1.	COURSE LEVEL	12
6.2.	PREREQUISITE	12
6.3.	COURSE INTAKE & ADMISSION	12
6.4.	COURSE COORDINATOR	12
6.5.	COURSE PREAMBLE	12
6.6.	DURATION	12
6.7.	CURRICULUM FOCUS	13
6.8.	COURSE OBJECTIVES	13
6.9.	SKILL EXPECTED	13
6.10.	COURSE OUTCOMES	13
6.11.	MAPPING OF COs WITH POs AND PSOs	14
6.12.	MODULE-WISE COURSE CONTENTS	14
6.13.	DELIVERY MODE	16
6.14.	DELIVERY SCHEDULE	16
6.15.	DETAILED COURSE DELIVERY PLAN	16
6.16.	ASSESSMENT COMPONENTS	17
6.17.	COURSE EVALUATION & GRADING	18
6.18.	GRIEVANCE REDRESSAL	19
6.19.	ISSUANCE OF CERTIFICATES	19



Manassery, Mukkam Post,  
Kozhikode, Kerala, India, 673 602.  
email: mamocollege@gmail.com



Office: 0495-2297319  
Principal: 0495-2295121



[www.mamocollege.org](http://www.mamocollege.org)

COORDINATOR  
ACADEMIC COMMITTEE  
MUHAMMED ABDURAHIMAN MEMORIAL  
ORPHANAGE COLLEGE  
P.O. MANASSERY, MUKKAM - 673602



# MUHAMMED ABDURAHIMAN MEMORIAL ORPHANAGE (MAMO) COLLEGE

[Govt. Aided First Grade College & Affiliated to University of Calicut.  
Re-Accredited by NAAC with A Grade]

DEPARTMENT OF PHYSICS

CURRICULUM FOR CERTIFICATE COURSE - CERPH004

## INSTITUTIONAL VISION, MISSION & OBJECTIVES 01



VISION

**VISION:** Build Scientifically Oriented, Intellectually Accomplished, Morally Upright and Socially Committed youth who can play a constructive role in Nation Building.



MISSION

**MISSION:** Intellectual, social and economic empowerment of the youth in general and women, minorities, orphans and the destitute in particular by providing quality, value-based higher-education.



OBJECTIVES

**OBJECTIVES:** Pursuit of Excellence, Harnessing technology, Thrust on value-based education, Nurturing Excellence and Moulding the youth for Nation Building.



Manassery, Mukkam Post,  
Kozhikode, Kerala, India, 673 602.  
email: mamocollege@gmail.com



Office: 0495-2297319  
Principal: 0495-2295121

COORDINATOR  
ACADEMIC COMMITTEE  
MUHAMMED ABDURAHIMAN MEMORIAL  
ORPHANAGE COLLEGE  
P.O. MANASSERY, MUKKAM - 673602



[www.mamocollege.org](http://www.mamocollege.org)



# MUHAMMED ABDURAHIMAN MEMORIAL ORPHANAGE (MAMO) COLLEGE

[Govt. Aided First Grade College & Affiliated to University of Calicut.  
Re-Accredited by NAAC with A Grade]

DEPARTMENT OF PHYSICS

CURRICULUM FOR CERTIFICATE COURSE - CERPH004

## VISION, MISSION, OBJECTIVES & CORE VALUES OF THE DEPARTMENT 02



VISION

**VISION:** To build an effective and efficient scenario for the conceptually rich youth to create and revolutionize towards the overall integrity and Development of our Nation.



MISSION

**MISSION:** To provide an effective environment to enhance the scientific temperament and leadership Quality through Rationalism, critical and logic thinking in the students and thereby promoting them to be a socially committed, employable and responsible youth.



**OBJECTIVES:** (a) Emphasize the role of Physics in life. (b) Develop the ability to conduct, observe, analyzes and report an experiment and to deal with physical and mathematical models. (c) Improve the fundamental concepts and advanced techniques of Physics. (d) Enhance intellectual, computational, experimental, communication and analytical skills of the students. (e) Provide the students with the modern techniques in physics.



VALUES

**CORE VALUES:** Innovation, Quality & Excellence, Integrity, Ethical Conscience, Fairness & Justice, Service Mindedness, Professionalism, Global Outlook, Honesty and Discipline & Accountability.



COORDINATOR  
ACADEMIC COMMITTEE  
MUHAMMED ABDURAHIMAN MEMORIAL  
ORPHANAGE COLLEGE  
P.O. MANASSERY, MUKKAM - 673602



Manassery, Mukkam Post,  
Kozhikode, Kerala, India, 673 602.  
email: mamocollege@gmail.com



Office: 0495-2297319  
Principal: 0495-2295121



[www.mamocollege.org](http://www.mamocollege.org)



## MUHAMMED ABDURAHIMAN MEMORIAL ORPHANAGE (MAMO) COLLEGE

[Govt. Aided First Grade College & Affiliated to University of Calicut.  
Re-Accredited by NAAC with A Grade]

DEPARTMENT OF PHYSICS

CURRICULUM FOR CERTIFICATE COURSE - CERPH004

# B.Sc PHYSICS: PROGRAMME EDUCATIONAL OBJECTIVES [PEOs] 03

After 4 to 5 years of graduation, the career and professional accomplishments attained by the Physics Graduates would reflect that the programme really prepared the graduates to deal with the real world, where they could apply and use the skills and knowledge they have learned to good use.

Specifically, the graduate would be able to:



**PEO1: COMPETENCY SKILLS:** To develop strong student competencies and its applications in a technology – rich, interactive environment.



**PEO2: ADAPTABILITY TO THE CHANGING ENVIRONMENTS:** Graduates will communicate effectively, recognize and incorporate societal needs and constraints in their professional endeavours, and practise their profession with high regard to legal and ethical responsibilities.



Manassery, Mukkam Post,  
Kozhikode, Kerala, India, 673 602.  
email: mamocollege@gmail.com



Office: 0495-2297319  
Principal: 0495-2295121

COORDINATOR  
ACADEMIC COMMITTEE  
MUHAMMED ABDURAHIMAN MEMORIAL  
ORPHANAGE COLLEGE  
P.O. MANASSERY, MUKKAM - 673602



[www.mamocollege.org](http://www.mamocollege.org)



# MUHAMMED ABDURAHIMAN MEMORIAL ORPHANAGE (MAMO) COLLEGE

[Govt. Aided First Grade College & Affiliated to University of Calicut.  
Re-Accredited by NAAC with A Grade]

## DEPARTMENT OF PHYSICS

### CURRICULUM FOR CERTIFICATE COURSE - CERPH004



**PEO3: ENTHUSIASM IN RESEARCH:** To develop strong student skills in research, and interpretation of complex information.



**PEO4: SUSTAINABLE EXCELLENCE AND GROWTH IN THE CAREER:** Have sufficient breadth of understanding to enable continued professional development and lifelong learning throughout their career..



Manassery, Mukkam Post,  
Kozhikode, Kerala, India, 673 602.  
email: mamocollege@gmail.com



Office: 0495-2297319  
Principal: 0495-2295121



[www.mamocollege.org](http://www.mamocollege.org)

**COORDINATOR**  
**ACADEMIC COMMITTEE**  
MUHAMMED ABDURAHIMAN MEMORIAL  
ORPHANAGE COLLEGE  
P.O. MANASSERY, MUKKAM - 673602



# MUHAMMED ABDURAHIMAN MEMORIAL ORPHANAGE (MAMO) COLLEGE

[Govt. Aided First Grade College & Affiliated to University of Calicut.  
Re-Accredited by NAAC with A Grade]

DEPARTMENT OF PHYSICS

CURRICULUM FOR CERTIFICATE COURSE - CERPH004

## B.Sc PHYSICS: PROGRAMME SPECIFIC OUTCOME [PSOs] 04

On successful completion of a Bachelor Degree in Physics, the graduates would be able to:



**PSO1:** Introduce advanced techniques and ideas required in developing a suitable career in life.



**PSO2:** Understand and apply principles of Physics for understanding the scientific phenomenon in the recent research realms.



**PSO3:** Developing research oriented skills and to create an awareness on the impact of Physics on the society and development outside the scientific community.



**PSO4:** Enhance the ability of the students to use Mathematical and Statistical models in solving various problems in the course of study and also to make aware and handle various sophisticated instruments/equipment.



Manassery, Mukkam Post,  
Kozhikode, Kerala, India, 673 602.  
email: mamocollege@gmail.com



Office: 0495-2297319  
Principal: 0495-2295121

COORDINATOR  
ACADEMIC COMMITTEE  
MUHAMMED ABDURAHIMAN MEMORIAL  
ORPHANAGE COLLEGE  
P.O. MANASSERY, MUKKAM - 673602



[www.mamocollege.org](http://www.mamocollege.org)



## MUHAMMED ABDURAHIMAN MEMORIAL ORPHANAGE (MAMO) COLLEGE

[Govt. Aided First Grade College & Affiliated to University of Calicut.  
Re-Accredited by NAAC with A Grade]

DEPARTMENT OF PHYSICS

CURRICULUM FOR CERTIFICATE COURSE - CERPH004

# B.Sc PHYSICS: PROGRAMME OUTCOMES [POs] 05

The students graduating from B.Sc Physics Programme should be able to:



**PO1: SCIENTIFIC TEMPER & KNOWLEDGE:** Apply knowledge of physics and its branches to provide solutions to complex problems.



**PO2: PROBLEM SOLVING CAPABILITY:** Identify, formulate, review research literature, and analyze complex real-life problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and computing.



**PO3: ANALYTIC SOLUTIONS:** Design practical solutions for complex real-life problems through proper case analysis and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.



Manassery, Mukkam Post,  
Kozhikode, Kerala, India, 673 602.  
email: mamocollege@gmail.com



Office: 0495-2297319  
Principal: 0495-2295121

COORDINATOR  
ACADEMIC COMMITTEE  
MUHAMMED ABDURAHIMAN MEMORIAL  
ORPHANAGE COLLEGE  
P.O. MANASSERY, MUKKAM - 673602



[www.mamocollege.org](http://www.mamocollege.org)





# MUHAMMED ABDURAHIMAN MEMORIAL ORPHANAGE (MAMO) COLLEGE

[Govt. Aided First Grade College & Affiliated to University of Calicut.  
Re-Accredited by NAAC with A Grade]

## DEPARTMENT OF PHYSICS

### CURRICULUM FOR CERTIFICATE COURSE - CERPH004



**PO4: CRITICAL / LOGICAL THINKING:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.



**PO5: ADAPTABILITY THROUGH TECHNOLOGY:** Create, select, and apply appropriate techniques, resources, and modern computing and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.



**PO6: THE RATIONALISM AND SOCIETY:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional practice.



**PO7: ENVIRONMENT AND SUSTAINABILITY:** Understand the impact of the professional computing solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.



**PO8: ETHICS & HONESTY:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the computing practice.



**PO9: INDIVIDUAL AND LEADERSHIP QUALITY:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.



Manassery, Mukkam Post,  
Kozhikode, Kerala, India, 673 602.  
email: mamocollege@gmail.com



Office: 0495-2297319  
Principal: 0495-2295121



[www.mamocollege.org](http://www.mamocollege.org)

COORDINATOR  
ACADEMIC COMMITTEE  
MUHAMMED ABDURAHIMAN MEMORIAL  
ORPHANAGE COLLEGE  
P.O. MANASSERY, MUKKAM - 673602



# MUHAMMED ABDURAHIMAN MEMORIAL ORPHANAGE (MAMO) COLLEGE

[Govt. Aided First Grade College & Affiliated to University of Calicut.  
Re-Accredited by NAAC with A Grade]

## DEPARTMENT OF PHYSICS

### CURRICULUM FOR CERTIFICATE COURSE - CERPH004



**PO10: COMMUNICATION:** Communicate effectively on complex computing activities with the team members and with society at large, such as, being able to comprehend and demonstrate in simple manner, and give and receive clear instructions.



**PO11: PROJECT MANAGEMENT AND FINANCE:** Demonstrate knowledge and understanding of the scientific and reasoning principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.



**PO12: LIFE-LONG LEARNING:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.



Manassery, Mukkam Post,  
Kozhikode, Kerala, India, 673 602.  
email: mamocollege@gmail.com



Office: 0495-2297319  
Principal: 0495-2295121

**COORDINATOR  
ACADEMIC COMMITTEE**  
MUHAMMED ABDURAHIMAN MEMORIAL  
ORPHANAGE COLLEGE  
P.O. MANASSERY, MUKKAM - 673602



[www.mamocollege.org](http://www.mamocollege.org)



# MUHAMMED ABDURAHIMAN MEMORIAL ORPHANAGE (MAMO) COLLEGE

[Govt. Aided First Grade College & Affiliated to University of Calicut.  
Re-Accredited by NAAC with A Grade]

DEPARTMENT OF PHYSICS

CURRICULUM FOR CERTIFICATE COURSE - CERPH004

# CERTIFICATE COURSE

## CERPH004: PHYSICS FOR COMPETITIVE EXAMINATIONS

# 06

# COURSE CURRICULUM

Course Name	Physics for Competitive Examinations
Course Code	CERPH004
Year	2018-19
Course Designer	Mr. VISHNU PRASAD S.
Course Duration	30 Hrs
Course Schedule	November to February
Maximum Students Intake	60 Students



Manassery, Mukkam Post,  
Kozhikode, Kerala, India, 673 602.  
email: mamocollege@gmail.com



Office: 0495-2297319  
Principal: 0495-2295121



[www.mamocollege.org](http://www.mamocollege.org)

  
COORDINATOR  
ACADEMIC COMMITTEE  
MUHAMMED ABDURAHIMAN MEMORIAL  
ORPHANAGE COLLEGE  
P.O. MANASSERY, MUKKAM - 673602



# MUHAMMED ABDURAHIMAN MEMORIAL ORPHANAGE (MAMO) COLLEGE

[Govt. Aided First Grade College & Affiliated to University of Calicut.  
Re-Accredited by NAAC with A Grade]

## DEPARTMENT OF PHYSICS

### CURRICULUM FOR CERTIFICATE COURSE - CERPH004

#### 1. COURSE LEVEL

Foundational, skill-oriented certificate programme.

#### 2. PREREQUISITE

None.

#### 3. COURSE INTAKE & ADMISSION

Maximum 60 students will be given admission to the course based on First-Come-First-Serve basis. All the students of the MAMO College are eligible for free enrolment for the course. The enrolment notification will be issued for the course well in advance of the commencement of the course.

#### 4. COURSE COORDINATOR

Mr. Vishnu Prasad S, Assistant Professor, Department of Physics.

#### 5. COURSE PREAMBLE

Entry into service exams has been a tough nut to crack for many of the youth as they lack the skill of solving the numerical problems with ease and the poor knowledge of simple physical phenomenon. This course is intended to serve those aspirants who look up for an assistance in the afore mentioned areas and thereby can achieve their goals.

#### 6. DURATION

Total Duration: 30 Hrs. [Contact Hrs. 15 Hrs., , Course Woks: 8 and Assessment Works: 7]



Manassery, Mukkam Post,  
Kozhikode, Kerala, India, 673 602.  
email: mamocollege@gmail.com



Office: 0495-2297319  
Principal: 0495-2295121



[www.mamocollege.org](http://www.mamocollege.org)

  
COORDINATOR  
ACADEMIC COMMITTEE  
MUHAMMED ABDURAHIMAN MEMORIAL  
ORPHANAGE COLLEGE  
P.O. MANASSERY, MUKKAM - 673602



# MUHAMMED ABDURAHIMAN MEMORIAL ORPHANAGE (MAMO) COLLEGE

[Govt. Aided First Grade College & Affiliated to University of Calicut.  
Re-Accredited by NAAC with A Grade]

## DEPARTMENT OF PHYSICS

### CURRICULUM FOR CERTIFICATE COURSE - CERPH004

## 7. CURRICULUM FOCUS

Enhance the employability of the learners through curriculum enrichment for additional skill development.

## 8. COURSE OBJECTIVES

Learners are expected to

- Learning of principles behind the simple physical systems
- Knowledge of solving problems related to the physics of simple systems.

## 9. SKILL EXPECTED

On the successful completion of the course, learners will be able to:

- To notify the learner about the various sections of physics asked in different exams
- To know about the basics of simple systems
- To have knowledge about how to solve the problems.

## 10. COURSE OUTCOMES

Upon the successful completion of the course, learners will be able to:

CO No	Course Outcome(CO)	Skill/Knowledge Attainment Level Based on Revised Bloom's Taxonomy
CO1	To have knowledge simple phenomenon in mechanics and dynamics of systems	Analyse & understand



Manassery, Mukkam Post,  
Kozhikode, Kerala, India, 673 602.  
email: mamocollege@gmail.com



Office: 0495-2297319  
Principal: 0495-2295121

COORDINATOR  
ACADEMIC COMMITTEE  
MUHAMMED ABDURAHIMAN MEMORIAL  
ORPHANAGE COLLEGE  
P.O. MANASSERY, MUKKAM - 673602



[www.mamocollege.org](http://www.mamocollege.org)



# MUHAMMED ABDURAHIMAN MEMORIAL ORPHANAGE (MAMO) COLLEGE

[Govt. Aided First Grade College & Affiliated to University of Calicut. Re-Accredited by NAAC with A Grade]

## DEPARTMENT OF PHYSICS

### CURRICULUM FOR CERTIFICATE COURSE - CERPH004

CO No	Course Outcome(CO)	Skill/Knowledge Attainment Level Based on Revised Bloom's Taxonomy
CO2	To notify the learner about the various processes involved in heat conversion and dynamics.	Understand& apply
CO3	To have knowledge about different material properties and structural properties	Understand& apply

## 11. MAPPING OF COs WITH PSO<sub>s</sub> AND PO<sub>s</sub>

CO <sub>s</sub>	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3	PSO4
CO1	2	3	2	2	1	1	0	1	1	1	1	2	3	1	3	3
CO2	3	3	3	2	0	0	0	1	1	1	2	3	3	0	1	3
CO3	3	3	3	2	1	0	0	1	1	1	1	3	3	1	1	2
AVG	2.6	3	2.6	2	0.7	0.3	0	1	1	1	1.3	2.6	3	0.7	1.3	2.7

## 12. MODULE-WISE COURSE CONTENTS

### MODULE 1: MECHANICAL PROBLEMS

**MODULE DURATION:** 8 Hrs. [Contact Hrs. 3 Hrs. Course Woks: 3 and Assessment Works: 2]

**MODULE CONTENT:** Displacement - distance: directional walking problem velocity - relative velocity, train - platform -pole, average velocity, time taken for travel, acceleration, car with varying speed, laws of motion, levers



Manassery, Mukkam Post,  
Kozhikode, Kerala, India, 673 602.  
email: mamocollege@gmail.com



Office: 0495-2297319  
Principal: 0495-2295121

**COORDINATOR**  
**ACADEMIC COMMITTEE**  
MUHAMMED ABDURAHIMAN MEMORIAL  
ORPHANAGE COLLEGE  
P.O. MANASSERY, MUKKAM - 673602



[www.mamocollege.org](http://www.mamocollege.org)



# MUHAMMED ABDURAHIMAN MEMORIAL ORPHANAGE (MAMO) COLLEGE

[Govt. Aided First Grade College & Affiliated to University of Calicut.  
Re-Accredited by NAAC with A Grade]

## DEPARTMENT OF PHYSICS

### CURRICULUM FOR CERTIFICATE COURSE - CERPH004

**MODULE OUTCOME:** On successful completion of the module learners can solve the simple problems in relative motions, usually asked in entry into state service exams

#### MODULE 2: HEAT AND ENERGY DYNAMICS

**MODULE DURATION:** 10 Hrs. [Contact Hrs. 6 Hr., Course Woks: 2 and Assessment Works: 2]

**MODULE CONTENT:** Energy flow dynamics - conduction, convection, radiation, joules theorem, theory of pressure cooker, refrigerator, heaters and coolers

**MODULE OUTCOME:** On successful completion of the module learners will be able get an idea on the assessment of energy dynamics in a system and will be able to solve problems in competitive exams

#### MODULE 3: ATOMS, MOLECULES & MATERIAL PROPERTIES.

**MODULE DURATION:** 12 Hrs. [Contact Hrs. 6 Hr., Course Woks: 3 and Assessment Works: 3]

**MODULE CONTENT:** atoms – structure, components, different models, molecules – bonding, composition, mechanical, relevant physical & chemical properties of matter

**MODULE OUTCOME:** On successful completion of the module learners will be able to answer the questions related to the topic in the competitive exams

#### REFERENCES

1. *Ganithammadhuram*, Mathrubhoomi books, 2017
2. NCERT Textbook for plus one Science Stream



Manassery, Mukkam Post,  
Kozhikode, Kerala, India, 673 602.  
email: mamocollege@gmail.com



Office: 0495-2297319  
Principal: 0495-2295121



[www.mamocollege.org](http://www.mamocollege.org)

  
**COORDINATOR**  
**ACADEMIC COMMITTEE**  
MUHAMMED ABDURAHIMAN MEMORIAL  
ORPHANAGE COLLEGE  
P.O. MANASSERY, MUKKAM - 673602



# MUHAMMED ABDURAHIMAN MEMORIAL ORPHANAGE (MAMO) COLLEGE

[Govt. Aided First Grade College & Affiliated to University of Calicut. Re-Accredited by NAAC with A Grade]

## DEPARTMENT OF PHYSICS

### CURRICULUM FOR CERTIFICATE COURSE - CERPH004

3. NCERT Textbook for plus two science stream.

#### ADDITIONAL REFERENCES & STUDY MATERIALS:

4. D. S. Mathur, *Mechanics*.
5. Ajoy Ghatak, *Optics*.
6. *Heat & Thermodynamics*, Manjusha Publications

### 13. DELIVERY MODE

The course employs multi-mode delivery mechanism including contact lecture, online videos, and Online and offline course works.

### 14. DELIVERY SCHEDULE

November to February.

### 15. DETAILED COURSE DELIVERY PLAN

Hour	Delivery Mode and Activity	Topics to be Covered
1	Contact Lecture 1	Distance -displacement
2	Assessment 1	Multiple choice exam
3	Contact Lecture 2	Velocity - relative velocity
4	Contact Lecture 3	Acceleration
5	Course work 1	Worksheet 1
6	Course work 2	Worksheet 2
7	Assessment 2	Multiple choice exam
8	Course work 3	Create problems related to module
9	Contact Lecture 4	Energy flow dynamics
10	Contact Lecture 5	Conduction, convection, radiation, ,
11	Contact Lecture 6	Joules theorem



Manassery, Mukkam Post,  
Kozhikode, Kerala, India, 673 602.  
email: mamocollege@gmail.com



Office: 0495-2297319  
Principal: 0495-2295121



[www.mamocollege.org](http://www.mamocollege.org)

  
COORDINATOR  
ACADEMIC COMMITTEE  
MUHAMMED ABDURAHIMAN MEMORIAL  
ORPHANAGE COLLEGE  
P.O. MANASSERY, MUKKAM - 673602





# MUHAMMED ABDURAHIMAN MEMORIAL ORPHANAGE (MAMO) COLLEGE

[Govt. Aided First Grade College & Affiliated to University of Calicut.  
Re-Accredited by NAAC with A Grade]

## DEPARTMENT OF PHYSICS

### CURRICULUM FOR CERTIFICATE COURSE - CERPH004

Hour	Delivery Mode and Activity	Topics to be Covered
12	Course work 4	Worksheet 3
13	Assessment 3	Multiple choice exam
14	Contact Lecture 7	Theory of pressure cooker
15	Contact Lecture 8	Refrigerator
16	Contact Lecture 9	Heaters and coolers
17	Course work 5	Worksheet 4
18	Assessment 4	Multiple choice exam
19	Contact Lecture 10	Atoms – structure, components
20	Contact Lecture 11	Different models
21	Course work 6	Worksheet 5
22	Assessment 5	Multiple choice exam
23	Contact Lecture 12	Molecules – bonding
24	Contact Lecture 13	Composition
25	Course work 7	Create problems related to module
26	Contact Lecture 14	Mechanical, physical & chemical properties
27	Course work 8	Create problems related to module
28	Assessment 6	Multiple choice exam
29	Contact Lecture 15	Winding up the course
30	Assessment 7	End course examination

## 16. ASSESSMENT COMPONENTS

Total Marks: 100

**CLASSROOM AND GROUP PARTICIPATION: 20 Marks.** This component aims at testing the course content understanding and the reflection skills and their attainment levels.



Manassery, Mukkam Post,  
Kozhikode, Kerala, India, 673 602.  
email: mamocollege@gmail.com



Office: 0495-2297319  
Principal: 0495-2295121

COORDINATOR  
ACADEMIC COMMITTEE  
MUHAMMED ABDURAHIMAN MEMORIAL  
ORPHANAGE COLLEGE  
P.O. MANASSERY, MUKKAM - 673602



[www.mamocollege.org](http://www.mamocollege.org)



# MUHAMMED ABDURAHIMAN MEMORIAL ORPHANAGE (MAMO) COLLEGE

[Govt. Aided First Grade College & Affiliated to University of Calicut.  
Re-Accredited by NAAC with A Grade]

## DEPARTMENT OF PHYSICS

### CURRICULUM FOR CERTIFICATE COURSE - CERPH004

**COURSE WORK: 30 Marks.** This component aims at testing the skill attainment levels of the learners in analysing and implementing the real-world problem.

**MID-COURSE ASSIGNMENT: 20 Marks.** This component aims at testing the module-wise attainment levels of the course objectives and course outcome and module outcomes.

**END-COURSE ASSESSMENT: 30 Marks.** This component aims at testing overall attainment levels of the course with respect to course objectives, course outcome and module outcomes.

## 17. COURSE EVALUATION & GRADING

The course evaluation is done/coordinated entirely by the course coordinator. The following 10-point Indirect Grading System is used for awarding grades to students:

Percentage of Mark	Letter Grade	Interpretation	Class
95 and above	O	Outstanding	First Class with Distinction
85 to below 95	A+	Excellent	First Class with Distinction
75 to below 85	A	Very good	First Class with Distinction
65 to below 75	B+	Good	First Class
55 to below 65	B	Satisfactory	First Class
45 to below 55	C	Average	Second Class
35 to below 45	P	Pass	Third Class
Below 35	F	Failure	Fail
Incomplete	I	Incomplete	Fail
Absent	Ab	Absent	Fail



Manassery, Mukkam Post,  
Kozhikode, Kerala, India, 673 602.  
email: mamocollege@gmail.com



Office: 0495-2297319  
Principal: 0495-2295121

COORDINATOR  
ACADEMIC COMMITTEE  
MUHAMMED ABDURAHIMAN MEMORIAL  
ORPHANAGE COLLEGE  
P.O. MANASSERY, MUKKAM - 673602



[www.mamocollege.org](http://www.mamocollege.org)



## MUHAMMED ABDURAHIMAN MEMORIAL ORPHANAGE (MAMO) COLLEGE

[Govt. Aided First Grade College & Affiliated to University of Calicut.  
Re-Accredited by NAAC with A Grade]

### DEPARTMENT OF PHYSICS

### CURRICULUM FOR CERTIFICATE COURSE - CERPH004

The grade is awarded by the course-coordinator by considering the overall performance of the learner in all the assessment component of the course.

### 18. GRIEVANCE REDRESSAL

The grievances, if any, can be submitted to the Head of the Department for its redressal. Those grievances that cannot be redressed by HoD can be forwarded to Academic Council of the College for final decision on the matter.

### 19. ISSUANCE OF CERTIFICATES

The Course Completion Certificate will be issued to all the successful candidates showing the Total Marks and Grade Obtained.



Manassery, Mukkam Post,  
Kozhikode, Kerala, India, 673 602.  
email: mamocollege@gmail.com



Office: 0495-2297319  
Principal: 0495-2295121



[www.mamocollege.org](http://www.mamocollege.org)

**COORDINATOR**  
**ACADEMIC COMMITTEE**  
MUHAMMED ABDURAHIMAN MEMORIAL  
ORPHANAGE COLLEGE  
P.O. MANASSERY, MUKKAM - 673602