

**K.S. RANGASAMY COLLEGE OF ARTS AND SCIENCE**  
**(Autonomous)**

K.S.R Kalvi Nagar, Tiruchengode – 637 215

Namakkal Dt, Tamil Nadu, India

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**Department of Physics**

**VALUE ADDED COURSE: ELECTRICAL APPLIANCES:**

**MAINTENANCE AND SERVICING**

**Academic Year: 2020 - 2021**

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**K.S.RANGASAMY COLLEGE OF ARTS AND SCIENCE (Autonomous)  
TIRUCHENGODE - 637 215**

**DEPARTMENT OF PHYSICS**

**VALUE ADDED COURSE**

The Department of Physics started to offer undergraduate courses in 2003 and expanded to include postgraduate and research programmes. In 2009, the college was promoted as an autonomous institution, and the department now provides a variety of courses tailored to the requirements of the region. Since 2015, the department has offering a certificate programme for other department students in odd semester. The certificate course offered by the department is "Electrical Appliances: Maintenance and Servicing (18PHCC01)".

Duration of the certificate course - 30 hours/semester.

The course provides an overview of physics and how it applies to everyday life. It looks at everyday objects and focuses on their principles of operation and relationships with one another. The course's goal is to give students a thorough grasp of the universe's fundamental laws, to assist them in developing critical thinking and mathematical reasoning skills, and to enable them to think critically and creatively about scientific questions and experiments. The course enhances the smooth running of all the electricity - powered items in your home while creating a safe environment that will be free from all sorts of hazards.

At the end of the certificate course, a certificate will be issued to the participants.



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CoE

Department of Physics, Value Added Course (Students admitted from 2018 – 2019 onwards)

18PHCC01	ELECTRICAL APPLIANCES: MAINTENANCE AND SERVICING	SEMESTER: ODD	
<b>Course Objectives</b> The course aims <ul style="list-style-type: none"> <li>• Diagnose and repair home appliances and air conditioners using the latest techniques.</li> <li>• Highlight the importance of transformers in transmission and distribution of electric power.</li> </ul>			
<b>Total Hours: 30</b>			
UNIT	CONTENTS	Hrs.	CO
I	<b>Fundamentals of electricity:</b> Electrical charge - current - potential - units - Ohm's law - electrical energy - power - watt - kWh - consumption of electrical power -resistance - capacitance - inductance and its units - Meters: Galvanometer, ammeter, voltmeter, resistance and Megger, Measuring and Checking - Basics and usage of Multimeter. Checking transistors and diodes in circuit measurements.	6	CO 1
II	<b>Electrical Connections and Wiring:</b> Soldering Iron - Flux - lead - Zero defect soldering - Desoldering pump- soldering station - AC and DC - single phase and three phase connections. Switches - ceiling rose - lamp holders, sockets - Fuse base - Distribution box - MCB - Earthing Process - Experimental study of house wiring. Electrical Wiring - Main board preparation - Distribution - Cut - out preparation - Switch board preparation - Power factor - IEE regulations - Safety precautions.	6	CO 2
III	<b>Heating Appliances:</b> Electromagnetic Relays, Heater types - working principle - Heating Rod - Iron Box - Iron box with steamer - Toasters - Geysers - Microwave Ovens - Oven Disassembling and assembling procedure - Fault indicator - Testing and Troubleshooting methods.	6	CO 3
IV	<b>Refrigeration Appliances:</b> Fridge - Electrical connection - Compressor - coolants - Automatic defrost circuits - Testing and troubleshooting of refrigerators - Air coolers and Air conditioners - Mounting and fixing of Air Conditioners - testing and troubleshooting methods.	6	CO 4

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V	<b>Motorized Appliances:</b> Stabilizer and its types, Types of Motors - DC and AC motors - motor coil winding method - Fans - mixers - blenders - wet grinders - circuit connection - testing methods. Washing machine - Electrical connections - assembly - Dish washer - Electrical connection - Testing and troubleshooting methods.	6	CO 5
<b>Text Books</b>			
<ol style="list-style-type: none"> <li>1. <i>Soni, P. L. Gupta, P.V. and Bhatnagar, V. S. A text book in electric power, [Seventh Edition] Dhanpat Rai sons.</i></li> <li>2. Taylor E. O. 1971. <i>Utilization of electrical energy. [First Edition] Orient Longman Pvt. Ltd.</i></li> </ol>			
<b>Reference Books</b>			
<ol style="list-style-type: none"> <li>1. Partab, H. 2017. <i>Arts and Science of utilization of electrical energy. [Second Edition] Dhanpat Rai &amp; Sons, New Delhi.</i></li> <li>2. Gupta, J. B. 2013. <i>An integrated course in electrical engineering. [Eighth Edition] S. K. Kataria &amp; Sons.</i></li> <li>3. Theraja, B. L. and Theraja, A. K. 2005. [Twenty Second Edition] <i>A Textbook of Electrical Technology. S. Chand &amp; Co. New Delhi.</i></li> </ol>			

### COURSE OUTCOMES (CO)

After completion of the course, the student will be able to

CO 1	Impart a basic knowledge of electrical quantities such as current, voltage, power, energy and frequency.
CO 2	Provide working knowledge for the analysis of basic DC and AC circuits used in electrical and electronic devices.
CO 3	Identify the type of heating appliances used for that particular application.
CO 4	Understand the concept of home appliances and their working.
CO 5	Realize the requirement of motorized appliances and other applications.

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Nambakkal, Dt. Tiruchengode



*M. S.*



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**TIRUCHENGODE - 637215  
DEPARTMENT OF PHYSICS**

**BOS Meeting & Syllabus Revision Summary (B.Sc., Physics)**

Based on the suggestions given by BOS members (Annexure I), COE and minutes of Department syllabus revision meeting (I, II & III), the following major changes has been made for new B.Sc., Physics syllabus (Semester I & II) which will be effective from the academic year 2018-2019.

S.No	Subject	Remarks
1.	Core I: Properties of Matter and Sound	In Unit – IV the topic 'Simple Harmonic Motion removed also added the topic of Sound. The medical application and Non-destructive testing content were added in Unit – V. There is 10% change in the paper.
2.	Core II: Thermal Physics	The paper name changed from Heat and Thermodynamics to Thermal Physics. Few topics were shifted from Unit – V to Unit – IV. There is 5% change in the paper.
3.	Core Practical I: Practical Physics I	The first experiment was newly added. The eight experiments were removed namely method of mixture. Also, update the all experiments. 15% changes present in the practical paper.
4.	Core III: Mechanics	In Unit – I Content was updated and rearranged. Few contents were added in Unit – V. There is 10% changes in this paper.
5.	Core IV: Optics	In Unit – IV the few names of the content were modified. Unit – V, the existing content was completely changed also included the photoelasticity-related topics. There is 20% changes in this paper.
6.	Core Practical II: Practical Physics II	All experiments were updated. There is less than 5% change in the paper.
7.	Allied I/III: Physics I	In this paper, some topics in Unit II are removed. In Unit IV Diffraction related topics are added. There is 5% changes in this paper.
8.	Allied Practical I/III: Physics I	Few Experiment was introduced also the details were given related to the compound Pendulum experiments. There is 10% changes in the paper.
9.	Allied II/IV: Physics II	In Unit – IV, the topic is full-wave rectifier is added. There is less than 5% change in the paper.
10.	Allied Practical II/IV: Physics II	One experiment is removed in this practical paper also added the new experiment. There is 10% changes in the paper.
11.	Value Added on Course: Electrical Appliances; Maintenance and Servicing	The new value-added course "Electrical Appliances: Maintenance and Servicing" was introduced instead of Physics in Everyday Life. There is 100% new in the syllabus

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Chairman - BOS Physics  
Dr. G. Suresh Kumar

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DEPARTMENT OF PHYSICS UG**

**Circular**

**Date: 24.08.2020**

<p><b>From</b></p> <p>The Head Department of Physics (UG) K.S. Rangasamy College of Arts and Science (Autonomous) Tiruchengode – 637 215</p>	<p><b>To</b></p> <p>All HOD's Students of all departments</p>
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Our department has planned to conduct a certificate course on “Electrical Appliances: Maintenance and Servicing” in this semester. Total duration of this course is 30 hours. The course starts from 1<sup>st</sup> September 2020 and ends by October 2020. Students who are all interested may enroll their name to the course coordinator. The certificate course will be conducted after the class hours (4.15 p.m. to 5.15 p.m.). At the end of this course certificate will be issued.


Students are advised to meet the following staff for registration.

Ms. A. Mohanapriya


Course coordinator

Department of Physics (UG)

KSRCAS

  
A. Mohanapriya  
24/8/2020  
Staff in-charge

  
24/8/2020  
Head of the Department

  
24/8/20  
Principal

Department of Physics (UG)  
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NA  
M  
24/8/20

# K.S. Rangasamy College of Arts and Science (Autonomous)

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Affiliated to Periyar University, Salem. Included Under 2(f) & 12B of UGC Act 1956)  
K.S.R Kalvi Nagar, Tiruchengode - 637 215, Namakkal Dt

*Value Added Course Offered by the  
Department of Physics  
(Fully Online Mode)*



**ACADEMIC YEAR 2020 - 2021**

Course Name	Semester	Offering Department
Electrical Appliances: Maintenance and Servicing	Odd	Physics

## For Registration:

**Ms. A. Mohanapriya**  
Course Coordinator  
Department of Physics (UG)  
KSRCAS

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Reach us @ [www.ksrcas.edu](http://www.ksrcas.edu)



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**TIRUCHENGODE - 637 215**  
**DEPARTMENT OF PHYSICS UG**  
**ACADEMIC YEAR: 2020 - 2021**

**STUDENT'S WILLINGNESS**

**COURSE CODE: 18PHCC01**

**Date: 25.08.2020**

**COURSE NAME: ELECTRICAL APPLIANCES: MAINTENANCE AND SERVICING**

S. No	Reg. No	Name	Signature
1	19UBA028	GOWTHAM. K	Gowtham K
2	19UBA059	MANIKANDAN. M	M. Manikandan
3	19UBA076	PRAVEENRAJ. S	P. Praveenraj
4	19UBC015	KIRUTHIKA. V	Kiruthika V
5	19UBC031	PRIYADHARSHINI. L	Priyadharshini L
6	19UBC036	SOWNDHARYA. T	Sowndharya T
7	19UBT011	DHANUSHYA. S	Dhanushya S
8	19UBT015	GOVINDHARAJ. C	Govindharaj C
9	19UBT033	MONISHA. R	Monisha R
10	19UBT050	RAVIKUMAR. S	Ravikumar S
11	19UCA068	GOWTHAM. K	Gowtham K
12	19UCA091	JAYASURYA. P	Jayasurya P
13	19UCA154	PRAKASHKUMAR. T	Prakash Kumar T
14	19UCA158	PRAVEENKUMAR. M	P. Praveen Kumar
15	19UCA231	VIGNESH. S	Vignesh S
16	19UCC017	BOOBESH. P	Boobesh P
17	19UCC095	PRAKASH. S	Prakash S
18	19UCC103	RAGUNATH. J	Ragunath J
19	19UCC107	RAMASKUMAR.	Ramaskumar
20	19UCC151	SURYA. S	Surya S
21	19UCS003	ABDULLA	A. Abdulla
22	19UCS010	ANIL KUMAR. S	Anil Kumar S
23	19UCS021	PADMAPRIYA. S	Padmapriya S

A. Mohanraj  
 Coordinator 25/8/20

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HoD 25/8/20



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**ACADEMIC YEAR: 2020 – 2021**

**COURSE CODE: 18.PHCC01**

**COURSE NAME: ELECTRICAL APPLIANCES: MAINTENANCE AND SERVICING**

S. No	Reg. No	Name	SEPTEMBER														
			1	2	3	7	8	10	14	15	17	18	24	25	28	29	30
1	19UBA028	GOWTHAM. K	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
2	19UBA059	MANIKANDAN. M	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
3	19UBA076	PRAVEENRAJ. S	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
4	19UBC015	KIRUTHIKA. V	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
5	19UBC031	PRIYADHARSHINI. L	/	/	/	a	/	/	a	/	/	/	/	/	/	/	/
6	19UBC036	SOWNDHARYA. T	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
7	19UBT011	DHANUSHYA. S	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
8	19UBT015	GOVINDHARAJ. C	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
9	19UBT033	MONISHA. R	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
10	19UBT050	RAVIKUMAR. S	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
11	19UCA068	GOWTHAM. K	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
12	19UCA091	JAYASURYA. P	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
13	19UCA154	PRAKASHKUMAR. T	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
14	19UCA158	PRAVEENKUMAR. M	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
15	19UCA231	VIGNESH. S	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
16	19UCC017	BOOBESH. P	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
17	19UCC095	PRAKASH. S	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
18	19UCC103	RAGUNATH. J	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
19	19UCC107	RAMASKUMAR.	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
20	19UCC151	SURYA. S	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
21	19UCS003	ABDULLA	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
22	19UCS010	ANIL KUMAR. S	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
23	19UCS021	PADMAPRIYA. S	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
Signature of the staff			/	/	/	/	/	/	/	/	/	/	/	/	/	/	/

*A. Mohan*  
 Staff in-charge

*[Signature]*  
 Head of the department

*[Signature]*  
 Principal

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**TIRUCHENGODE – 637 215**  
**DEPARTMENT OF PHYSICS UG**  
**ACADEMIC YEAR: 2020 – 2021**

**COURSE CODE: 18PHCC01**

**COURSE NAME: ELECTRICAL APPLIANCES: MAINTENANCE AND SERVICING**

S. No	Reg. No	Name	OCTOBER														
			1	5	6	7	8	9	12	13	14	15	16	19	20	27	28
1	19UBA028	GOWTHAM. K	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
2	19UBA059	MANIKANDAN. M	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
3	19UBA076	PRAVEENRAJ. S	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
4	19UBC015	KIRUTHIKA. V	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
5	19UBC031	PRIYADHARSHINI. L	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
6	19UBC036	SOWNDHARYA. T	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
7	19UBT011	DHANUSHYA. S	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
8	19UBT015	GOVINDHARAJ. C	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
9	19UBT033	MONISHA. R	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
10	19UBT050	RAVIKUMAR. S	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
11	19UCA068	GOWTHAM. K	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
12	19UCA091	JAYASURYA. P	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
13	19UCA154	PRAKASHKUMAR. T	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
14	19UCA158	PRAVEENKUMAR. M	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
15	19UCA231	VIGNESH. S	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
16	19UCC017	BOOBESH. P	/	/	/	a	/	a	/	/	/	/	/	/	/	/	/
17	19UCC095	PRAKASH. S	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
18	19UCC103	RAGUNATH. J	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
19	19UCC107	RAMASKUMAR.	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
20	19UCC151	SURYA. S	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
21	19UCS003	ABDULLA	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
22	19UCS010	ANIL KUMAR. S	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
23	19UCS021	PADMAPRIYA. S	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
Signature of the staff			MS	MS	MS	MS	MS	MS	MS	MS	MS	MS	MS	MS	MS	MS	MS

A. Meharaj  
 Staff in-charge  
 28/10/2020

Head of the department  
 28/10/2020

Principal  
 28/10/20

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MAINTENANCE AND SERVICING****CLASS: UG****MAX. MARK: 100**

S. No	Reg. No	Name	Ass1 (10)	Ass2 (10)	Test (75)	Att %	Att (5)	Total (100)
1	19UBA028	GOWTHAM. K	7	6	71	100	5	89
2	19UBA059	MANIKANDAN. M	9	7	66	100	5	87
3	19UBA076	PRAVEENRAJ. S	7	8	68	100	5	88
4	19UBC015	KIRUTHIKA. V	6	9	70	100	5	90
5	19UBC031	PRIYADHARSHINI. L	7	8	72	92	4	83
6	19UBC036	SOWNDHARYA. T	8	7	63	100	5	83
7	19UBT011	DHANUSHYA. S	9	6	65	100	5	85
8	19UBT015	GOVINDHARAJ. C	6	9	67	100	5	87
9	19UBT033	MONISHA. R	7	8	69	100	5	89
10	19UBT050	RAVIKUMAR. S	8	7	71	100	5	91
11	19UCA068	GOWTHAM. K	9	6	73	100	5	93
12	19UCA091	JAYASURYA. P	7	8	69	100	5	89
13	19UCA154	PRAKASHKUMAR. T	8	7	71	100	5	91
14	19UCA158	PRAVEENKUMAR. M	9	6	73	100	5	93
15	19UCA231	VIGNESH. S	7	6	71	100	5	89
16	19UCC017	BOOBESH. P	8	7	61	92	4	80
17	19UCC095	PRAKASH. S	6	8	63	100	5	82
18	19UCC103	RAGUNATH. J	7	9	65	100	5	91
19	19UCC107	RAMASKUMAR.	8	7	67	100	5	87
20	19UCC151	SURYA. S	9	6	70	100	5	90
21	19UCS003	ABDULLA	8	7	69	100	5	89
22	19UCS010	ANIL KUMAR. S	9	7	73	100	5	94
23	19UCS021	PADMAPRIYA. S	6	8	61	100	5	80

A. Mohan  
Staff in-charge

Head of the Department

Principal

Department of Physics (UG)  
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Science (Autonomous), Tiruchengode-15.

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**DEPARTMENT OF PHYSICS UG**  
**ACADEMIC YEAR: 2020 - 2021**

**COURSE CODE: 18PHCC01**

**COURSE NAME: ELECTRICAL APPLIANCES: MAINTENANCE AND SERVICING**

**Feedback**

After completion of this course, based on the feedback given by the participants of the course. The consolidated feedback reports are the course "Electrical Appliances: Maintenance and Servicing" which provides a better understanding of the handling of electricity, according to participants. The course is in-depth and provides an overview of present electrical appliance usage as well as its possibilities in the future. We learned about the several types of waves employed in microwave ovens and toasters, as well as the concepts and operation of household appliances like the refrigerator, iron box, and mixer, after completing this course. Also, in addition, we learn the importance of transformers in electric power transmission.

*A. Mohan*  
11/11/20

**Course Coordinator**

*[Signature]*  
11/11/2020

**HoD**

*[Signature]*  
11/11/2020

**Principal**

Dr. M. VENKATESH, M.Sc., Ph.D.  
 Assistant Professor & Head  
 Department of Physics  
 K.S. Rangasamy College of Arts & Science (Autonomous)  
 Tiruchengode - 637 215, Tamil Nadu, India

PRINCIPAL  
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 (Autonomous)  
 TIRUCHENGODE - 637 215  
 Namakkal-Dt. Tamil Nadu, India

*[Signature]*

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 (Autonomous)  
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 Namakkal-Dt. Tamil Nadu, India**



**K.S.RANGASAMY COLLEGE OF ARTS AND SCIENCE (Autonomous)  
TIRUCHENGODE – 637 215**

**DEPARTMENT OF PHYSICS**

**Summary of the Course**

**Certificate Course Name: Electrical Appliances: Maintenance and Servicing  
Course Code: 18PHCC01**

**Objective of the Course:**

After completion of the this course, the student will be able to

- Impart a basic knowledge of electrical quantities such as current, voltage, power, energy and frequency.
- Provide working knowledge for the analysis of basic DC and AC circuits used in electrical and electronic devices.
- Identify the type of heating appliances used for that particular application.
- Understand the concept of home appliances and their working.
- Realize the requirement of motorized appliances and other applications.

**Total Number of Participants: 23**

**Course Coordinator :** Ms. A. Mohanapriya  
Assistant Professor  
Department of Physics  
KSRCAS


**Course Conducted Accademic Year: 2020 – 2021**

**Branch of the Students Participated: BBA,Biochemistry, Biotechnology, BCA, B.Com(CA)  
and Computer Science**

  
A. Mohanapriya  
Course Coordinator

  
HoD

  
Principal

  
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**Dr. M. VENKATESH**, M.Sc., Ph.D.  
Assistant Professor & Head  
Department of Physics  
K S Rangasamy College of Arts & Science (Autonomous)  
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K.S.R Kalvi Nagar, Tiruchengode – 637 215, Namakkal Dt

## Value Added Course “ Electrical Appliances: Maintenance and Servicing” Certificate of Completion

This is to certify that Gowtham. K of II – BBA, has completed a Value Added Course “Electrical Appliances: Maintenance and Servicing” during the academic year 2020 – 2021 odd semester conducted by the Department of Physics, K.S. Rangasamy College of Arts and Science (Autonomous), Tiruchengode.

*A. Mohanapriya*  
**Ms. A. Mohanapriya**  
Course Coordinator



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**Dr. V. Radhakrishnan**  
Principal





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### Value Added Course “ Electrical Appliances: Maintenance and Servicing”

*This is to certify that Manikandan. M of II – BBA, has completed a Value Added Course “Electrical Appliances: Maintenance and Servicing” during the academic year 2020 – 2021 odd semester conducted by the Department of Physics, K.S. Rangasamy College of Arts and Science (Autonomous), Tiruchengode.*

*A. Mohanpriya*  
**Ms. A. Mohanpriya**  
Course Coordinator

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**Dr. V. Radhakrishnan**  
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K.S.R Kalvi Nagar, Tiruchengode – 637 215, Namakkal Dt*

### **Value Added Course “ Electrical Appliances: Maintenance and Servicing” Certificate of Completion”**

*This is to certify that Praveenraj. S of II – BBA, has completed a Value Added Course “Electrical Appliances: Maintenance and Servicing” during the academic year 2020 – 2021 odd semester conducted by the Department of Physics, K.S. Rangasamy College of Arts and Science (Autonomous), Tiruchengode.*

*A. Mohanapriya*  
**Ms. A. Mohanapriya**  
Course Coordinator

*[Signature]*  
**Dr. M. Venkatesh**  
Head

*[Signature]*  
**Dr. V. Radhakrishnan**  
Principal





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*K.S.R Kalvi Nagar, Tiruchengode – 637 215, Namakkal Dt*

### **Value Added Course “ Electrical Appliances: Maintenance and Servicing”**

#### **Certificate of Completion**

**This is to certify that Kiruthika. V of II – B.SC., Biochemistry has completed a Value Added Course “Electrical Appliances: Maintenance and Servicing” during the academic year 2020 – 2021 odd semester conducted by the Department of Physics, K.S. Rangasamy College of Arts and Science (Autonomous), Tiruchengode.**

*A. Mohanapriya*

**Ms. A. Mohanapriya**  
Course Coordinator

PRINCIPAL,  
K.S. Rangasamy College of Arts & Science  
(Autonomous),  
TIRUCHENGODE

**Dr. M. Venkatesh**  
Head

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### Value Added Course “ Electrical Appliances: Maintenance and Servicing”

This is to certify that Priyadharshini. L of II – B.SC., Biochemistry has completed a Value Added Course “Electrical Appliances: Maintenance and Servicing” during the academic year 2020 – 2021 odd semester conducted by the Department of Physics, K.S. Rangasamy College of Arts and Science (Autonomous), Tiruchengode.

  
Ms. A. Mohanapriya  
Course Coordinator

  
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(Autonomous)  
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Namakkal Dt, Tamil Nadu, I

  
Dr. M. Venkatesh  
Head

Dr. V. Radhakrishnan  
Principal





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K.S.R Kalvi Nagar, Tiruchengode – 637 215, Namakkal Dt*

### **Value Added Course “ Electrical Appliances: Maintenance and Servicing”**

*This is to certify that Sowndharya. T of II – B.SC., Biochemistry has completed a Value Added Course “Electrical Appliances: Maintenance and Servicing” during the academic year 2020 – 2021 odd semester conducted by the Department of Physics, K.S. Rangasamy College of Arts and Science (Autonomous), Tiruchengode.*

*A. Mohanpriya*  
**Ms. A. Mohanpriya**  
Course Coordinator

*K. S. Rangasamy College of Arts & Science  
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Namakkal Dt, Tamil Nadu.*

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**Dr. V. Radhakrishnan**  
Principal

**Dr. M. Venkatesh**  
Head





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### **Value Added Course “ Electrical Appliances: Maintenance and Servicing”**

*This is to certify that Dhanushya. S of II – B.SC., Biotechnology has completed a Value Added Course “Electrical Appliances: Maintenance and Servicing” during the academic year 2020 – 2021 odd semester conducted by the Department of Physics, K.S. Rangasamy College of Arts and Science (Autonomous), Tiruchengode.*

*A. Mohanraj*  
**Ms. A. Mohanapriya**  
Course Coordinator

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TIRUCHENGODE  
Namakkal Dt.

**Dr. M. Venkatesh**  
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**Dr. V. Radhakrishnan**  
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K.S.R Kalvi Nagar, Tiruchengode – 637 215, Namakkal Dt*

### **Value Added Course “ Electrical Appliances: Maintenance and Servicing” Certificate of Completion**

*This is to certify that Govindharaj. C of II – B.S.C., Biotechnology has completed a Value Added Course “Electrical Appliances: Maintenance and Servicing” during the academic year 2020 – 2021 odd semester conducted by the Department of Physics, K.S. Rangasamy College of Arts and Science (Autonomous), Tiruchengode.*

*A. Mohanapriya*  
**Ms. A. Mohanapriya**  
Course Coordinator

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K.S.R Kalvi Nagar, Tiruchengode – 637 215, Namakkal Dt*

### **Value Added Course “ Electrical Appliances: Maintenance and Servicing” Certificate of Completion**

*This is to certify that Monisha. R of II – B.SC., Biotechnology has completed a Value Added Course  
“Electrical Appliances: Maintenance and Servicing” during the academic year 2020 – 2021 odd semester  
conducted by the Department of Physics, K.S. Rangasamy College of Arts and Science (Autonomous),  
Tiruchengode.*

*A. Mohanapriya*  
**Ms. A. Mohanapriya**  
Course Coordinator

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K.S.R Kalvi Nagar, Tiruchengode – 637 215, Namakkal Dt*

### **Value Added Course “ Electrical Appliances: Maintenance and Servicing” Certificate of Completion**

*This is to certify that Ravikumar. S of II – B.SC., Biotechnology has completed a Value Added Course  
“Electrical Appliances: Maintenance and Servicing” during the academic year 2020 – 2021 odd semester  
conducted by the Department of Physics, K.S. Rangasamy College of Arts and Science (Autonomous),  
Tiruchengode.*

*A. Mohanapriya*  
**Ms. A. Mohanapriya**  
Course Coordinator

*Dr. V. Radhakrishnan*  
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### Value Added Course “ Electrical Appliances: Maintenance and Servicing” Certificate of Completion

This is to certify that Gowtham. K of II – BCA has completed a Value Added Course “Electrical Appliances: Maintenance and Servicing” during the academic year 2020 – 2021 odd semester conducted by the Department of Physics, K.S. Rangasamy College of Arts and Science (Autonomous), Tiruchengode.

*A. Mohanapriya*  
**Ms. A. Mohanapriya**  
Course Coordinator

*Principal*  
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**Dr. M. Venkatesh**  
Head

**Dr. V. Radhakrishnan**  
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K.S.R Kalvi Nagar, Tiruchengode – 637 215, Namakkal Dt*

### **Value Added Course “ Electrical Appliances: Maintenance and Servicing” Certificate of Completion**

*This is to certify that Jayasurya. P of II – BCA has completed a Value Added Course “Electrical Appliances: Maintenance and Servicing” during the academic year 2020 – 2021 odd semester conducted by the Department of Physics, K.S. Rangasamy College of Arts and Science (Autonomous), Tiruchengode.*

*A. Mohanapriya*  
**Ms. A. Mohanapriya**  
Course Coordinator

*Principal*  
PRINCIPAL  
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Namakkal Dt., Tamil Nadu, IF

*Dr. V. Radhakrishnan*  
**Dr. V. Radhakrishnan**  
Principal



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### **Value Added Course “ Electrical Appliances: Maintenance and Servicing” Certificate of Completion**

*This is to certify that Prakashkumar. T of II – BCA has completed a Value Added Course “Electrical Appliances: Maintenance and Servicing” during the academic year 2020 – 2021 odd semester conducted by the Department of Physics, K.S. Rangasamy College of Arts and Science (Autonomous), Tiruchengode.*

*A. Mohan*  
**Ms. A. Mohanapriya**  
Course Coordinator

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TIRUCHENGODE - 637 215  
Namakkal Dt., Tamil Nadu, INDIA.

*Dr. M. Venkatesh*  
**Dr. M. Venkatesh**  
Head

*Dr. V. Radhakrishnan*  
**Dr. V. Radhakrishnan**  
Principal





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### Value Added Course “ Electrical Appliances: Maintenance and Servicing” Certificate of Completion

*This is to certify that Praveenkumar. M of II – BCA has completed a Value Added Course “Electrical Appliances: Maintenance and Servicing” during the academic year 2020 – 2021 odd semester conducted by the Department of Physics, K.S. Rangasamy College of Arts and Science (Autonomous), Tiruchengode.*

*A. Mohanapriya*  
**Ms. A. Mohanapriya**  
Course Coordinator

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Namakkal Dt. Tamil Nadu, INDIA

**Dr. M. Venkatesh**  
Head

**Dr. V. Radhakrishnan**  
Principal





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### **Value Added Course “ Electrical Appliances: Maintenance and Servicing” Certificate of Completion**

*This is to certify that Vignesh. S of II – BCA has completed a Value Added Course “Electrical Appliances: Maintenance and Servicing” during the academic year 2020 – 2021 odd semester conducted by the Department of Physics, K.S. Rangasamy College of Arts and Science (Autonomous), Tiruchengode.*

*A. Mohanapriya*  
**Ms. A. Mohanapriya**  
Course Coordinator

*Dr. V. Radhakrishnan*  
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Namakkal Dt, Tamil Nadu.

**Dr. M. Venkatesh**  
Head

**Dr. V. Radhakrishnan**  
Principal





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### **Value Added Course “ Electrical Appliances: Maintenance and Servicing”** **Certificate of Completion**

***This is to certify that Boobesh. P of II – B.COM (CA) has completed a Value Added Course “Electrical Appliances: Maintenance and Servicing” during the academic year 2020 – 2021 odd semester conducted by the Department of Physics, K.S. Rangasamy College of Arts and Science (Autonomous), Tiruchengode.***

*A. Mohanapriya*  
**Ms. A. Mohanapriya**  
Course Coordinator

*Dr. V. Radhakrishnan*  
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Namakkal Dt, Tamil Nadu.

**Dr. M. Venkatesh**  
Head

**Dr. V. Radhakrishnan**  
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### **Value Added Course “ Electrical Appliances: Maintenance and Servicing” Certificate of Completion**

*This is to certify that Prakash. S of II – B.COM (CA) has completed a Value Added Course “Electrical Appliances: Maintenance and Servicing” during the academic year 2020 – 2021 odd semester conducted by the Department of Physics, K.S. Rangasamy College of Arts and Science (Autonomous), Tiruchengode.*

*A. Mohanpriya*  
**Ms. A. Mohanpriya**  
Course Coordinator

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**Dr. M. Venkatesh**  
Head

**Dr. V. Radhakrishnan**  
Principal





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### **Value Added Course “ Electrical Appliances: Maintenance and Servicing”**

*This is to certify that Ragunath. J of II – B.COM (CA) has completed a Value Added Course “Electrical Appliances: Maintenance and Servicing” during the academic year 2020 – 2021 odd semester conducted by the Department of Physics, K.S. Rangasamy College of Arts and Science (Autonomous), Tiruchengode.*

*A. Mohanpriya*  
**Ms. A. Mohanpriya**  
Course Coordinator

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Namakkal-Dt. Tamil Nadu, India.

**Dr. M. Venkatesh**  
Head

**Dr. V. Radhakrishnan**  
Principal





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K.S.R Kalvi Nagar, Tiruchengode – 637 215, Namakkal Dt*

### **Value Added Course “ Electrical Appliances: Maintenance and Servicing” Certificate of Completion”**

*This is to certify that Ramaskumar of II – B.COM (CA) has completed a Value Added Course “Electrical Appliances: Maintenance and Servicing” during the academic year 2020 – 2021 odd semester conducted by the Department of Physics, K.S. Rangasamy College of Arts and Science (Autonomous), Tiruchengode.*

*A. Mohanpriya*  
**Ms. A. Mohanpriya**  
Course Coordinator

*A. S. Rangasamy*  
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(Autonomous)  
TIRUCHENGODE  
(K.S.R. Kalvi Nagar)

*Dr. M. Venkatesh*  
**Dr. M. Venkatesh**  
Head

*Dr. V. Radhakrishnan*  
**Dr. V. Radhakrishnan**  
Principal





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K.S.R Kalvi Nagar, Tiruchengode – 637 215, Namakkal Dt

### Value Added Course “ Electrical Appliances: Maintenance and Servicing” Certificate of Completion

This is to certify that **Surya. S of II – B.COM (CA)** has completed a Value Added Course “**Electrical Appliances: Maintenance and Servicing**” during the academic year 2020 – 2021 odd semester conducted by the Department of Physics, **K.S. Rangasamy College of Arts and Science (Autonomous), Tiruchengode.**

*A. Mohanapriya*  
**Ms. A. Mohanapriya**  
Course Coordinator

*[Signature]*  
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Namakkal Dt

**Dr. M. Venkatesh**  
Head

**Dr. V. Radhakrishnan**  
Principal





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K.S.R Kalvi Nagar, Tiruchengode – 637 215, Namakkal Dt

### **Value Added Course “ Electrical Appliances: Maintenance and Servicing”**

#### **Certificate of Completion**

**This is to certify that Abdulla of II – B.Sc Computer Science has completed a Value Added Course “Electrical Appliances: Maintenance and Servicing” during the academic year 2020 – 2021 odd semester conducted by the Department of Physics, K.S. Rangasamy College of Arts and Science (Autonomous), Tiruchengode.**

*A. Mohanapriya*  
**Ms. A. Mohanapriya**  
Course Coordinator

*[Signature]*  
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Namakkal-Dt., Tamil Nadu, INDIA

**Dr. M. Venkatesh**  
Head

**Dr. V. Radhakrishnan**  
Principal





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K.S.R Kalvi Nagar, Tiruchengode – 637 215, Namakkal Dt*

### **Value Added Course “ Electrical Appliances: Maintenance and Servicing” Certificate of Completion**

*This is to certify that Anil kumar. S of II – B.Sc Computer Science has completed a Value Added Course  
“Electrical Appliances: Maintenance and Servicing” during the academic year 2020 – 2021 odd semester  
conducted by the Department of Physics, K.S. Rangasamy College of Arts and Science (Autonomous),  
Tiruchengode.*

*A. Mohanapriya*  
**Ms. A. Mohanapriya**  
Course Coordinator

PRINCIPAL

A. S. Rangasamy College of Arts & Science

Tiruchengode - 637 215

Namakkal Dt. Tamil Nadu

*Dr. M. Venkatesh*  
**Dr. M. Venkatesh**  
Head

*Dr. V. Radhakrishnan*  
**Dr. V. Radhakrishnan**  
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K.S.R Kalvi Nagar, Tiruchengode – 637 215, Namakkal Dt

### Value Added Course “ Electrical Appliances: Maintenance and Servicing”

#### Certificate of Completion

This is to certify that *Padmapriya. S of II – B.Sc Computer Science* has completed a Value Added Course “*Electrical Appliances: Maintenance and Servicing*” during the academic year 2020 – 2021 odd semester conducted by the Department of Physics, K.S. Rangasamy College of Arts and Science (Autonomous), Tiruchengode.

*A. MohanPriya*  
**Ms. A. Mohanapriya**  
Course Coordinator

*Dr. M. Venkatesh*  
**Dr. M. Venkatesh**  
Head

*Dr. V. Radhakrishnan*  
**Dr. V. Radhakrishnan**  
Principal