

#### K.S. RANGASAMY COLLEGE OF ARTS AND SCIENCE

#### (Autonomous)

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

#### **Department of Physics**

## <u>VALUE ADDED COURSE: PHYSICS IN EVERYDAY LIFE</u> <u>Academic Year: 2016 - 2017</u>

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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 "Physics in Everyday Life (15PHCC01)".

Duration of the certificate course - 30 hours/semester.

This course is an introduction to physics and science in everyday life. It considers objects from our daily environment and focus on their principles of operation and relations to one another. The aim of the course is to provide the student with a broad understanding of the physical principles of the universe, to help them develop critical thinking and quantitative reasoning skills, to empower them to think creatively and critically about scientific problems and experiments.

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

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Department of Physics, Value Added Course (Students admitted from 2015 - 2016 onwards)

15PHCC01 PHYSICS IN EVERYDAY LIFE SEMESTER: ODD

Total Hours: 30

#### Objective:

- 1. To explain the operation and troubleshooting techniques of home appliances.
- Focus on the importance of transformers in electric power transmission and distribution.

#### CONTENTS

UNIT I:

(6 Hours)

Electrical charge - current - potential - units - Ohm's law - electrical energy - power - watt - kWh - consumption of electrical power - resistance - capacitance - inductance and its units - measuring meter - Galvanometer, ammeter, voltmeter and multimeter.

UNIT II:

Principles of transformers - constructional details - Core type, Shell type - classification of transformers - EMF equation - voltage ratio - current ratio - transformer on no load - auto transformer - applications.

UNIT III: (6 Hours)

AC and DC - single phase and three phase connections - three phase transformer - house wiring star-star, star - delta, delta - star connections - overloading - Earthing - short circuiting - fuses - cooling of transformers - protective devices and accessories - losses in transformer.

UNIT IV: (6 Hours)

Electrical bulbs - fluorescent lamps - inverter - UPS - Stabilizer - principle and operations of fan - wet grinder - mixer - water heater - electric iron box - microwave oven - refrigerator.

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(Automomous)

TIRUCHENGODE - 637.215

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Department of Physics, Value Added Course (Students admitted from 2015 - 2016 onwards)

UNIT V: (6 Hours)

Electric heating - resistance heating - induction heating - high frequency eddy current heating - Dielectric heating - resistance welding - electric arc welding - occupational hazards due to chemical reactions.

#### TEXT BOOK:

- Soni, P. L. Gupta, P. V. and Bhatnagar, V. S. A text book in electric power, [Seventh Edition] Dhanpat Rai sons.
- Taylor E. O. 1971. Utilization of electrical energy. [First Edition] Orient Longman Pvt. Ltd.

#### REFERENCE BOOK:

- Gupta, J. B. 2013. An integrated course in electrical engineering. [Eigth Edition]
   K. Kataria & Sons.
- Theraja, B. L. and Theraja, A. K. 2005. [Twenty Second Edition] A Textbook of Electrical Technology. S. Chand & Co. New Delhi.

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CONTROLLER
OF
EXAMINATIONS

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A. S. Rangasamy College of Arts & Science
(Anthomorphy)
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Namakkantil Landings)

## K.S.RANGASAMY COLLEGE OF ARTS AND SCIENCE (AUTONOMOUS) TIRUCHENGODE - 637 215

#### DEPARTMENT OF PHYSICS

The syllabus for 2015-2016 has been thoroughly discussed and revised.

Resolved that the programme structure for B.Sc Physics is approved for adoption from the academic year 2015-2016 onwards.

The changes in the new syllabus suggested by the members are included and are given in Annexure - I

S.No	Name and Designation	Signature
I,	Dr. A.S. Vytheeswaran Assistant Professor Department of Theoretical Physics University of Madras Chennai- 600 025	Khina
2	Dr. G. Suresh Kumar Head & Assistant Professor Department of Physics K.S.Rangasamy College of Arts and Science Trichengode – 637 215	lds. Holis
3	Ms. F. Eamimal Assistant Professor Department of Physics K.S.Rangasamy College of Arts and Science Trichengode – 637 215	F-E-etatis
4	Dr. S. Jayanthi Assistant Professor Department of Physics K.S.Rangasamy College of Arts and Science Trichengode – 637 215	ML
5	Ms. G. Vijayalakshmi Assistant Professor Department of Physics K.S.Rangasamy College of Arts and Science Trichengode – 637 215	h-reifice from

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

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6	Dr. M. Venkatesh Assistant Professor Department of Physics K.S.Rangasamy College of Arts and Science Trichengode – 637 215	Jh 06/03/15
7	Dr. R. Nithya Assistant Professor Department of Physics K.S.Rangasamy College of Arts and Science Trichengode – 637 215	R. purgeair
8	Mr. T. Rajendra Kumar Head & Assistant Professor Department of Mathematics K.S.Rangasamy College of Arts and Science Trichengode – 637 215	06/03/15
9	Mr. K. M. Prabhusankarlal Head & Assistant Professor Department of Electronics & Communication K.S.Rangasamy College of Arts & Science Tiruchengode – 637 215	X16) 6/3/2015
10	Dr. R. Pugazendi Head & Assistant Professor Department of Computer science K.S.Rangasamy College of Arts & Science Tiruchengode – 637 215	68/6/3/5
II.	Dr. Subramanian Head & Assistant Professor Department of Chemistry K.S.Rangasamy College of Arts & Science Tiruchengode — 637 215	R. Sur 6/3/15

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(Autonomous)

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# K.S. RANGASAMY COLLEGE OF ARTS AND SCIENCE (AUTONOMOUS) TIRUCHENGODE - 637 215 DEPARTMENT OF PHYSICS

#### Annexure - I

Date: 06.03.2015

The following are the suggestions given by the members of the board of studies during the meeting

- 1. In properties of matter, concepts about waves and oscillations can be included.
- In heat and thermodynamics, same concepts about intensives and extensive variable can be introduced.
- In electricity and Electromagnetism, ideas about electric fields, electric potential and Gauss law should be included.
- The concepts about the complex analysis can be included either in allied mathematics or in Mathematical Physics.
- 5. In quantum mechanics, concepts about potential well may be included.
- In Astrophysics, the concepts about HR diagram in unit IV, some ideas about temperature measurements and few concepts about Astronomical Units (Parrsc) can be included.
- 7. In this revision, four SBS papers have been included as follows.
  - i. SBS 1 Instrumentation Semester III
  - ii. SBS II Laser Physics Semester IV
  - iii. SBS III Spectrophysics Semester V
  - SBS IV Material and Processing Semester V
- In this revision, Biomedical Instrumentation has been introduced as an elective paper and Nanoscience and Applications has been changed as an elective paper in semester – VI.
- In this revision, Astrophysics (with sky observation) has been introduced as a Diploma paper.
- Also, in this revision, Physics in Everyday Life has been introduced as a Value Added Course offered by the Department in Semester – III.

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A. S. Rangasamy College of Arts & Sci-(Autonomous)

TIRUCHENGODE - 637 245 Namulikal Dt. Tamil Nadi - 15-22 CHAIRMAN

[Dr. G. SURESH KUMAR]

#### Circular

Date: 21.07.2016

From

The Head

Department of Physics (UG)

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

Tiruchengode - 637 215

To

All HOD's

Students of all Departments

Our department has planned to conduct a certificate course on "Physics in Everyday Life" in this semester. Total duration of this course is 30 hours. The course starts from 1st August 2016 and ends by September 2016. 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. R. Keerthiga Course Coordinator Department of Physics (UG)

KSRCAS

Staff in-charge

Head of the Department

Department of Physics (UG) K. S. Rangasamy College of Aris and

Science (Autonomous), Pruch-Vaude-15.

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Principal

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

(NAAC Reaccredited, an ISO 9001:2008 Certified Institution, 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



## ACADEMIC YEAR 2016 - 2017

Course Name	200 - 100 - 2	
	Semester	Offering Department
Physics in Everyday Life	Odd	
		Physics

### For Registration:

Ms. R. Keerthiga Course Coordinator Department of Physics (UG) KSRCAS

TRUCHENGOL Reach us @ www.ksrcas.edu

#### STUDENT'S WILLINGNESS

COURSE CODE: 15PHCC01

Date: 21.07.2016

COURSE NAME: PHYSICS IN EVERYDAY LIFE

S. No	Reg. No	Name	Signature
1	15UEN005	M. K. BHARATHKUMAR	K. Bhow Manager
2	15UEN025	A. KRISHNAKUMAR	A 1
3	15UEN030	P. MOHANASEDUPATHI	A. Kullminging
4	15UEN052	K. K. VINOTH	P Mohanasodu
5	15UBC001	K. S. ABISHEK	K. K. VENTO
6	15UBC018	K. KRISHNAN	har thinks
7	15UBT021	N. M. S. GOKUL	No found
8	15UBT048	G. MOHANKUMAR	NAS CLEBES
9	15UBT079	N. SUBAGEETHA	(7) Moles estates
10	15UBT088	M. TAMILARASAN	N. Sulmacotha
11	15UBT094	M. VISHNUVARTHAN	M Kim Julanta
12	15UCS021	C. DHARANIDHARAN	M. Hulle-Insternation
13	15UCS084	A. PRAKASHRAJ	Dhahidhas
14	15UCS124	M. SURYA	present ray 12
15	15UEL001	S. ABILASH	& Thingson
16	15UEL004	K.S. BOOBESH	V ( E N O
17	15UEL005	S.CHILAMBUSELVAN	1.6.1.1.1.0
18	15UEL006	M. DEVARAJ	11 5
9	15UEL017	H.KHAJAMOHINUDEEN	M. Danayana H
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1	15UEL041	J.SURYA	T. O
2	15UEL043	K.VIJAY	L Billian
	15UMA002	P.AARTHIKA	6 Kilaha Dis
4	15UMA032	S.GOPINATH	d'again ta

Staff in-charge

Head of the Department

TIRUCHENGOUL - 637 215 Namakkal-Dt. Tamil Nadu, INC.

COURSE CODE: 15PHCC01

COURSE NAME: PHYSICS IN EVERYDAY LIFE

S.	Reg. No	Name								1	Augu	st						
No			3	4	1 5	8	9	10	11	16	17	18	19	22	23	24	26	29
1	15UEN005	M. K. BHARATHKUMAR	1	1	1	1	a	1	,	-		-	1	A	-	-		
2	15UEN025	A. KRISHNAKUMAR	1	1	1	1	,	1	-	-	-	1	-	1	a	1	/	1
3	15UEN030	P. MOHANASEDUPATHI	1	1	, ,	1	1	1	1	-	/	1	1	/	/	/	1	1
4	15UEN052	K. K. VINOTH	1	1	+	1	1	1	1	-	1	/	/	/	/	1	1	1
5	15UBC001	K. S. ABISHEK	1	1	1	1	1	1	1	-	/	/	1	/	1	1	1	1
6	15UBC018	K. KRISHNAN	1	1	1	1	1	1	<u>'</u> ,	-	/	/	/	1	/	1	1	1
7	15UBT021	N. M. S. GOKUL	1	1	-	,	1	1		-/-	/	/	1.	1	1	1	1	1
8	15UBT048	G. MOHANKUMAR	1	1	1	-	,	-	1		/	/	/	1	1	1	1	1
9	15UBT079	N. SUBAGEETHA	1	1	1	,	-		-	-	1	1	1	1	/	1	1	1
10	15UBT088	M. TAMILARASAN	-	,	1	1	1	-	-	/	/	1	1		1	1	1	1
11	15UBT094	M. VISHNUVARTHAN	1	1	1	1	/	/	1	-	/	/	1	1	1	1	1	1
12	15UCS021	C. DHARANIDHARAN	1	,	-	,	1	a	-	/		/	1	1	/	1	1	1
13	15UCS084	A. PRAKASHRAJ	1	1	-	1	/	00	-	4	/	/	1	/	/	1	1	1
14	15UCS124	M. SURYA	1	1	1	1	/	-/-	1	/	1		1	1	1	1	1	1
15	15UEL001	S. ABILASH	1	1	-	/ A	-	-/-	-/-	/	_/	/	1	1.	1	1	1	1
16	15UEL004	K.S. BOOBESH	1	,	-	1	-	-	-	1	1	1	1	1	1	1	1	1
17	15UEL005	S.CHILAMBUSELVAN	1	,	,	-	1	/	/	4	/	1	1	1	1	1	1	1
18	15UEL006	M. DEVARAJ	1	1	a	-	4	-	/	-	/	1	/	1	1	1	1	1
19	15UEL017	H.KHAJAMOHINUDEEN	1	,	,	1	-	4	-	(	a	/	/	/	1	1	1	1
20	15UEL040	T.SIVAMOORTHY	1	1	-	1	-	/	1	4	/	./	1	1	1	1	1	1
21	15UEL041	J.SURYA	1	1	-	4	1	/	-	1	/	1	1	1	1	1	1	1
22	15UEL043	K.VIJAY	1	1	-	4	4	-		1		1	1	1	1	1	1	1
23	15UMA002	P.AARTHIKA	1	,	-	-	4	/	/	1	4	1	1	1	1	1	1	1
24	15UMA032	S.GOPINATH	1	,	1	-	/	1	4	1	1	1	1	1	1	1	1	1
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Staff in-charge

PRINCIPAL

A. S. Rangasamy College of Arts & Science

(Autonomous) TIRUCHENGODE - 637 215

Namakkal-Dt. Tamil Nadu, INDIA

Head of the Department

Department of Physics (UG) K. S. Rangasamy College of Arts and Science (Autonomous), Tiruchengous 15.

PRINCIPAL K. S. Rangasamy College of Arts & (Autonomous) TIRUCHENGODE - 637 Namakkal-Dt. Tamil Nadu.

Principal

COURSE CODE: 15PHCC01

COURSE NAME: PHYSICS IN EVERYDAY LIFE

S.	Reg. No	Name	September															
No	Acg. 140	Name	1	6	7	8	9	14	15	19	20	21	22	23	26	27	29	30
1	15UEN005	M. K. BHARATHKUMAR	1	1	1	1	1	,	a	1	1	,	1	,	,			٠,
2	15UEN025	A. KRISHNAKUMAR	1	1	,	1	1	1	1	1	1	1	-	-	1	-	/	/
3	15UEN030	P. MOHANASEDUPATHI	1	,	1	1	1		-	,	-	1	-	-	1	1	/	/
4	15UEN052	K. K. VINOTH	1	1	1	1	1	-	-	-	-	-	-	-	/	1	/	7
5	15UBC001	K. S. ABISHEK	1	1	1	1	1	0	-	1	1	-	1	-	1	1	/_	1
6	15UBC018	K. KRISHNAN	1	1	1	1	1	-	1	-	-	/	-	-	-	1	-	(
7	15UBT021	N. M. S. GOKUL	_	1	1	1	1	1	1	-	-	1	-	1	/	/	/_	1
8	15UBT048	G. MOHANKUMAR	1	1	1	1	1	A	-	-	1	1	1	/	/	1		-
9	15UBT079	N. SUBAGEETHA	1	1	,	1	-		-	-	-/-	/	1	/		1	1	1
10	15UBT088	M. TAMILARASAN	1	1	1	1	-		-	-	(	/	-		/	/	1	1
11	15UBT094	M. VISHNUVARTHAN	1	1	1	1	-	-	-	-		1	-	- /	/	-	_/_	1
12	15UCS021	C. DHARANIDHARAN	1	1	1	a	1	-/-	-	-	1	1	1	-/-	1,	/	/	_
13	15UCS084	A. PRAKASHRAJ	1	1	,	,	,	,	-	/	/	1		1	/	/	1	a
14	15UCS124	M. SURYA	1	1	1	,	1	-	-	/	,	1	/	-	/.	/	1	/
15	15UEL001	S. ABILASH	,	1	,	1	1	1	1	,	/	,	/	-/-	/	/	/	
16	15UEL004	K.S. BOOBESH	1	1	1	1	1	,	1	/	-	/	1	1	/	/,	/	/
17	15UEL005	S.CHILAMBUSELVAN	1	1	1	1	,	1	1	-	-		/	-/	4		4	
18	15UEL006	M. DEVARAJ	1	1	,	1	<i>'</i> ,	1	1		/	1	,	1	/	/	/	_/
19	15UEL017	H.KHAJAMOHINUDEEN	1	1	1	1	1	1	/	1	-	/	a	4	/	/	/	_
20	15UEL040	T.SIVAMOORTHY		/	1	1	1	/	1	,	/	-	/	/	/		/	1
21	15UEL041	J.SURYA	,	1	,	/	<del>_</del> _	1	1	/	',	1	/	/	/	/	/	/
22	15UEL043	K.VIJAY		1	1	1	,	1	-	1	1		/	/	/	/	1	/
23	15UMA002	P.AARTHIKA	1	1	1	1	1	1	1	1	/	-	/	4	/	/	1	_
24	15UMA032	S.GOPINATH	1	1	1	1	,		,	,	,	/	1	/	1	1	1	1
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Staff in-charge

Head of the Department

Department of Physics (UG) K. S. Rangasamy Coffege of Arts and K. S. Rangasamy College of Arts & Science (Autonomous), Tiruchenge 35-15,

(Autonomous) TIRUCHENGODE - 637 215

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Principal

Namakkal-Dt, Tamil Naclu-

ACADEMIC YEAR: 2016 - 2017

COURSE CODE: 15PHCC01

COURSE NAME: PHYSICS IN EVERYDAY LIFE

CLASS: UG

MAX. MARK: 100

S. No	Reg. No	Name	Ass1 (10)	Ass2 (10)	Test (75)	Att %	Att (5)	Total (100)
1	15UEN005	M. K. BHARATHKUMAR	8	7	61	92	4	80
2	15UEN025	A. KRISHNAKUMAR	6	8	63	100	5	82
3	15UEN030	P. MOHANASEDUPATHI	7	9	65	100	5	91
4	15UEN052	K. K. VINOTH	8	7	67	100	5	87
5	15UBC001	K. S. ABISHEK	9	6	70	100	5	90
6	15UBC018	K. KRISHNAN	8	7	69	100	5	89
7	15UBT021	N. M. S. GOKUL	7	9	71	100	5	92
8	15UBT048	G. MOHANKUMAR	9	7	73	100	5	94
9	15UBT079	N. SUBAGEETHA	6	8	61	100	5	80
10	15UBT088	M. TAMILARASAN	8	6	63	100	5	82
11	15UBT094	M. VISHNUVARTHAN	7	9	65	100	5	86
12	15UCS021	C. DHARANIDHARAN	6	8	67	92	4	77
13	15UCS084	A. PRAKASHRAJ	8	7	69	100	5	89
14	15UCS124	M. SURYA	7	6	71	100	5	89
15	15UEL001	S. ABILASH	9	7	66	100	5	87
16	15UEL004	K.S. BOOBESH	7	8	68	100	5	88
17	15UEL005	S.CHILAMBUSELVAN	6	9	70	100	5	90
18	15UEL006	M. DEVARAJ	7	8	72	92	4	83
19	15UEL017	H.KHAJAMOHINUDEEN	8	7	63	100	5	83
20	15UEL040	T.SIVAMOORTHY	9	6	65	100	5	85
21	15UEL041	J.SURYA	6	9	67	100	5	87
22	15UEL043	K.VIJAY	7	8	69	100	5	89
23	15UMA002	P.AARTHIKA	8	7	71	100	5	91
24	15UMA032	S.GOPINATH	9	6	73	100	5	93

Staff in-charge

Head of the Department

Department of Physics (UG) K. S. Rangasamy College of Arts and 

... o. Kangasapy Compour Arts & Sur-(Autonomous) TIRUCHENGODE - 637 215

Principal

Namakkal-Dt, Tamil Nadu, INDIA

PRINCIPAL n. S. Rangasamy College of Arts & Science (Autonomous) TIRUCHENGODE - 637 215

Namakkal-Dt. Tamil Nadu, INDIA

COURSE CODE: 15PHCC01

COURSE NAME: PHYSICS IN EVERYDAY LIFE

#### Feedback

Based on the feedback received by the course participants, after completion of this course. They learned about measurement equipment such as galvanometers, ammeters, and voltmeters in the subject "Physics in Everyday Life." Students will have a better understanding of basic physics words such as potential, power, and current after finishing the course. Students should be knowledgeable of domestic items such as light bulbs, inverters, water heaters, refrigerators, and so on. They gain an understanding of the many types of phase connections available to our homes.

Coordinator

Department of Physics (UG)

K. S. Rangasamy College of Arts and

Science (Autonomous), Tiruchengode: 15.

Principal

PRINCIPAL K. S. Rangasamy College of Arts & Scio (Autonomous)

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PRINCIPAL

A. S. Rangasamy College of Arts & Science (Autonomous)

TIRUCHENGODE - 637 215 Namakkal-Dt, Tamit Nadu, INDIA

COURSE CODE: 15PHCC01

COURSE NAME: PHYSICS IN EVERYDAY LIFE

#### Summary of the course

#### Objective of the course

Physics in Everyday Life certificate course educates the students to learn about the basic terms and principles in everyday life to the other major students.

- 1. To explain the operation and troubleshooting techniques of home appliances.
- 2. Focus on the importance of transformers in electric power transmission and distribution.

No. of Participants: 24

Coordinator: Ms. R. Keerthiga

Course Coordinator

Department of Physics (UG)

KSRCAS

Year: 2016-2017

Branch of the Students: II UG students from the following departments

- English
- Biochemistry
- Biotechnology
- Computer Science
- Electronics
- Mathematics

Course Coordinator

Head of the Department

Department of Physics (UG) K. S. Rangasamy College of Arts and Tience (Autonomous, Juochengode-15. Principal

PRINCIPAL K. S. Rangasamy College of Arts & Sci. (Automomous) TIRUCHENGODE - 637 245 Namakkat-Dt. Tarnii Nathi 1

K. S. Rangasamy College of Arts & Science (Autonomous) TIRUCHENGODE - 637 217 Namakkal-Dt. Tanoi Nasari



Value Added Course "Physics in Everyday Life" Certificate of Completion

This is to certify that M. K. Bharathkumar of II – BA English has completed a Value Added Course "Physics in Everyday Life" during the academic year 2016 – 2017 odd semester conducted by the Department of Physics, K.S. Rangasamy College of Arts and Science (Autonomous), Tiruchengode.

(ku)

Ms. R. Keerthiga Course Coordinator 1

Dr. M. Venkatesh Head of the Department

PRINCIPAL

A. S. Rangasamy College of Arts & Science
(Autonomous)

TIRUCHENGODE - 637 215

Namakkal-Dt. Tamil Nadu, IN



Value Added Course "Physics in Everyday Life"
Certificate of Completion

This is to certify that A. Krishnakumar of II - BA English has completed a Value Added Course "Physics in Everyday Life" during the academic year 2016 - 2017 odd semester conducted by the Department of Physics, K.S. Rangasamy College of Arts and Science (Autonomous), Tiruchengode.

(Am)

Ms. R. Keerthiga Course Coordinator

M

Dr. M. Venkatesh Head of the Department

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(Autonomous)

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Namakkal-Dt. Tamit Nadu.

Dr. V. Radhakrishnan Principal



Value Added Course "Physics in Everyday Life"
Certificate of Completion

This is to certify that **P. Mohanasedupathi** of **II - BA English** has completed a Value Added Course "**Physics in Everyday Life**" during the academic year 2016 - 2017 odd semester conducted by the Department of Physics, **K.S. Rangasamy College of Arts and Science (Autonomous), Tiruchengode**.

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Ms. R. Keerthiga Course Coordinator M

Dr. M. Venkatesh Head of the Department

A. S. Rangasamy College of Arts & Science (Autonomous) TIRUCHENGODE - 637 214

Namakkal-Dt. Tamil Nadu. In.



Value Added Course "Physics in Everyday Life"
Certificate of Completion

This is to certify that **K. K. Vinoth** of **II - BA English** has completed a Value Added Course "Physics in Everyday Life" during the academic year 2016 - 2017 odd semester conducted by the Department of Physics, **K.S. Rangasamy College of Arts and Science** (Autonomous), Tiruchengode.

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Dr. M. Venkatesh Head of the Department



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(NAAC Reaccredited, an ISO 9001:2008 Certified Institution, Affiliated to Periyar University, Salem. Included Under 2(f) & 12(B) of UGC Act 1956)

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

Value Added Course "Physics in Everyday Life"
Certificate of Completion

This is to certify that **K. S. Abishek** of **II - B. Sc., Biochemistry** has completed a Value Added Course "Physics in Everyday Life" during the academic year 2016 - 2017 odd semester conducted by the Department of Physics, **K.S. Rangasamy College of Arts and Science (Autonomous), Tiruchengode.** 

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Ms. R. Keerthiga Course Coordinator

Dr. M. Venkatesh Head of the Department



Value Added Course "Physics in Everyday Life"
Certificate of Completion

This is to certify that **K.** Krishnan of **II - B.** Sc., Biochemistry has completed a Value Added Course "Physics in Everyday Life" during the academic year 2016 - 2017 odd semester conducted by the Department of Physics, **K.S.** Rangasamy College of Arts and Science (Autonomous), Tiruchengode.

(tw)

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

Dr. M. Venkatesh Head of the Department



Value Added Course "Physics in Everyday Life" Certificate of Completion

This is to certify that N. M. S. Gokul of II - B. Sc., Biotechnology has completed a Value Added Course "Physics in Everyday Life" during the academic year 2016 - 2017 odd semester conducted by the Department of Physics, K.S. Rangasamy College of Arts and Science (Autonomous), Tiruchengode.

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Dr. M. Venkatesh Head of the Department

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Value Added Course "Physics in Everyday Life"
Certificate of Completion

This is to certify that G. Mohankumar of II - B. Sc., Biotechnology has completed a Value Added Course "Physics in Everyday Life" during the academic year 2016 - 2017 odd semester conducted by the Department of Physics, K.S. Rangasamy College of Arts and Science (Autonomous), Tiruchengode.

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Dr. M. Venkatesh Head of the Department

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Value Added Course "Physics in Everyday Life"
Certificate of Completion

This is to certify that N. Subageetha of II - B. Sc., Biotechnology has completed a Value Added Course "Physics in Everyday Life" during the academic year 2016 - 2017 odd semester conducted by the Department of Physics, K.S. Rangasamy College of Arts and Science (Autonomous), Tiruchengode.

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Dr. M. Venkatesh Head of the Department

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Dr. V. Radhakrishnan Principal



Value Added Course "Physics in Everyday Life" **Certificate of Completion** 

This is to certify that M. Tamilarasan of II - B. Sc., Biotechnology has completed a Value Added Course "Physics in Everyday Life" during the academic year 2016 - 2017 odd semester conducted by the Department of Physics, K.S. Rangasamy College of Arts and Science (Autonomous), Tiruchengode.

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Dr. M. Venkateshakkal-Dt. Tamil Nadu, INDIA Dr. V. Radhakrishnan

Head of the Department

Principal



Value Added Course "Physics in Everyday Life" Certificate of Completion

This is to certify that M. Vshnuvarthan of II - B. Sc., Biotechnology has completed a Value Added Course "Physics in Everyday Life" during the academic year 2016 - 2017 odd semester conducted by the Department of Physics, K.S. Rangasamy College of Arts and Science (Autonomous), Tiruchengode.

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Ms. R. Keerthiga Course Coordinator

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Dr. M. Venkatesh Head of the Department

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Value Added Course "Physics in Everyday Life"
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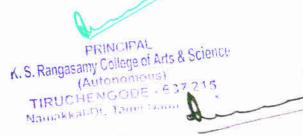
This is to certify that C. Dharanidharan of II - B. Sc., Computer Science has completed a Value Added Course "Physics in Everyday Life" during the academic year 2016 - 2017 odd semester conducted by the Department of Physics, K.S. Rangasamy College of Arts and Science (Autonomous), Tiruchengode.

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Dr. M. Venkatesh Head of the Department



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Value Added Course "Physics in Everyday Life"
Certificate of Completion

This is to certify that A. Prakashraj of II - B. Sc., Computer Science has completed a Value Added Course "Physics in Everyday Life" during the academic year 2016 - 2017 odd semester conducted by the Department of Physics, K.S. Rangasamy College of Arts and Science (Autonomous), Tiruchengode.

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Value Added Course "Physics in Everyday Life"
Certificate of Completion

This is to certify that M. Surya of II - B. Sc., Computer Science has completed a Value Added Course "Physics in Everyday Life" during the academic year 2016 - 2017 odd semester conducted by the Department of Physics, K.S. Rangasamy College of Arts and Science (Autonomous), Tiruchengode.

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Dr. M. Venkatesh Head of the Department



Value Added Course "Physics in Everyday Life"
Certificate of Completion

This is to certify that S. Abilash of II - B. Sc., Electronics has completed a Value Added Course "Physics in Everyday Life" during the academic year 2016 - 2017 odd semester conducted by the Department of Physics, K.S. Rangasamy College of Arts and Science (Autonomous), Tiruchengode.

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Ms. R. Keerthiga Course Coordinator M

Dr. M. Venkatesh Head of the Department

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Value Added Course "Physics in Everyday Life"
Certificate of Completion

This is to certify that K.S. Boobesh of II - B. Sc., Electronics has completed a Value Added Course "Physics in Everyday Life" during the academic year 2016 - 2017 odd semester conducted by the Department of Physics, K.S. Rangasamy College of Arts and Science (Autonomous), Tiruchengode.

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Value Added Course "Physics in Everyday Life"
Certificate of Completion

This is to certify that S. Chilambuselvan of II - B. Sc., Electronics has completed a Value Added Course "Physics in Everyday Life" during the academic year 2016 - 2017 odd semester conducted by the Department of Physics, K.S. Rangasamy College of Arts and Science (Autonomous), Tiruchengode.

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Ms. R. Keerthiga Course Coordinator

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Value Added Course "Physics in Everyday Life"
Certificate of Completion

This is to certify that M. Devaraj of II - B. Sc., Electronics has completed a Value Added Course "Physics in Everyday Life" during the academic year 2016 - 2017 odd semester conducted by the Department of Physics, K.S. Rangasamy College of Arts and Science (Autonomous), Tiruchengode.

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Value Added Course "Physics in Everyday Life"
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This is to certify that **H. Khajamohinudeen** of **II - B. Sc., Electronics** has completed a Value Added Course "Physics in Everyday Life" during the academic year 2016 - 2017 odd semester conducted by the Department of Physics, **K.S. Rangasamy College of Arts and Science (Autonomous), Tiruchengode.** 

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Ms. R. Keerthiga
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Value Added Course "Physics in Everyday Life" Certificate of Completion

This is to certify that **T. Sivamoorthy** of **II - B. Sc., Electronics** has completed a Value Added Course "Physics in Everyday Life" during the academic year 2016 - 2017 odd semester conducted by the Department of Physics, **K.S. Rangasamy College of Arts and Science (Autonomous), Tiruchengode.** 

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Value Added Course "Physics in Everyday Life"
Certificate of Completion

This is to certify that J. Surya of II - B. Sc., Electronics has completed a Value Added Course "Physics in Everyday Life" during the academic year 2016 - 2017 odd semester conducted by the Department of Physics, K.S. Rangasamy College of Arts and Science (Autonomous), Tiruchengode.

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Ms. R. Keerthiga Course Coordinator h

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Value Added Course "Physics in Everyday Life"

Certificate of Completion

This is to certify that K.VIjay of II - B. Sc., Electronics has completed a Value Added Course "Physics in Everyday Life" during the academic year 2016 - 2017 odd semester conducted by the Department of Physics, K.S. Rangasamy College of Arts and Science (Autonomous), Tiruchengode.

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Ms. R. Keerthiga Course Coordinator h

Dr. M. Venkatesh Head of the Department

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Certificate of Completion

This is to certify that **P.** Aarthika of **II - B.** Sc., Mathematics has completed a Value Added Course "Physics in Everyday Life" during the academic year 2016 - 2017 odd semester conducted by the Department of Physics, **K.S.** Rangasamy College of Arts and Science (Autonomous), Tiruchengode.

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Dr. M. Venkatesh Head of the Department

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Value Added Course "Physics in Everyday Life"
Certificate of Completion

This is to certify that S. Gopinath of II - B. Sc., Mathematics has completed a Value Added Course "Physics in Everyday Life" during the academic year 2016 - 2017 odd semester conducted by the Department of Physics, K.S. Rangasamy College of Arts and Science (Autonomous), Tiruchengode.

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Dr. M. Venkatesh Head of the Department

K. S. Rangasamy College of Arts & Sciences (Autonomous)

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