



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

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

**Department of Electronics and Communication**

**Value Added Course**

**Academic Year 2017-2018**

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**K.S.Rangasamy College of Arts and Science (Autonomous)**  
NAAC Reaccredited and an ISO Certified Institution  
Affiliated to Periyar University, Salem  
Included Under 2(f) & 12(B) of UGC Act, 1956  
KSR, Kalvi Nagar, Tiruchengode - 637 215; Namakkal Dist, Tamil Nadu, India

## Value added courses offered by the College



### Academic Year 2017-2018

Course Name	Semester	Offering Department
• Cell Phone Servicing	- ODD / EVEN	- Electronics and Communication
• Personality Development	- ODD / EVEN	- Commerce and Management
• 3D Animation	- ODD / EVEN	- Computer Science
• MATLAB	- ODD / EVEN	- Mathematics
• Basics of Biotechnology	- ODD	- Life Science
• Understanding Immunity and Vaccination	- EVEN	- Life Science

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

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K. S. Rangasamy College of Arts & Science  
(Autonomous)  
TIRUCHENGODE - 637 215  
Namakkal-Dt. Tamil Nadu, India

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

Tiruchengode – 637 215

Department of Electronics and Communication

## CIRCULAR

From  
The Head  
Department of Electronics & Communication

To  
All HODs  
Students of all Departments

Date: 14-08-2017

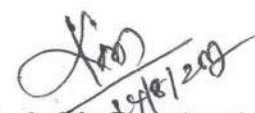
**Sub: Certificate Course- Cell Phone Servicing-reg**


Our Department has planned to conduct certificate course on "Cell Phone Servicing" in this semester. Total duration of the course is 30 hours, course starts from September. Students who are all interested may enroll their names to the course coordinator. The Certificate course will be conducted after the class hours 4.15pm to 5.15pm. At the end of this course, certificate will be issued.

Students are advised to meet following staff for registration.

Mr.L.Dhatchinamurthy  
Course Coordinator  
Department of Electronics and Communication  
KSRCAS

  
Course Coordinator

  
Head of the Department  
Dr. K.M. PRABUSANKARLAL, M.Sc., M.Phil., M.E., P.T.O.  
Associate Professor & Head,  
Dept. of Electronics & Communication  
K.S. Rangasamy College of Arts & Science (Autonomous)  
Tiruchengode - 637 215, Namakkal Dt. T.N.

  
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Namakkal Dt. Tamil Nadu



15UECCC01	CERTIFICATE COURSE: CELL PHONE SERVICING	ODD/EVEN
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**Objectives:**

- Learn the Basic generation and spectrum process
- Understand the operating systems and principle of handset
- Understand the basic repairing and troubleshooting the handset

**Duration: 30Hrs**

**CONTENTS**

**UNIT-I: Introduction**

**(06 Hours)**

Introduction to mobile phones-Generations of mobile phones- FHSS networks-GSM-Spread spectrum-CDMA-TDMA- Basic electronics components.

**UNIT- II: Handsets**

**(06 Hours)**

Handset Specific operating systems-Handset features & applications- working principle of mobile handset -Components used in mobile handsets.

**UNIT-III: Handset Troubleshooting**

**(06 Hours)**

Tools & Equipment used for repairing - Maintenance of mobile handsets-Types of Power Supply & Batteries- Boosting a Battery-Trouble shooting basics.

**UNIT- IV: Network Problems**

**(06 Hours)**

Network problems-Power failure (dead)-Mobile phone hardware troubleshooting (water damage, hanging, charging & keypad problems)- Handsets Assembly& Disassembly-Soldering & Desoldering -SMD rework station.

**UNIT- V:Mobile Software**

**(06 Hours)**

Mobile software's-Data cable-Card reader-Mobile display- Remove/replace Component-Mobile phone hardware troubleshooting-Troubleshooting through circuit diagram-Transmission-Transmitter filter- Microphone- Reception- Antenna-RF power amplifier-Local oscillator-Audio IC-speaker- charger.

**TEXT BOOK:**

- 1 *Chukky Operandu.* 2014. **Mobile Phones and Tablets Repairs: A Complete Guide for Beginners and Professionals.** [First Edition]. Mondraim Nig Limited.

**REFERENCE BOOKS**

- 1 *Sajal Kumar Das.* 2013. **Mobile handset Design.** Wiley Publication.
- 2 *Chukky Operandu.* 2014. **Smart Phones and Tablets Repairs: A Complete Guide for Beginners and Professionals.** [First Edition]. Mondraim Nig Limited.

Principles of  
Engineering  
Department  
SRM Institute of Science & Technology  
Kattankulathur - 603 003  
Tamil Nadu, India



### Work Plan Schedule

Faculty Name : Ms.P.Janani

Department : B.Sc. ELEC

Class : II UG

Subject : CERTIFICATE COURSE: CELL

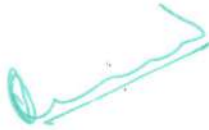
Period : ODD/EVEN 2017-2018

PHONE SERVICING (15UECCC01)

S No	Unit	Topic	No. of Hours
1	I	Introduction to mobile phones-Generations of mobile phones	2
2	I	FHSS networks-GSM-Spread spectrum-CDMA-TDMA	2
3	I	Basic electronics components.	2
4	II	Handset Specific operating systems-Handset features & applications	2
5	II	Working principle of mobile handset	2
6	II	Components used in mobile handsets.	2
7	III	Tools & Equipment used for repairing - Maintenance of mobile handsets	2
8	III	Types of Power Supply & Batteries	2
9	III	Boosting a Battery-Trouble shooting basics.	2
10	IV	Network problems-Power failure (dead)-Mobile phone hardware troubleshooting (water damage, hanging, charging & keypad problems)	2
11	IV	Handsets Assembly& Disassembly	2
12	IV	Soldering & Desoldering -SMD rework station.	2
13	V	Mobile software's-Data cable-Card reader-Mobile display- Remove/replace Component	2
14	V	Mobile phone hardware troubleshooting-Troubleshooting through circuit diagram-Transmission-Transmitter filter	2
15	V	Microphone- Reception- Antenna-RF power amplifier-Local oscillator-Audio IC-speaker-charger	2
16	Others	Revision	2
<b>Total No of Hours</b>			<b>32</b>

  
HOD Signature  
with Date

[Dr.K.M.PRABUSANKARLAL]



  
Faculty  
Signature  
with Date  
[Ms.P.Janani]

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

TIRUCHENGODE - 637 215

DEPARTMENT OF ELECTRONICS AND COMMUNICATION

CERTIFICATE COURSE -Students Name List


Academic Year 2017-2018

Course Code: 15UECCC01

Course Name: Cell Phone Servicing

Batch : 2016-2019

S. No	Register No	Student Name	STUDENTS SIGNATURE
1	16UBA010	BALARAMAN K	Balaraman
2	16UBA042	KARTHI G	Karthi
3	16UBA094	TAMIL ARASAN G	Tamil
4	16UCO011	GANESH V	Ganesh
5	16UCO014	KABILAN G	Kabilan
6	16UCO035	RAGUL P	Ragul
7	16UMA015	DEEPAK R	Deepak
8	16UMA046	KALAI SELVI M	Kalai Selvi
9	16UMA075	PRAGADEESH S	Pragadeesh
10	16UMA119	SRIRAM R	Sriram
11	16UMB012	HARIHARAN M	Hariharam
12	16UPH048	NAVEEN KUMAR S	Naveen
13	16UPH059	RAJESH KUMAR B	Rajesh
14	16UPH063	SANTHOSH KUMAR V	Santhosh
15	16UTA002	BHARATHI V	Bharathi
16	16UTA030	DHARANI E	Dharani
17	16UTA035	VINITHA S	Vinitha
18	16UTF015	KAMILA JOSE J	Jose
19	16UTF022	MEIYALAGAN R	Meiyalagan
20	16UTF028	PRABHAKARAN S	Prabhakaran

  
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Namakkal-Dt. Tamil Nadu

  
Dr. K.M. PRABUSANKARLAL, M.Sc., M.Phil., M.A., M.Ed.  
Associate Professor & Head,  
Dept. of Electronics & Communication  
K.S. Rangasamy College of Arts & Science (Autonomous)  
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DEPARTMENT OF ELECTRONICS AND COMMUNICATION

CERTIFICATE COURSE NAME LIST

Academic Year 2017-2018

Course Code: 15UECCC01

Course Name: Cell Phone Servicing

Batch : 2016-2019

S. No	Register No	Student Name	14/9	15/9	16/9	19/9	21/9	22/9	25/9	30/9	5/10	6/10
1	16UBA010	BALARAMAN K	/	/	/	/	/	a	/	/	a	/
2	16UBA042	KARTHI G	x	/	/	a	/	/	/	a	/	/
3	16UBA094	TAMIL ARASAN G	/	a	/	/	/	a	/	/	/	/
4	16UCO011	GANESH V	/	/	/	/	a	/	/	a	/	/
5	16UCO014	KABILAN G	/	/	/	/	a	/	/	/	/	/
6	16UCO035	RAGUL P	/	/	a	/	/	/	/	/	/	/
7	16UMA015	DEEPAK R	/	/	/	a	/	/	a	/	/	/
8	16UMA046	KALAI SELVI M	/	a	/	/	/	a	/	/	/	/
9	16UMA075	PRAGADEESH S	/	/	/	a	/	/	/	/	/	/
10	16UMA119	SRIRAM R	/	/	/	/	/	/	/	/	/	/
11	16UMB012	HARIHARAN M	/	/	/	/	/	/	/	/	/	/
12	16UPH048	NAVEEN KUMAR S	/	/	/	/	/	/	/	/	/	/
13	16UPH059	RAJESH KUMAR B	/	/	/	/	/	/	/	/	/	/
14	16UPH063	SANTHOSH KUMAR V	/	/	/	/	/	/	/	/	/	/
15	16UTA002	BHARATHI V	/	/	/	/	a	/	/	/	/	/
16	16UTA030	DHARANI E	/	a	/	/	/	a	/	/	/	/
17	16UTA035	VINITHA S	a	/	/	/	a	/	/	a	/	/
18	16UTF015	KAMILA JOSE J	/	a	/	/	/	/	a	/	/	/
19	16UTF022	MEIYALAGAN R	a	a	a	/	/	a	/	/	/	/
20	16UTF028	PRABHAKARAN S	/	/	a	/	/	/	/	a	/	/

Staff Signature *Pf Pf Pf Pf Pf Pf Pf Pf Pf Pf Pf Pf*

  
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 Namakkal Dt. Tamil Nadu. In.



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TIRUCHENGODE - 637 215

DEPARTMENT OF ELECTRONICS AND COMMUNICATION

CERTIFICATE COURSE NAME LIST

Academic Year 2017-2018

Course Code: 15UECC01


Course Name: Cell Phone Servicing

Batch : 2016-2019

S. No	Register No	Student Name	7/10	12/10	14/10	15/10	19/10	20/10	22/10	26/10	28/10	2/11
1	16UBA010	BALARAMAN K	1	a	1	1	1	1	a	1	a	1
2	16UBA042	KARTHI G	1	1	a	1	1	1	a	1	1	1
3	16UBA094	TAMIL ARASAN G	1	1	1	a	1	1	1	a	1	1
4	16UCO011	GANESH V	1	1	a	1	1	1	1	1	1	1
5	16UCO014	KABILAN G	1	1	1	1	1	a	1	1	1	1
6	16UCO035	RAGUL P	a	1	1	1	1	a	1	1	1	1
7	16UMA015	DEEPAK R	1	1	1	a	1	1	1	1	1	1
8	16UMA046	KALAI SELVI M	1	a	1	1	1	1	a	1	1	1
9	16UMA075	PRAGADEESH S	1	1	1	1	1	a	1	1	1	1
10	16UMA119	SRIRAM R	1	1	1	1	1	1	1	1	1	1
11	16UMB012	HARIHARAN M	1	1	1	1	1	1	1	1	1	1
12	16UPH048	NAVEEN KUMAR S	1	1	1	1	1	1	1	1	1	1
13	16UPH059	RAJESH KUMAR B	1	1	1	1	1	1	1	1	1	1
14	16UPH063	SANTHOSH KUMAR V	1	1	1	1	1	1	1	1	1	1
15	16UTA002	BHARATHI V	a	1	1	1	1	a	1	1	1	1
16	16UTA030	DHARANI E	1	a	1	1	1	a	1	1	1	1
17	16UTA035	VINITHA S	a	1	1	1	a	1	1	1	1	1
18	16UTF015	KAMILA JOSE J	1	1	1	a	1	1	1	1	1	1
19	16UTF022	MEIYALAGAN R	a	1	1	1	1	a	1	1	a	1
20	16UTF028	PRABHAKARAN S	a	1	1	1	1	1	1	1	1	a

Staff Signature

*[Handwritten signatures]*

  
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TIRUCHENGODE - 637 215

DEPARTMENT OF ELECTRONICS AND COMMUNICATION

CERTIFICATE COURSE NAME LIST

Academic Year 2017-2018

Course Code: 15UECCC01

Course Name: Cell Phone Servicing

Batch : 2016-2019

S. No	Register No	Student Name	3/1	4/1	8/1	9/1	11/1	13/1	18/1	23/1	24/1	27/1	30/1	31/1	6/2
1	16UBA010	BALARAMAN K	/	/	a	/	/	/	/	a	/	/	/	/	/
2	16UBA042	KARTHI G	/	/	/	a	/	/	/	/	/	/	/	/	/
3	16UBA094	TAMIL ARASAN G	/	/	/	/	/	/	/	a	/	/	/	/	/
4	16UCO011	GANESH V	/	/	/	/	/	a	/	/	/	/	/	/	/
5	16UCO014	KABILAN G	/	/	/	/	/	/	/	/	/	/	/	/	/
6	16UCO035	RAGUL P	/	/	/	/	/	a	/	/	/	/	/	a	/
7	16UMA015	DEEPAK R	/	/	/	/	/	/	a	/	/	/	/	/	/
8	16UMA046	KALAI SELVI M	/	a	/	/	/	/	/	/	/	/	/	/	/
9	16UMA075	PRAGADEESH S	/	/	/	/	/	/	/	a	/	/	/	/	/
10	16UMA119	SRIRAM R	/	/	/	/	/	/	/	/	/	/	/	/	/
11	16UMB012	HARIHARAN M	/	/	/	/	/	a	/	/	/	/	/	/	/
12	16UPH048	NAVEEN KUMAR S	a	/	/	/	/	/	/	a	/	/	/	/	/
13	16UPH059	RAJESH KUMAR B	/	a	/	/	/	/	/	/	/	/	/	/	/
14	16UPH063	SANTHOSH KUMAR V	/	/	/	/	/	/	/	/	/	/	/	/	/
15	16UTA002	BHARATHI V	a	a	/	a	a	/	/	/	/	/	/	/	/
16	16UTA030	DHARANI E	/	a	/	/	/	a	/	/	/	/	/	/	/
17	16UTA035	VINITHA S	/	/	a	/	a	/	/	/	/	/	/	/	/
18	16UTF015	KAMILA JOSE J	a	/	/	/	/	a	/	/	/	/	/	/	/
19	16UTF022	MEIYALAGAN R	a	/	a	/	/	/	a	/	/	/	/	/	/
20	16UTF028	PRABHAKARAN S	a	/	/	/	/	/	/	/	/	a	/	/	/

Staff Signature

*[Handwritten signatures]*

  
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 Namakkal-Dt. Tamil Nadu, INDIA



CLASS : IIIrd U.G. ..... 2017-2018 ..... SUBJECT : CERTIFICATE ..... DURE : CELL PHONE  
SERVICING

CIBUECCED1

Planned		Topics Covered	Executed		Signature	
Date	Hour		Date	Hour	Faculty	HOD
14/9	4.15-5.15	Introduction to mobile phones	14/9	4.15-5.15	Rg	}
15/9	4.15-5.15	Generation of mobile phones	15/9	4.15-5.15	Rg	
18/9	4.15-5.15	FHSS networks - GSM spread spectrum	15/9	4.15-5.15	Rg	
19/9	4.15-5.15	CDMA - TDMA	19/9	4.15-5.15	Rg	
21/9	4.15-5.15	Basic electronic components	21/9	4.15-5.15	Rg	
22/9	4.15-5.15	Basic electronic components	22/9	4.15-5.15	Rg	
28/9	4.15-5.15	Handset specific operating system	28/9	4.15-5.15	Rg	
30/9	4.15-5.15	Handset features application	30/9	4.15-5.15	Rg	
5/10	4.15-5.15	working principles	5/10	4.15-5.15	Rg	
6/10	4.15-5.15	mobile handset	6/10	4.15-5.15	Rg	
7/10	4.15-5.15	components used	7/10	4.15-5.15	Rg	}
12/10	4.15-5.15	mobile handset	12/10	4.15-5.15	Rg	
14/10	4.15-5.15	tools & equipment used for repairing - maintenance	14/10	4.15-5.15	Rg	
15/10	4.15-5.15	types of mobile handsets	15/10	4.15-5.15	Rg	
19/10	4.15-5.15	Types of power supply	19/10	4.15-5.15	Rg	
20/10	4.15-5.15	Batteries	20/10	4.15-5.15	Rg	
22/10	4.15-5.15	troubleshooting a battery	22/10	4.15-5.15	Rg	
26/10	4.15-5.15	troubleshooting basic	26/10	4.15-5.15	Rg	
28/10	4.15-5.15	network problem - power failure (ded) - mobile phone hardware trouble	28/10	4.15-5.15	Rg	
		troubleshooting water damage, hanging charging				
2/11	4.15-5.15	& keypad problems	2/11	4.15-5.15	Rg	}
3/11	4.15-5.15	handset assembly &	3/11	4.15-5.15	Rg	
4/11	4.15-5.15	disassembly	4/11	4.15-5.15	Rg	
8/11	4.15-5.15	soldering & resoldering	8/11	4.15-5.15	Rg	
9/11	4.15-5.15	SMD rework station	9/11	4.15-5.15	Rg	
11/11	4.15-5.15	mobile software - data	11/11	4.15-5.15	Rg	





# S.RANGASAMY COLLEGE OF ARTS & SCIENCE (Autonomous)

TIRUCHENGODE - 637 215

DEPARTMENT OF ELECTRONICS AND COMMUNICATION

CERTIFICATE COURSE MARK LIST

Academic Year 2017-2018

Course Code: 15UECCC01

Course Name: Cell Phone Servicing


Batch : 2016-2019


Max Marks: 100

S. No	Register No	Student Name	ASS 1 (10)	ASS 2 (10)	Test (75)	Att %	Att (5)	Total
1	16UBA010	BALARAMAN K	8	9	72	91	5	94
2	16UBA042	KARTHI G	6	8	73	93	5	92
3	16UBA094	TAMIL ARASAN G	7	8	70	94	5	90
4	16UCO011	GANESH V	8	7	72	95	5	92
5	16UCO014	KABILAN G	8	7	70	96	5	90
6	16UCO035	RAGUL P	8	7	74	95	5	94
7	16UMA015	DEEPAK R	8	8	73	95	5	94
8	16UMA046	KALAI SELVI M	7	8	70	94	5	90
9	16UMA075	PRAGADEESH S	9	9	72	97	5	95
10	16UMA119	SRIRAM R	9	8	71	98	5	93
11	16UMB012	HARIHARAN M	8	9	73	96	5	95
12	16UPH048	NAVEEN KUMAR S	6	8	74	97	5	93
13	16UPH059	RAJESH KUMAR B	8	9	72	98	5	94
14	16UPH063	SANTHOSH KUMAR V	7	7	71	95	5	90
15	16UTA002	BHARATHI V	9	6	70	94	5	90
16	16UTA030	DHARANI E	8	8	70	93	5	91
17	16UTA035	VINITHA S	6	9	70	92	5	90
18	16UTF015	KAMILA JOSE J	7	7	74	92	5	93
19	16UTF022	MEIYALAGAN R	8	7	73	90	5	93
20	16UTF028	PRABHAKARAN S	8	7	72	92	5	92

  
Staff Signature  
(Ms.P.Janani)

  
HoD  
(Dr.K.M.Prabusankarlal)  
Dr.K.M. PRABUSANKARLAL, M.Sc., M.Phil., M.E., Ph.D.  
Associate Professor & Head,  
Dept. of Electronics & Communication  
K.S. Rangasamy College of Arts & Science (Autonomous)  
Tiruchengode - 637 215, Namakkal Dt. T.N.

  
PRINCIPAL  
(Dr.V.Radhakrishnan)  
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KSR Kalvi Nagar; Tiruchengode - 637 215; Namakkal Dist, Tamil Nadu, India



**Certificate**

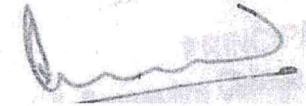
*This is to certify that **BALARAMAN K, (16UBA010)** of **II BBA** has completed a Certificate Course in **Cell Phone Servicing** during the academic year **2017-2018, ODD/EVEN** semester conducted by the Department of Electronics and Communication, **K.S.Rangasamy College of Arts and Science (Autonomous), Tiruchengode-15***



**Mr.L.Dhatchinamurthy**  
Course Coordinator



**Dr. K.M.Prabusankarlal**  
Head of the Department



**Dr.V.Radhakrishnan**  
Principal

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Included Under 2(f) & 12(B) of UGC Act, 1956

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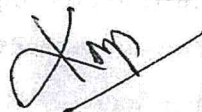


***Certificate***

*This is to certify that **KARTHI G, (16UBA042)** of **II BBA** has completed a Certificate Course in ***Cell Phone Servicing*** during the academic year **2017-2018, ODD/EVEN** semester conducted by the Department of Electronics and Communication, ***K.S.Rangasamy College of Arts and Science (Autonomous), Tiruchengode-15****



**Mr.L.Dhatchinamurthy**  
Course Coordinator



**Dr. K.M.Prabusankarlal**  
Head of the Department



**Dr.V.Radhakrishnan**  
Principal

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**Certificate**

*This is to certify that **TAMIL ARASAN G, (16UBA094)** of **II BBA** has completed a Certificate Course in **Cell Phone Servicing** during the academic year **2017-2018, ODD/EVEN** semester conducted by the Department of Electronics and Communication, **K.S.Rangasamy College of Arts and Science (Autonomous), Tiruchengode-15***

**Mr.L.Dhatchinamurthy**  
Course Coordinator

**Dr. K.M.Prabusankarlal**  
Head of the Department

**Dr.V.Radhakrishnan**  
Principal

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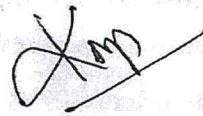
KSR Kalvi Nagar; Tiruchengode - 637 215; Namakkal Dist, Tamil Nadu, India




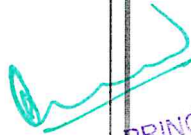
***Certificate***

*This is to certify that GANESH V, (16UC0011) of II B.COM has completed a Certificate Course in **Cell Phone Servicing** during the academic year **2017-2018, ODD/EVEN** semester conducted by the Department of Electronics and Communication, **K.S.Rangasamy College of Arts and Science (Autonomous), Tiruchengode-15***

  
**Mr.L.Dhatchinamurthy**  
Course Coordinator

  
**Dr. K.M.Prabusankarlal**  
Head of the Department

  
**Dr.V.Radhakrishnan**  
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**Certificate**

*This is to certify that **KABILAN G, (16UCO014)** of **II B.COM** has completed a Certificate Course in **Cell Phone Servicing** during the academic year **2017-2018, ODD/EVEN** semester conducted by the Department of Electronics and Communication, **K.S.Rangasamy College of Arts and Science (Autonomous), Tiruchengode-15***

Handwritten signature of Mr. L. Dhatchinamurthy in blue ink.

**Mr.L.Dhatchinamurthy**  
Course Coordinator

Handwritten signature of Dr. K.M.Prabusankarlal in blue ink.

**Dr. K.M.Prabusankarlal**  
Head of the Department

Handwritten signature of Dr. V.Radhakrishnan in blue ink.

**Dr.V.Radhakrishnan**  
Principal

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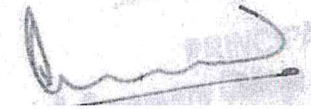
*This is to certify that **RAGUL P, (16UC0035)** of **II B.COM** has completed a Certificate Course in ***Cell Phone Servicing*** during the academic year **2017-2018, ODD/EVEN** semester conducted by the Department of Electronics and Communication, ***K.S.Rangasamy College of Arts and Science (Autonomous), Tiruchengode-15****



**Mr.L.Dhatchinamurthy**  
Course Coordinator



**Dr. K.M.Prabusankarlal**  
Head of the Department



**Dr.V.Radhakrishnan**  
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***Certificate***

*This is to certify that **DEEPAK R, (16UMA015)** of **II B.Sc., MAT** has completed a Certificate Course in **Cell Phone Servicing** during the academic year **2017-2018, ODD/EVEN** semester conducted by the Department of Electronics and Communication, **K.S.Rangasamy College of Arts and Science (Autonomous), Tiruchengode-15***

**Mr.L.Dhatchinamurthy**  
Course Coordinator

**Dr. K.M.Prabusankarlal**  
Head of the Department

**Dr.V.Radhakrishnan**  
Principal

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***Certificate***

*This is to certify that **KALAI SELVI M, (16UMA046)** of **II B.Sc., MAT** has completed a Certificate Course in **Cell Phone Servicing** during the academic year **2017-2018, ODD/EVEN** semester conducted by the Department of Electronics and Communication, **K.S.Rangasamy College of Arts and Science (Autonomous), Tiruchengode-15***

**Mr.L.Dhatchinamurthy**  
Course Coordinator

**Dr. K.M.Prabusankarlal**  
Head of the Department

**Dr.V.Radhakrishnan**  
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**Certificate**

*This is to certify that **PRAGADEESH S, (16UMA075)** of **II B.Sc., MAT** has completed a Certificate Course in **Cell Phone Servicing** during the academic year **2017-2018, ODD/EVEN** semester conducted by the Department of Electronics and Communication, **K.S.Rangasamy College of Arts and Science (Autonomous), Tiruchengode-15***

**Mr.L.Dhatchinamurthy**  
Course Coordinator

**Dr. K.M.Prabusankarlal**  
Head of the Department

**Dr.V.Radhakrishnan**  
Principal

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**Certificate**

*This is to certify that **SRIRAM R, (16UMA119)** of **II B.Sc., MAT** has completed a Certificate Course in **Cell Phone Servicing** during the academic year **2017-2018, ODD/EVEN** semester conducted by the Department of Electronics and Communication, **K.S.Rangasamy College of Arts and Science (Autonomous), Tiruchengode-15***

Handwritten signature of Mr. L. Dhatchinamurthy in black ink.

**Mr.L.Dhatchinamurthy**  
Course Coordinator

Handwritten signature of Dr. K.M.Prabusankarlal in black ink.

**Dr. K.M.Prabusankarlal**  
Head of the Department

Handwritten signature of Dr. V.Radhakrishnan in black ink.

**Dr.V.Radhakrishnan**  
Principal

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***Certificate***

*This is to certify that HARIHARAN M, (16UMB012) of II B.Sc., MB has completed a Certificate Course in **Cell Phone Servicing** during the academic year **2017-2018, ODD/EVEN** semester conducted by the Department of Electronics and Communication, **K.S.Rangasamy College of Arts and Science (Autonomous), Tiruchengode-15***

A handwritten signature in blue ink, appearing to read 'L. Dhatchinamurthy'.

**Mr.L.Dhatchinamurthy**  
Course Coordinator

A handwritten signature in blue ink, appearing to read 'K.M.P.'.

**Dr. K.M.Prabusankarlal**  
Head of the Department

A handwritten signature in blue ink, appearing to read 'V.R.'.

**Dr.V.Radhakrishnan**  
Principal

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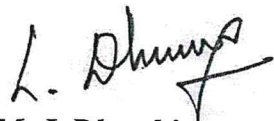
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**Certificate**

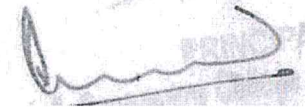
*This is to certify that NAVEEN KUMAR S, (16UPH048) of II B.Sc., PHY has completed a Certificate Course in Cell Phone Servicing during the academic year 2017-2018, ODD/EVEN semester conducted by the Department of Electronics and Communication, **K.S.Rangasamy College of Arts and Science (Autonomous), Tiruchengode-15***



**Mr.L.Dhatchinamurthy**  
Course Coordinator



**Dr. K.M.Prabusankarlal**  
Head of the Department



**Dr.V.Radhakrishnan**  
Princinal

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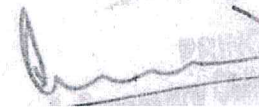


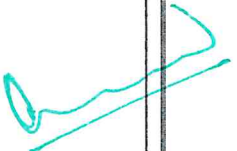
## ***Certificate***

*This is to certify that **RAJESH KUMAR B, (16UPH059)** of **II B.Sc., PHY** has completed a Certificate Course in ***Cell Phone Servicing*** during the academic year **2017-2018, ODD/EVEN** semester conducted by the Department of Electronics and Communication, ***K.S.Rangasamy College of Arts and Science (Autonomous), Tiruchengode-15****

  
**Mr.L.Dhatchinamurthy**  
Course Coordinator

  
**Dr. K.M.Prabusankarlal**  
Head of the Department

  
**Dr.V.Radhakrishnan**  
Principal

  
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**Certificate**

This is to certify that **SANTHOSH KUMAR V, (16UPH063)** of **II B.Sc., PHY** has completed a Certificate Course in **Cell Phone Servicing** during the academic year **2017-2018, ODD/EVEN** semester conducted by the Department of Electronics and Communication, **K.S.Rangasamy College of Arts and Science (Autonomous), Tiruchengode-15**

Handwritten signature of Mr. L. Dhatchinamurthy in black ink.

**Mr.L.Dhatchinamurthy**  
Course Coordinator

Handwritten signature of Dr. K.M.Prabusankarlal in black ink.

**Dr. K.M.Prabusankarlal**  
Head of the Department

Handwritten signature of Dr. V.Radhakrishnan in black ink.

**Dr.V.Radhakrishnan**  
Principal

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## ***Certificate***

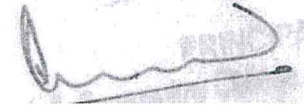
*This is to certify that **BHARATHI V, (16UTA002)** of **II BA TAM** has completed a Certificate Course in ***Cell Phone Servicing*** during the academic year **2017-2018, ODD/EVEN** semester conducted by the Department of Electronics and Communication, **K.S.Rangasamy College of Arts and Science (Autonomous), Tiruchengode-15***



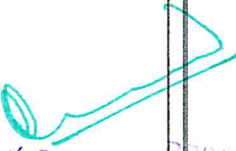
**Mr.L.Dhatchinamurthy**  
Course Coordinator



**Dr. K.M.Prabusankarlal**  
Head of the Department



**Dr.V.Radhakrishnan**  
Principal



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***Certificate***

*This is to certify that **DHARANI E, (16UTA030)** of **II BA TAM** has completed a Certificate Course in **Cell Phone Servicing** during the academic year **2017-2018, ODD/EVEN** semester conducted by the Department of Electronics and Communication, **K.S.Rangasamy College of Arts and Science (Autonomous), Tiruchengode-15***



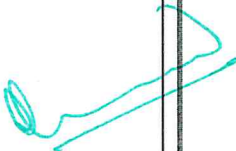
**Mr.L.Dhatchinamurthy**  
Course Coordinator



**Dr. K.M.Prabusankarlal**  
Head of the Department



**Dr.V.Radhakrishnan**  
Principal



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***Certificate***

*This is to certify that VINITHA S, (16UTA035) of II BA TAM has completed a Certificate Course in Cell Phone Servicing during the academic year 2017-2018, ODD/EVEN semester conducted by the Department of Electronics and Communication, ***K.S.Rangasamy College of Arts and Science (Autonomous), Tiruchengode-15****

A handwritten signature in black ink, appearing to read 'L. Dhatchinamurthy'.

**Mr.L.Dhatchinamurthy**  
Course Coordinator

A handwritten signature in black ink, appearing to read 'K.M.Prabusankarlal'.

**Dr. K.M.Prabusankarlal**  
Head of the Department

A handwritten signature in black ink, appearing to read 'V.Radhakrishnan'.

**Dr.V.Radhakrishnan**  
Principal

Principal  
K.S.Rangasamy College of Arts & Science  
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## ***Certificate***

*This is to certify that **KAMILA JOSE J, (16UTF015)** of **II B.Sc., TFD** has completed a Certificate Course in ***Cell Phone Servicing*** during the academic year ***2017-2018, ODD/EVEN*** semester conducted by the Department of Electronics and Communication, ***K.S.Rangasamy College of Arts and Science (Autonomous), Tiruchengode-15****

A handwritten signature in black ink, appearing to read 'L. Dhatchinamurthy'.

**Mr.L.Dhatchinamurthy**  
Course Coordinator

A handwritten signature in black ink, appearing to read 'K.M.P.'.

**Dr. K.M.Prabusankarlal**  
Head of the Department

A handwritten signature in black ink, appearing to read 'V. Radhakrishnan'.

**Dr.V.Radhakrishnan**  
Principal

PRINCIPAL

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**Certificate**

*This is to certify that MEIYALAGAN R, (16UTF022) of II B.Sc., TFD has completed a Certificate Course in **Cell Phone Servicing** during the academic year **2017-2018, ODD/EVEN** semester conducted by the Department of Electronics and Communication, **K.S.Rangasamy College of Arts and Science (Autonomous), Tiruchengode-15***

Handwritten signature of Mr. L. Dhatchinamurthy in black ink.

**Mr.L.Dhatchinamurthy**  
Course Coordinator

Handwritten signature of Dr. K.M.Prabusankarlal in black ink.

**Dr. K.M.Prabusankarlal**  
Head of the Department

Handwritten signature of Dr. V.Radhakrishnan in black ink.

**Dr.V.Radhakrishnan**  
Principal

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***Certificate***

*This is to certify that **PRABHAKARAN S, (16UTF028)** of **II B.Sc., TFD** has completed a Certificate Course in ***Cell Phone Servicing*** during the academic year ***2017-2018, ODD/EVEN*** semester conducted by the Department of Electronics and Communication, ***K.S.Rangasamy College of Arts and Science (Autonomous), Tiruchengode-15****

A handwritten signature in black ink, appearing to read 'L. Dhatchinamurthy'.

***Mr.L.Dhatchinamurthy***  
*Course Coordinator*

A handwritten signature in black ink, appearing to read 'K.M.P.'.

***Dr. K.M.Prabusankarlal***  
*Head of the Denartment*

A handwritten signature in black ink, appearing to read 'V. Radhakrishnan'.

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

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Tamil Nadu, INDIA  
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