

Add-On Course
Computer Interfaced Physics Experiments

Offered by Department of Physics, Sacred Heart College, Chalakudy

Year: 2019-20

Summary Report

To explore the technical aspects of conventional practical experiments an add on course on **Computer Interfaced Physics Experiments** was conducted by the Department of Physics in the year 2019-20 with minor revision in the syllabus to include the python programming to design the experiment. The time duration for this course was 30 hours. 24 students enrolled and successfully completed the course. Dr. Nijo Varghese and Ms. Fancy K F handled the classes and practical sessions.

The add-on course used ExpEYES(expEriments for Young Engineers & Scientists) kit. ExpEYES is a tool for learning science by exploring and experimenting. It is designed to support a wide range of experiments from school to Postgraduate level. Students were highly benefited from this, as this helped them to clear many of the subject concepts as it was based on “learn by doing” approach. To assess them, a practical examination was conducted. All the students enrolled successfully completed the course and were issued certificates.

Department of Physics

Sacred Heart College, Chalakudy

Minutes of the Staff Meeting held on 04-06-2019

The meeting started at 2.30pm on 4th June 2019 at the department staff room. The head of the department welcomed all members. After the detailed discussions on the items of the circulated agenda, the committee decided to

1. choose the Non Conventional Energy Sources(PH5 D01(1)) as open course and Computational Physics(PH6B13(E1)) as elective course for the B.Sc. program. For M.Sc. elective courses chosen are Experimental Techniques(PHY3E05), Communication Electronics(PHY4E14) and Microprocessors, Microcontrollers and Applications(PHY4E20)

2. assign the class-in-charge duties to

I BSc. Salini Jose, II B.Sc. Nijo Varghese, III B.Sc. Fency K F, IMSc. Sukanya I S, II MSc. Mary Lidiya

3. approve the department time table

4. approve the proposed revision in the syllabus of the Add on Course - Computer Interfaced Physics Experiments

5. approve the department action plan for the year to be submitted to the principal

Members present

1. Dr. Nijo Varghese, Head of the Department

2. Ms. Fency K F

3. Dr. Salini Jose

4. Ms. Sukanya I S

5. Ms. Mary Lidia Simethy

6. Ms. Megha C Kachappilly

Nijo
H O D
Department of physics
Sacred Heart College,
Chalakudy

Fency K F

Salini Jose

Lidia

Megha

The meeting adjourned at 4.00 pm.



Add-On Course
Computer Interfaced Physics Experiments

Offered by Department of Physics, Sacred Heart College, Chalakudy

Year: 2019-20

Date of commencement: 17-06-2019

Course instructors: Dr. Nijo Varghese, Ms. Fancy K F

List of Enrolled Students

Sl No	Name	Class
1	AKSHARA THILAK	III B.Sc Physics
2	AKSHAYA T T	III B.Sc Physics
3	ALPHA BABU	III B.Sc Physics
4	APARNA RAJ M	III B.Sc Physics
5	ARATHY ARAVINDAKSHAN	III B.Sc Physics
6	ATHIRA V U	III B.Sc Physics
7	CHRISTINA PAUL	III B.Sc Physics
8	DEEPTHI K P	III B.Sc Physics
9	DEVIKA P U	III B.Sc Physics
10	FINI RAPHAEL C	III B.Sc Physics
11	GAYATHRI HARIDAS	III B.Sc Physics
12	HITHA V S	III B.Sc Physics
13	JIANNA K JOHNSON	III B.Sc Physics
14	K DISHA DAVID	III B.Sc Physics
15	KEERTHI E S	III B.Sc Physics
16	KRISHNAJA K U	III B.Sc Physics
17	MANJIMA RAJAN V R	III B.Sc Physics
18	MARIYA JAISON	III B.Sc Physics
19	NANDANA P S	III B.Sc Physics
20	NAVYA VASU	III B.Sc Physics
21	SRUTHY C S	III B.Sc Physics
22	AISWARYA P.S	III B.Sc Physics
23	MERIN K JOY	III B.Sc Physics
24	SHAFNA KISHOR	III B.Sc Physics

Experiments

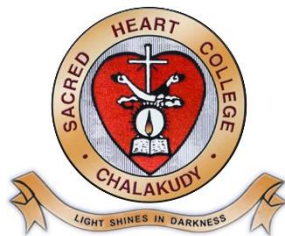
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Admission No.	S. No.	NAME	Days																		
			Eng:	Date	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
	1	AKshana Thilak			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	2	AKshaya TT			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	3	AlPha Babu			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	4	APanna Raj M			X	A	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	5	Anaathy Anavindakshan			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	6	Athina V U			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	7	Chaistina Paul			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	8	Deepthi KP			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	9	Devika PU			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	10	Fini Raphael C			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	11	Gayathri Hanildas.			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	12	Hiba VS			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	13	Jianna K Johnson			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	14	K Disha David			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	15	Keerthi ES			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	16	Krishnaja KU			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	17	Manjima Rajan V R			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	18	Maniya Jaison.			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	19	Nandana PS			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	20	Navya Vasu			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	21	Snuthy CS.			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	22	Aiswarya PS			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	23	Meen K Joy.			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	24	Shafna Kishon.			A	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X



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 Sacred Heart College,
 Chalakudy





Sacred Heart College, Chalakudy

Thrissur, Kerala - 680307, India.

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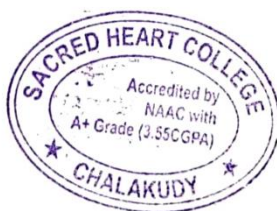
*This is to certify that Ms. **AKSHARA THILAK.***

has successfully completed the

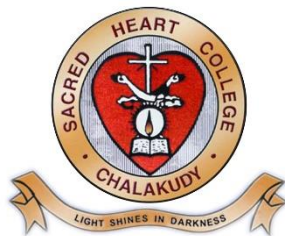
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Dr. Nijo Varghese
Head of the Department
& Course Coordinator



Principal



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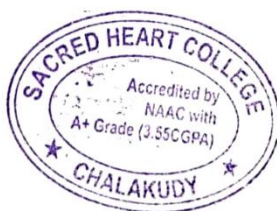
*This is to certify that Ms. **ALPHA BABU***

.has successfully completed the

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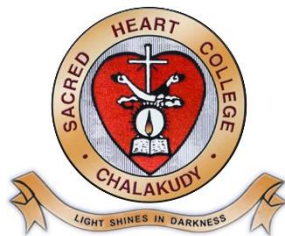
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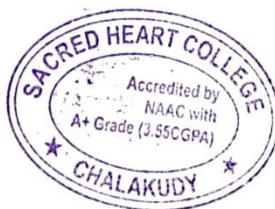
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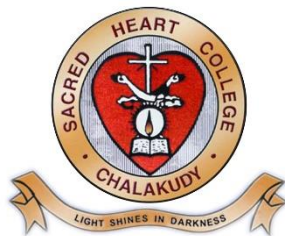
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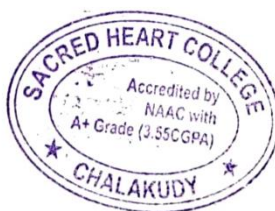
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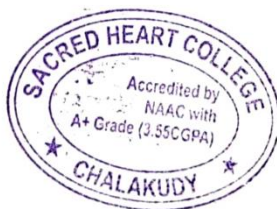
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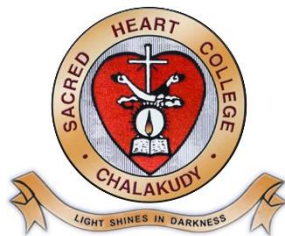
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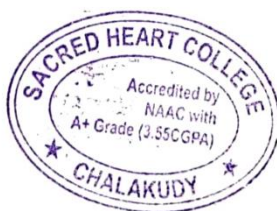
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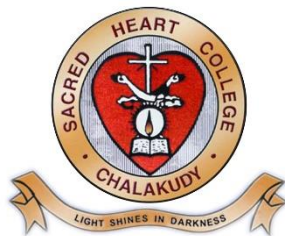
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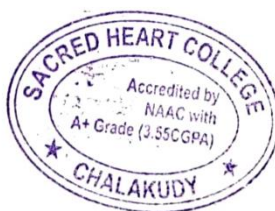
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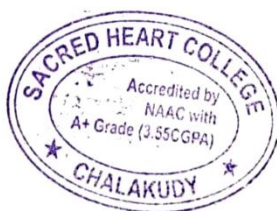
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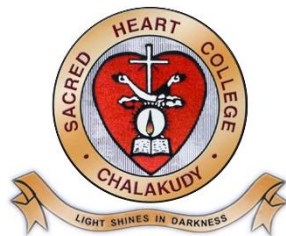
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*This is to certify that Ms **FINI RAPHAEL C**
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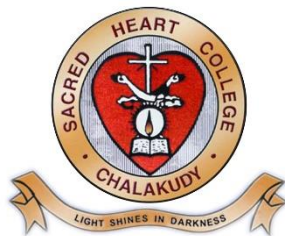
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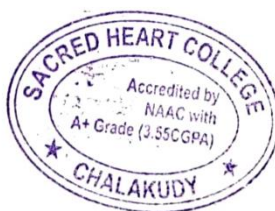
*This is to certify that Ms **HITHA V S***

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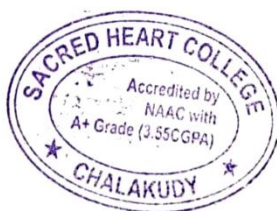
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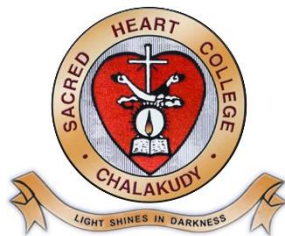
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*This is to certify that Ms **JIANNA K JOHNSON**
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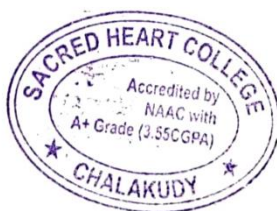
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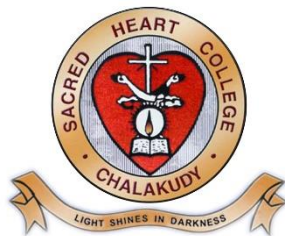
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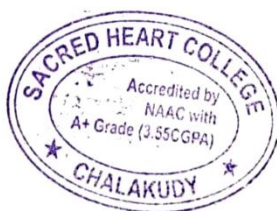
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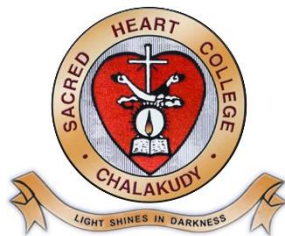
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*This is to certify that Ms **KRISHNAJA K U**
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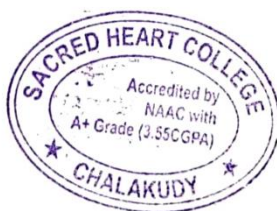
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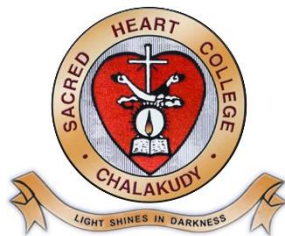
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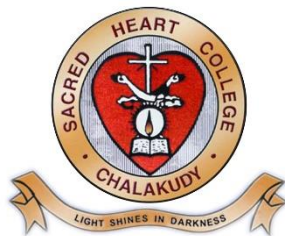
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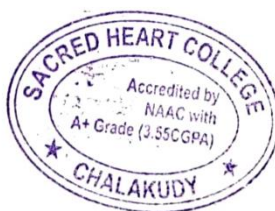
*This is to certify that Ms **SRUTHY C S***

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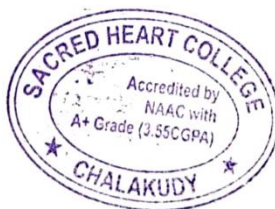
*This is to certify that Ms **AISWARYA P.S***

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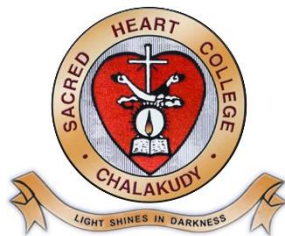
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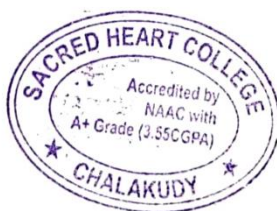
*This is to certify that Ms **MERIN K. JOY***

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CERTIFICATE

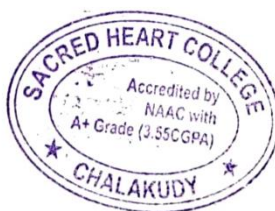
*This is to certify that Ms **SHAFNA KISHOR***

has successfully completed the

Add-On Course on Computer Interfaced Physics Experiments

*offered by the Department of Physics, Sacred Heart College, Chalakudy, in
the academic year 2019-20.*

Dr. Nijo Varghese
Head of the Department
& Course Coordinator



Principal

SACRED HEART COLLEGE, CHALAKUDY
ADD ON COURSE EXAMINATION- MARCH 2020
Computer Interfaced Physics Experiments

Time: 3 Hours

Max Marks: 50

Attempt question marked “X”

1. Draw the IV characteristics of the given diodes and find the ideality factor. (Use three different diodes)
2. Construct a full wave rectifier and measure the ripple factor with and without filter.
3. Plot the output characteristic curve of the given transistor.
4. Calculate the velocity of sound by measuring the pressure variation with distance.
5. Plot the transient response of RC circuits and find the value of the given capacitor.
6. Plot the transient response of LC circuits and find the value of the given inductance.
7. Study the transient response of LCR circuits and calculate the value of resonant frequency.
8. Measure the period of oscillations of a rod pendulum using a light barrier and calculate the value of acceleration due to gravity.
9. Write python code to study the IV characteristics of a diode.
10. Write python code to plot the transient response of a capacitor.