

NALLAMUTHU GOUNDER MAHALINGAM COLLEGE
(AUTONOMOUS)- POLLACHI
DEPARTMENT OF PHYSICS

CIRCULAR

02.02.2023

The department of Physics has planned to conduct a value added programme on PCB and Circuit Designing for UG students of all the departments which commences from 11th February 2023 onwards. Respective HODs are asked to inform the students and the interested students may register their names with the course coordinator Dr. T. Ponraj



Dr. T.E. Manjulavalli, M.Sc., M.Phil., Ph.D.,
Assistant Professor and Head
PG & Research Department of Physics
NGM College (Autonomous)
Pollachi - 642 001, Tamil Nadu.

Head of the Department



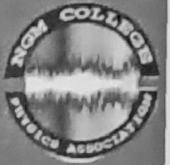
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Principal



NGM COLLEGE

An Autonomous Institution Affiliated to Bharathiar University
Re-Accredited by NAAC & ISO 9001:2015 Credited



PG and Research Department of Physics

Value Added course
on
PCB Designing
for
UG Programme (2022 - 23)

Aim

Provide fundamental knowledge of
PCB

Objective

To ability give knowledge about PCB
building

Course coordinator

Dr. T. Ponraj

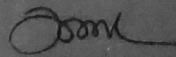
Career Opportunities

PCB engineering
Advanced technology computing
Design Engineer
Research and development Engineer

Course Name : PCB Designing

Duration : 30 hrs

Course fee : Rs. 350


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Programme Code:	BSc PHY	Programme Title:	Bachelor of Science	
Course Code:	20VAD601	Title	Batch:	2020 - 2023
		Value Added Course: PCB and Circuit Design	Semester:	VI
Total Hrs	30		Credits:	Grade

VALUE ADDED PROGRAM

S.no	PCB AND CIRCUIT DESIGN-SYLLABUS	Modules
1	INTRODUCTION TO CIRCUIT DESIGN Fundamental of circuit design – Creating new components – Introduction to Analog circuit design - Introduction to Digital circuit design – Placing symbols and ports - Labeling components – Circuit optimization.	Module 1
2	INTRODUCTION TO PCB DESIGN Definition and Evolution of PCB – Purpose of PCB- Types of PCBs– Creating the blank PCB – Defining a sheet template – Printed circuit technology – PCB construction –PCB Printing and Etching process.	Module 2
3	PROTEUS PCB SCHEMATIC Defining the Board shape & Placement Boundary – Creating a board outline & Placement/routing boundary- Basic concepts of PCB Designing – Schematic capture – From Schematic to PCB – Placing ,editing and connecting parts and electrical symbols – Adding and editing graphics and text.	Module 3
4	PROTEUS PCB EDITOR Creating and editing parts – Preparing to create a net list – Creating a net list – Exporting and importing schematic data – PCB material – Board layers, colors and grids – Defining the Electrical/Mechanical layer – Defining PWR/GND layers.	Module 4
5	DESIGN TRANSFER TO THE PCBA ND DESIGN RULE CHECK Design synchronization with schematic tool – Design transfer using a Net list – Design rules concepts – Design Rule Checking.	Module 5
6	COMPONENT PLACEMENT & SHEIDING Placing components – Finding components for placement – Shielding components – Copper Pour – PCB layout routing and grounding - Routing guidelines.	Module 6

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K. SRINIVASAN, M.C.A.,
Co-ordinator
Curriculum Development Cell (CDC)
NGM College (Autonomous)
Pollachi - 642 001.

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Certificate ID: 23PRPCB01

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ABIJITH V

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COMPLETING THE VALUE ADDED PROGRAMME - PCB AND CIRCUIT DESIGNING (30Hrs)
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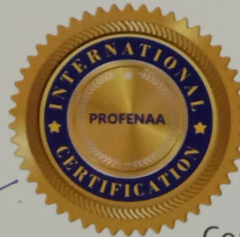
ARUN PRASATH K M

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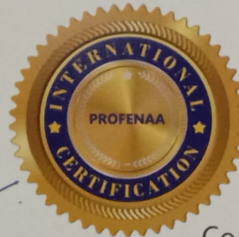
ARUNKUMAR C

OF III B.Sc., PHYSICS (2020-2023), NGM COLLEGE, POLLACHI FOR SUCCESSFULLY
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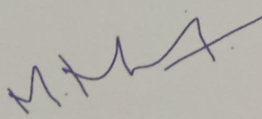


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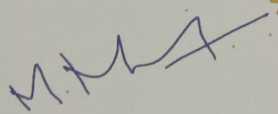
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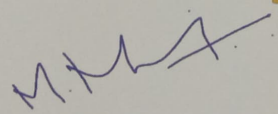


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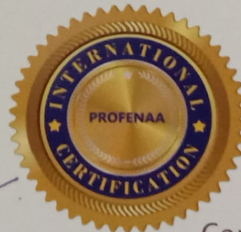
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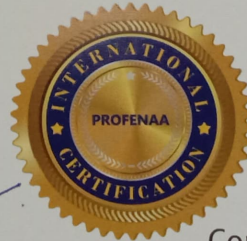
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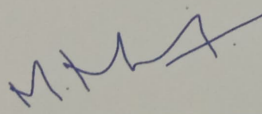
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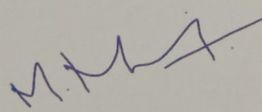
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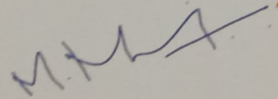
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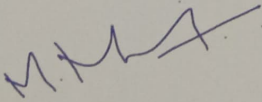
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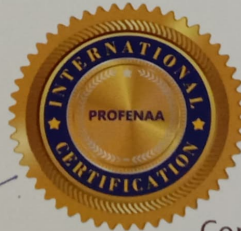
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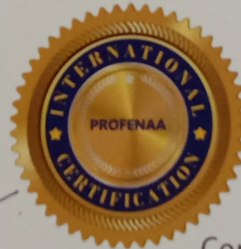
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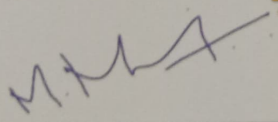
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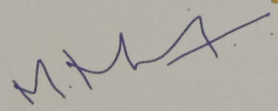


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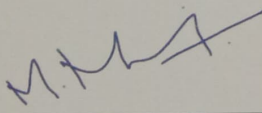
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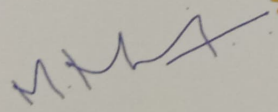


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