To
The Board of Studies,
S.D.Mahila Mahavidyalya,
Narwana.

Sub: Approval for "ARDUINO" Certificate course..

Respected Madam,

We want to start a certified offline course "**ARDUINO**"(30 Hours) in our campus. A Certificate is an education goal for many students who want to improve their visibility among aggressive job applications. Certificates may help to provide students with increased skills and experience. Syllabus of "**ARDUINO**"is attached with this application. Please kindly approve this certified course. We shall be thankful to you for this.

Enclosed: Syllabus of the Certificate Course.

Yours Faithfully

Officiating Principal
S.D. Mahila Mahavidyalya
NARWANA

Ms.Nisha
Asstt. Prof. of Physics

Skill oriented certificate course
Topic- Arduino
SYLLABUS

1. Introduction

1.1. Installation of Arduino
1.2 Basic in Arduino (UNO)
* PIN Configuration
• PIN Function

2. Arduino Working

3. Basic Arduino Programming

3.1 Program structure & Rules
3.2 Using Variables
3.3 Writing First Boguam
3.4 Serial Monitor
3.5 Numeric Data types
3.6 Tent data type
3.7 Array data Type
3.8 Digital Input/Output
3.9 Analog Input/Output
3.10 If ELSE IF statement
3.11 For Loop

4.LED Blink Program

5. MQ3 Alcohol Sensor Interfacing With Arduino Uno

6. Servo Motor Interfacing with Arduino Uno

7. How to use IR sensor with Arduino Uno

8. LCD with Arduino Uno.

Skill Oriented Certificate Course Paper Pattern
Topic- Arduino
Theory

Time - 1:00 hour

M.M-20

Note:- Paper Setter will set 5 question in all. Question No. 1 Comprising of 4 short types Questions carrying 1 Marks each is compulsory. It Covers the entire syllabus. Candidate is required to attempt all questions carrying 4 marks each.

"Practicals"

Time- 1:00 hour

MM-20

Note-Do any one experiment (Program) from the five (Program)

* The Practical examination will be held in a Single Session of 1 hour.

Distribution of Marks:

Experiments- 15 marks

Viva Voice- 05 marks

Total- 20 marks

Ms. Nisha
Asst. Prof. of Physics

Ms. Mahak
Asst. Prof. of Physics

Subject: Approval for **"ARDUINO"** by the Board of Studies

Dear Ms. Nisha & Mahak,

I am pleased to inform you that after careful consideration and review by the Board of Studies, has approved **"ARDUINO"** which spans over 30+ hours of instruction.

This course has been evaluated thoroughly to ensure its alignment with our institution's academic standards and objectives. We believe that it will significantly contribute to the academic enrichment of our students and align with our commitment to providing high-quality education.

Thank you for your interest and support in our academic endeavors.

Yours sincerely,

Dr. Nayandeep	Dr. Anita Chhabra	Dr. Shallu Sachdeva	Suman Garg	Nisha
Assoc. Prof. in Eco.	Asst. Prof. in Hindi	Asst. Prof. in Hist.	Asst. Prof. in Eng.	Asst. Prof. in Physics
Convener	Member	Member	Member	Member

Principal
S.D. Mahila Mahavidyalaya
Narwana

Ph. No. 01684-240161

S D MAHILA MAHAVIDYALYA

NARWANA-126116 (JIND) HARYANA

Dated:- 28/07/22

Notice

बी एस सी फाइनल ईयर की सभी छात्राओं को सूचित किया जाता है कि 01 ऑक्टूबर 2022 से महाविद्यालय में ARDUINO पर 30 घंटे का सर्टिफिकेट कोर्स करवाया जाएगा और कोर्स के अंत में परीक्षा ली जाएगी और छात्राओं को प्रमाण पत्र दिए जाएंगे।

Officiating Principal
S.D. Mahila Mahavidyalya
NARWANA

S.D MAHILA MAHAVIDYALAYA NARWANA

DEPARTMENT OF SCIENCE

PROUDLY OFFERS

ADD ON CERTIFICATE COURSE IN

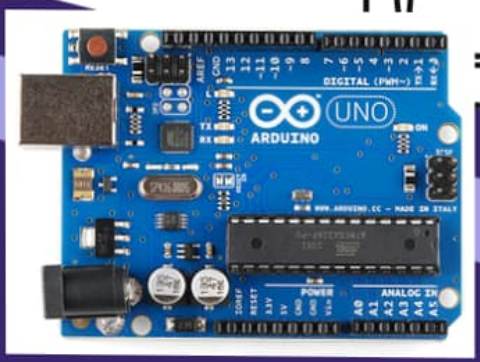
ARDUINO

STARTING FROM 1ST OCTOBER 2022

DURATION - 30 HOURS

MODE- OFFLINE

- Understanding the basics of ArduinoOverview of Arduino boards and components
- Basics of electronic components: resistors, capacitors, LEDs, etc
- Interfacing with sensors: light, temperature, motion, etc.
- Advanced Arduino Projects



MS. NISHA
CONVENOR

MS. MAHAK
CO-CONVENOR

DR. ANJANA LOHAN
PRINCIPAL

Skill Oriented Course on Arduino

S.D. Mahila Mahavidyalya, Narwana

Participant Attendance Sheet :- B.Sc. IIIrd

from 01/10/2022 to 19/11/2022

Session... 2022-2023 (Oct. to Nov.)

Sr.No.	Name	Roll No.	Octoleer																		Novemleer										Total	Signature
			01	03	04	06	07	08	10	12	18	14	15	17	18	19	20	21	27	28	29	31	04	07	11	12	14	15	16	17	18	19		
1	Gurpreet	12019101100 1	P	P	P	P	P	P	P	-	P	P	P	P	P	P	P		P	P	P	P	P	P	P	P	P	P	P		P	P	27	Gurpreet
2	Ravina	12019101500 1	P	-	P	P	P		P	P	P	P	P	P	P	P	P	P	P		P	P	P	P	P	P		P	P	P	P	P	26	Ravina
3	Preeti	02	P	P	P	P		P	P	P	P		P	P	P	P	P	P	P	P		P	P	P	P	P	P	P	P	P	P	P	27	Preeti
4	Jyoti	03	P	P	P	P	P	P		P	P	P	P	P	P	P	P		P	P	P	P	P	P	P	P	P	P	P	P	P		27	Jyoti
5	Sakeena	05	P	-	P	P	P	P	P	-	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P		P	P	P	P	P	P	27	Sakeena
6	Nisha Rani	06	P	P	P		P	P	P	P	P	P		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	28	Nisha
7	Ankita Kumari	07	P	P	P	P	P		P	P	P	P	P	P	P	P	P	P		P	P	P	P	P	P	P	P	P	P	P	P	P	28	Ankita
8	Sumita	08	P	P		P	P	P	P		P	P	P	P	P	P	P	P	P		P	P	P	P	P	P	P	P		P	P		26	Sumita
9	Anjali	09	P	P	P	P	P		P	P	P		P	P	P	P	P	P	P		P	P	P	P	P	P	P	P	P	P	P	P	27	Anjali
10	Alish	10		P	P	P	P	P	P	P		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P		P	P		P	P	26	Alish
11	Pooja	12	P	P	P	P	P		P	P	P	P	P		P	P	P	P	P		P	P	P	P	P	P	P	P	P	P	P	P	27	Pooja
12	Balwinder	13	P	P	P		P	P	P	P	P		P	P	P	P	P	P	P	P	P	P	P	P		P	P	P	P	P	P	P	27	Balwinder
13	Diksha	14		P	P	P		P	P	P	P	P	P		P	P	P	P		P	P	P		P	P	P	P	P	P	P	P		25	Diksha
14	Pinku	15	P	P	P		P	P		P	P	P	P	P	P		P	P	P	P	P	P	P	P		P	P	P	P	P	P	P	26	Pinku
15	Khushi	16		P	P	P	P	P	P	P	P		P	P	P	P	P	P		P	P	P	P	P	P	P	P	P	P	P	P	P	27	Khushi
16	Priya	17	P			P	P	P		P	P	P	P	P	P		P	P	P	P	P	P	P	P		P	P	P	P	P		P	25	Priya
17	Muskan	18	P	P		P	P	P	P	P	P	P	P	P	P	P		P	P		P	P	P	P	P	P	P		P	P	P	P	26	Muskan
18	Amandeep	19	P	P	P		P		P	P	P	P		P	P	P	P	P	P	P	P	P		P	P	P	P	P	P	P	P	P	26	Aman
19	Anju	21	P	P	P	P	P	P	P		P	P	P		P	P	P	P		P	P	P		P	P	P	P	P	P	P	P		26	Anju
20	Vandana	23	P	P		P	P	P	P	P	P		P	P	P	P	P	P	P	P	P	P		P	P	P	P	P	P		P	P	27	Vandana
21	Tamanna	23	P	P	P		P	P	P	P	P	P	P	P		P	P		P	P	P	P	P	P	P	P	P	P	P	P	P		26	Tamanna

GPS Map Camera
Narwana, Haryana, India
H4V5+JG7, Bir Bal Nagar, Narwana, Narwana Rural, Haryana 126116, India
Lat 29.59414°
Long 76.109174°
12/10/22 11:53 AM GMT +05:30
Google
12:02 pm

GPS Map Camera
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Long 76.109174°
28/10/22 11:56 AM GMT +05:30
Google
12:01 pm

Skill oriented certificate course
TOPIC- ARDUINO
Question Paper Theory

MM-20 Time-1 hour

Question 1 have 4 question carrying 1 marks each. Another 5 questions have four marks. All Candidates are required to attempt any four question from 2 to 6.

1 (a) What are the 28 pins on Arduino?
(b) Why is it called Arduino?
(c) Which language is used in Arduino?
(d) Who is the developer of Arduino? 1x4= 4

Q2. Draw and explain the circuit diagram af Arduino board?

Q3. What are the three main parts of Arduino program?

Q4. What are some key components of an Arduino Project?

Q5. How can you create an LED blink program for Arduino?

Q6. How can you create a servo Motor program for Arduino? 4x4=16

S.D. MAHILA MAHAVIDYALYA, NARWANA

Session - 2022-23

Roll No. 120191011010 Class B.Sc. final Sec. ..... Subject Physics

Date..... Signature Alish

16/20 Nisha

Q1 (a)

Ans=) There are a total of 28 pins. There are 14 digital pins including transmission and receiver pins. There are 6 analog pins, 3 ground pins and 1 Analog Reference pin, 1 Reset pin, 1 reset pin, 1 Vin pin, 15 V pin, 1 3.3V pin.

(b)

Ans=) Arduino :-

The name Arduino comes from a bar in Ivorea, Italy, where some of the project's founders used to meet. It was named after Arduin of Ivrea, who was the margrave of the March of Ivrea. He was the king of Italy from 1002 to 1014.

(c)

Ans=) Arduino uses a variant of the C++ programming language.

(d)

Ans=) A brief History. In 2005, building upon the work of Hern Hernando Barragan, Massimo Banzi and David Cuartielles created Arduino.

S.D. MAHILA MAHAVIDYALYA, NARWANA

Session- 2022-2023

Roll No. 12019105001 Class B.Sc Final Sec. ..... Subject Physics

Date..... Signature Ravina

20/20 Nisha

Que 1(a)

Ans => There are 14 digital pins including RX and TX pins. There are 3 ground pins, 6 analog pins, 1 Reset pin, 1 3.3 V pin and 1 5 V pin and 1 Analog reference (AREF) pin. Thus, there are total 28 pins.

Que 1(b)

Ans => The name Arduino comes from a bar in Ivrea, Italy where some of the project's founder used to meet. The bar was named Arduino of Ivrea who are the margrava of the march of Ivrea and king of Italy from 1002 to 1014.

Que 1(c)

Ans => Arduino uses a variant of the C++ programming language.

Que 1(d)

Ans 1(d) Massimo Banzi and David Cuartielles is known as the developer of arduino.

offered by ... 01 October ... sucessfully

Result of Certificate Course

Class - B.Sc IIIrd Year

Session - 2022-2023

Topic - Arduino

S.No.	Roll No.	Name	Theory (20)	Practical (20)	Total (40)
1	12091011001	Gurpreet	17	15	32
2	12019101 5001	Ravina	20	17	37
3	12019101 5002	Preeti	14	19	33
4	12019101 5003	Jyoti	17	20	37
5	12019101 5005	Sakeena	15	15	30
6	12019101 5006	Nisha Rani	15	17	32
7	12019101 5007	Ankita	19	18	37
8	12019101 5008	Sumita	14	17	31
9	12019101 5009	Anjali	17	18	35
10	12019101 5010	Alish	16	18	34
11	12019101 5012	Pooja	14	17	31
12	12019101 5013	Balwinder	15	15	30
13	12019101 5014	Diksha	19	12	31
14	12019101 5015	Pinku	16	14	30
15	12019101 5016	Khushi	13	19	31
16	12019101 5017	Priya	19	13	32
17	12019101 5018	Muskan	17	18	35
18	12019101 5019	Amandeep	15	19	34
19	12019101 5021	Anju	18	15	33
20	12019101 5022	Vandana	14	16	30
21	12019101 5023	Tamanna	17	15	32

Present	21
Absent	0
Total	21

Overview

Skill Oriented Course on ARDUINO
Session:- 2022-23

The Certificate Course on ARDUINO Offered by the Department of Physics, Mrs. Nisha S.D.MM.V Narwana has conducted from 01 October 2022 to 19 November, 2022 with a batch of 21 students and 21 Students sucessfully completed the course. The students gain basic knowledge of ARDUINO programming. During this certificate Course Mrs Nisha and Mahak gave the mechanical skill like how to use alcohol sensor with Arduino UNO, how to use IR sensor with Arduino, how to use servo motor witb Arduino etc.
Principal Dr Anjana Lohan, Dr Nayandeep, Dr Shalu Sachdeva Neha, Seema, Yashika were present at this event.

Learning Outcomes

* Gain knowledge of Arduino (UNO)

* Installation af Arduino

* Basic knowledge of Arduino programming

* To use MQ3 alcohol sensor with Arduino Uno

* To Use IR Sensor with Arduino Uno

* To use Servo motor with Arduino UNO

- Develop mechanical skill

All students Successfully completed this Course. By gaining knowledge of this course, they develop their technical skills by making antisleep alarm and Radar. They also become self independent & will start their own start up in future to make earning on their own.

Nisha

S D Mahila Mahavidyalya, Narwana

Student Feedback Performa

Name	Preeti
Class	B.Sc III Yr
Roll Number	12019015002
Email Address	
Session	2022-2023
Phone No.	

	Excellent	Very Good	Good	Average
The content was easy to understand.		✓		
It was well organised.	✓			
It engaged the participants in learning.			✓	
The Teacher was able to explain the activity.				
The level of communication of teacher with students	✓		✓	
The event made progress in accomplishing its goal.			✓	
I found this event experience to be worthwhile.				✓

Suggesion

महाविद्यालय द्वारा प्रदान किया गया यह कोर्स अत्यंत लाभदायक रहा। इससे हम चीज़ों को बाहर से खरीदने की बजाय खुद ही बना सकते हैं। अतः समयनुसार ये कोर्स चलते रहने चाहिए।

Preeti
Signature

Date

S D Mahila Mahavidyalya, Narwana

Student Feedback Performa

Name	Ankita
Class	B.Sc III rd
Roll Number	12019011500 7
Email Address	
Session	2022-2023
Phone No.	

	Excellent	Very Good	Good	Average
The content was easy to understand.	✓			
It was well organised.		✓		
It engaged the participants in learning.		✓		
The Teacher was able to explain the activity.	✓			
The level of communication of teacher with students			✓	
The event made progress in accomplishing its goal.		✓		
I found this event experience to be worthwhile.	✓			

Suggesion

जो courses महाविद्यालय में आयोजित किए गए थे उनसे हमें New ideas मिलें जिन्हें हम अपने भविष्य के कार्यों में Apply कर सकते हैं। ऐसे courses होते रहने चाहिए।

Ankita

Signature

Date

S D Mahila Mahavidyalya, Narwana

Student Feedback Performa

Name	Ravina
Class	B.Sc III Yr
Roll Number	12019105001
Email Address	
Session	2022-2023
Phone No.	

	Excellent	Very Good	Good	Average
The content was easy to understand.		✓		
It was well organised.	✓			
It engaged the participants in learning.			✓	
The Teacher was able to explain the activity.	✓			
The level of communication of teacher with students		✓		
The event made progress in accomplishing its goal.			✓	
I found this event experience to be worthwhile.	✓			

Suggesion

सभी courses, जो आयोजित किए गए थे उनसे हमें बहुत कुछ सीखने को मिला। आशा करते हैं कि महाविद्यालय आगे में इन courses को आयोजित करने में अग्रसर हो।

Ravina

Signature

Date

S D Mahila Mahavidyalya, Narwana

Student Feedback Performa

Name	Pinku
Class	B.Sc III yrd
Roll Number	12019011015
Email Address	
Session	2022-2023
Phone No.	

	Excellent	Very Good	Good	Average
The content was easy to understand.		✓		
It was well organised.			✓	
It engaged the participants in learning.	✓			
The Teacher was able to explain the activity.				✓
The level of communication of teacher with students	✓			
The event made progress in accomplishing its goal.		✓		
I found this event experience to be worthwhile.			✓	

Suggesion

महाविद्यालय में आयोजित किए गए सभी courses अत्यंत प्रेरणादायक थे। इससे हमें बहुत कुछ सीखने को मिला जो भविष्य में काम आएंगे। आशा करते हैं भविष्य में भी ऐसे courses हो

Pinku
Signature

Date

S.D. MAHILA MAHAVIDYALYA

NARWANA (JIND)

(AFFILIATED TO CH. RANBIR SINGH UNIVERSITY, JIND)

Certificate of Participation

This is to certify that Miss **MUSKAN** of **Class B.Sc. III** Participated in **ARDUINO Certificate Course (Session 2022-23)** Course for a duration of 30 hours organized in College Campus by Science Department.

Convener | Co-Convener | Principal

S.D. MAHILA MAHAVIDYALYA

NARWANA (JIND)

(AFFILIATED TO CH. RANBIR SINGH UNIVERSITY, JIND)

Certificate of Participation

This is to certify that Miss **DIKSHA** of **Class B.Sc. III** Participated in **ARDUINO Certificate Course (Session 2022-23)** Course for a duration of 30 hours organized in College Campus by Science Department.

Convener

Nisha

Co-Convener

Principal

S.D. MAHILA MAHAVIDYALYA

NARWANA (JIND)

(AFFILIATED TO CH. RANBIR SINGH UNIVERSITY, JIND)

Certificate of Participation

This is to certify that Miss **SUMITA** of **Class B.Sc. III** Participated in **ARDUINO Certificate Course (Session 2022-23)** Course for a duration of 30 hours organized in College Campus by Science Department.

Convener

Nisha

Co-Convener

Principal

S.D. MAHILA MAHAVIDYALYA

NARWANA (JIND)

(AFFILIATED TO CH. RANBIR SINGH UNIVERSITY, JIND)

Certificate of Participation

This is to certify that Miss **PREETI** of **Class B.Sc. III** Participated in **ARDUINO Certificate Course (Session 2022-23)** Course for a duration of 30 hours organized in College Campus by Science Department.

Convener

Co-Convener

Principal