

**Government of West Bengal**  
**Department of Science & Technology and Biotechnology (DSTBT)**  
**Vigyan Chetana Bhavan, Block-DD, Plot-26/B,**  
**Sector-I Salt Lake, Kolkata-700064**

**Application Format for Science Popularization Programme**

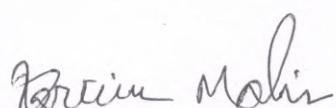
1. Programme Type (ref SN 11 of the Memorandum): **Workshop, Organized by college.**
2. Title of the proposed Programme: ***A five-day hands-on workshop on electronics prototyping and scientific exploration using Arduino for undergraduate students.***
3. Target Group (Faculty, Teacher, Research Scholar, School/College/ University Student, Community): **College students.**
4. Duration (days): Five; Tentative Dates of the proposed Programme: ***19<sup>th</sup> May, 2026 to 23<sup>rd</sup> May, 2026.***
5. Aims, Objectives and Details of the Programme (attach separate sheet, if necessary):  
The details of the program is provided in **Annexure-III.**
6. Name, Designation, Postal Address, mobile no. and e-mail id of the (only one) Programme Co-ordinator (PC) (attach separate sheet, if necessary):  
**Dr. Kartick Malik,  
Assistant Professor, Vidyasagar Metropolitan College  
39 Sankar Ghosh Lane, Kolkata-700006  
Mobile no.: 8584821557, e-mail: kartick.phy09@gmail.com.**
7. Legal status of the Institute (School/College/ University/ Institute/ Polytechnic/ ITI/ Autonomous body/ registered NGO/ Trust etc.): **Govt. aided College**
8. Date wise detail Programme Schedule (attach separate sheet, if necessary): The detailed schedule is provided in **Annexure-III.**
9. Collaborating Institutions/ Organizations, if any, with their specific contribution: NA
10. Expected number of participants and list of Resource Persons/ Invited Speakers: ***Fifty and list of resource persons are mentioned in the Annexure-III.***
11. Give details of the grant received from DSTBT in last three Financial Years, if any alongwith the date of submission of UC, Audited SoE, Report etc.: NA
12. Name and address of the authority to whom the allotted amount is to be credited (if sanctioned) who will also be responsible for submitting the UC, audited SoE, Programme Completion Report, Feedback, Still and Video photographs etc. of the grant:  
**Dr. Arghya Sarkar, Principal, Vidyasagar Metropolitan College, Kolkata-700006.**
13. Total Estimated Expenditure (A)/ Organisation's contribution (B)/ Contribution from any other sources (C) / Grant expected from DSTBT(D):  
**D : ₹150000 = (A: ₹1,75,000/- – B: ₹25000/- – C: ₹0 )**  
(provide detail Budget break-up as per Annexure-I and Bank details as per Annexure-II):

**Check List (put tick) of attachments to be submitted with the application**

- Proposed Total Budget with break-up (Annexure-I) and Bank Details (Annexure-II) in Institute/ Organization's letter head: **YES/NO**
- For registered NGO/ Trust, filled in Application Format recommended by the appropriate Recommending Authority, viz., Jt.BDO/ BDO/ SDO/ DM/ Executive Officer- Municipality/ Commissioner-Municipal Corporation as the case may be (where the programme is actually going to be held): **YES/NO**
- For registered NGO/ Trust, attested copies of the registration certificate, latest renewal certificate, Memorandum and Rules & Regulations of the Organization, last three years Audited Statement of Accounts, Annual Reports etc., List of recommended beneficiaries: **YES/NO**

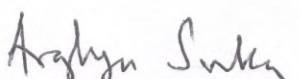
**DECLARATION**

Certified that the details furnished in the filled in format are correct to the best of our knowledge & belief and that the amount of financial assistance, if sanctioned, will be utilized for the purpose for which it is granted within the time as prescribed by DSTBT. We also undertake to abide by the General Guidelines and Terms & Condition prescribed by DSTBT and provide due coverage to DSTBT during the Programme and publications/ print and electronic media made from the Programme in future. We also declare that within one month after completion of the Programme we shall submit the Utilisation Certificate (UC), Audited Statement of Expenditure (Audited-SoE), Programme Completion Report, Feedbacks from the Participants, still and video photographs etc.



**Signature:**  
**Date: 15.12.2025**

**Name of Programme Coordinator:**  
**Dr. Kartick Malik**  
**Designation: Assistant Professor**  
**Address:**



**Principal**  
**Vidyasagar Metropolitan College**  
**Kolkata-700 006**

**Signature:**  
**Date: 15.12.2025**

**Name of Head of the Institution:**  
**Dr. Arghya Sarkar**  
**Designation: Principal**  
**Address:**

**(Office Seal)**



**RECOMMENDATION**  
(only for registered NGO/ Trust)

Certified that the said Organisation is reputed in this field and I/ we recommend the said proposal for getting grant-in-aid from DSTBT, Govt of West Bengal for the benefit of the local College/ University Students/ Community etc.

**(Office Seal)**

**Signature: NA**  
**Date: NA**  
**Name of Recommending Authority:**  
**Designation:**  
**Address:**



**Annexure-I**

**Proposed Total Budget with break-ups**

**A. Total Estimated Expenditure**

| <b>Sl. No.</b>                      | <b>Items required with justification and rate</b> | <b>Total Expenditure (A) (₹)</b> |
|-------------------------------------|---|----------------------------------|
| 1.                                  | Honorarium to Resource Persons/ Experts           | 30000/-                          |
| 2.                                  | Study materials, Consumables expenses             | 25000/-                          |
| 3.                                  | AC Hall rent & computer Laboratory                | 25000/-                          |
| 4.                                  | Publicity materials                               | 5000/-                           |
| 5.                                  | Travel expenses                                   | -                                |
| 6.                                  | T.A. to the external Resource Persons/ Experts    | 15000/-                          |
| 7.                                  | Documentation expenses including audio-visual     | 12000/-                          |
| 8.                                  | Light refreshments                                | 48000/-                          |
| 9.                                  | Auditors' fee                                     | 5000/-                           |
| 10.                                 | Other expenses, (certificates, prize)             | 10000/-                          |
| <b>Grand Total Expenditure (₹):</b> |   | <b>1,75,000/-</b>                |

**Please mention:**

**B. Institution/ Organization Contribution\* in ₹25000/-**

**C. Contribution from any other sources (with name & Address) in ₹0**

**D. Grant expected from DSTBT (₹) = (A-B-C)=₹1,50,000/-**

*Argyha Sekhar*

*Principal*  
**Vidyasagar Metropolitan College**  
 Kolkata-700 006

**Signature of Authorised Personnel with seal**

**If C= 0**

**Undertaking: This organization/ institution is not receiving any kind of financial assistance from any other sources**

*Argyha Sekhar*

*Principal*  
**Vidyasagar Metropolitan College**  
 Kolkata-700 006

**Signature of Authorised Personnel with seal**

\*At least 10% of the total budget contribution from the Institute/ Organization is desirable



**Annexure-II**

**Bank details of the Applicant Organisation**

|  |   |
|--|---|
| Name of the Organization   | Vidyasagar Metropolitan College   |
| Bank Account number & name of the Account holder/ Organization       | A/C No.: 10309241160<br>VIDYASAGAR METROPOLITAN COLLEGE                       |
| Type of Account (Savings or Current A/c)                             | Savings A/c   |
| Name of the Bank   | STATE BANK OF INDIA   |
| Name of the Branch with Branch address                               | Srimani Market<br>Vivekananda Road<br>206/1/F Bidhan Sarani<br>Kolkata-700006 |
| IFSC of the Branch   | SBIN0031539   |
| Mobile Number of the Programme Coordinator/ Head of the Organization | 8584821557/9433159354   |
| PAN / TAN of the Account holder/ Organization                        | AAAV3600L   |

*Argyaprakash Sekhon*  
*Principal*  
*Vidyasagar Metropolitan College*  
*Kolkata-700 006*

**Signature of Authorised Personnel with seal**



### Annexure-III

#### ***A five-day hands-on workshop on electronics prototyping and scientific exploration using Arduino for undergraduate students***

ARDUINO may be considered as an integration of hardware and software, designed to make electronics accessible to everyone for experience. The wide and ease of ARDUINO in various fields, viz., Education and learning, Scientific Instrumentation & Data Logging, Home Automation (IOT) and Smart Systems, Art, Design, and Interactive Installations (Physical Computing), Industrial and Commercial Prototyping, etc., along with a low-cost and open-source microcontroller platform, drawing attention of the researcher and educationist. The national priorities for STEM (Science, Technology, Engineering, and Mathematics), encouraging interdisciplinary learning, fostering innovation, and the idea of laboratory to prototyping, encourage the universities and engineering institutes to introduce a glimpse of ARDUINO in the syllabus. This workshop aims to demystify the Arduino microcontroller through hands-on work in the laboratory. This workshop aims to engage students through hands-on training and promote a culture of scientific temperament. Further, through structured training and project-oriented activities, students will acquire a preliminary understanding of product design through collaborative teamwork.

#### **➤ Topics to be covered**

- Introduction and Architecture of ARDUINO
- Basic details, circuit design and programming fundamentals
- Interfacing of I/O Devices and different Sensors with ARDUINO System
- Hands-on training for sample experiments
- Seven-segment display with different dimensions
- Prototyping as a project work



## ➤ **The Importance of Hands-on Learning through Arduino**

The newly adopted education system by the Govt. of West Bengal and other states of India, the **New Education Policy 2020**, emphasises experiential and project-based learning in the field of interdisciplinary education. ARDUINO is an excellent kit that enables the development of low-cost laboratory experiments and problem-solving beyond classroom-based theoretical learning. A workshop employing ARDUINO, directly contributes to popularization of science by simplifying the complex scientific principles, helping students to develop curiosity and a scientific temper. The programme perfectly aligns with the recent trends and targets to build a new India by:

- ✓ Promoting scientific temper and rational thinking
- ✓ Encouraging experiential and project-based learning
- ✓ Providing exposure to emerging technologies at the undergraduate level
- ✓ Supporting innovation, skill development, and research orientation
- ✓ Contributing to popular science dissemination initiatives

## ➤ **Objective of the Workshop**

- The primary goal of the workshop is to popularize science through the demonstration of how to design, build, and analyze scientific experiments and instruments using digital tools and open-source software.
- Plausible prototyping, using low-cost ARDUINO
- Skill development for employability through hands-on experience with embedded systems, sensors, and robotics.
- Encourage students through innovation, scientific inquiry, and enhancing problem -solving skills.
- To popularize science through affordable, open-source and accessible experimental tools
- Learning teamwork through the challenge to prepare a prototype by the group

## ➤ **Expected Outcomes and Impact:**

- Students will **gain exposure** to Arduino, enabling them to **develop functional prototypes** through teamwork.
- Participants will improve their scientific understanding and develop **practical experimental skills** through programming in the Arduino environment.



- The program will **demystify scientific instrumentation** and **increase awareness** of how to utilize low-cost scientific tools and technologies.
- **The workshop will foster an innovative culture among the students.**
- The workshop will **make scientific learning both popular and interesting.**

**Program Schedule (Tentative)**

| <b>Day</b> | <b>Date</b> | <b>Session-1</b>   |  | <b>Session-2</b>   |
|------------|-------------|--|--|--|
|            |             | <b>10.00 AM-11.30 AM</b>   | <b>11.30 AM – 1.00 PM</b>  | <b>2.00 PM to 5PM)</b>   |
| 1          | 19.06.2026  | Inauguration   | Introduction of ARDUINO<br><br>(Theory)  | <ol style="list-style-type: none"> <li>1. Architecture of ARDUINO</li> <li>2. Programming Fundamentals</li> <li>3. Basic details and Circuit Design (Hands-on training)</li> </ol> |
| 2          | 20.06.2026  | Understanding Sensors and Actuators (Theory)   | Hands-on training (Sample experiments)   | <ol style="list-style-type: none"> <li>1. Digital and Analog Signals, Serial Communications</li> <li>2. Hands-on training (Sample experiments)</li> </ol>                          |
| 3          | 21.06.2026  | <ol style="list-style-type: none"> <li>1. Seven segment Display with different dimensions</li> <li>2. Hands-on training</li> </ol> | <ol style="list-style-type: none"> <li>1. Seven segment Display with different dimensions</li> <li>2. Hands-on training</li> </ol> | Student Project Work   |
| 4          | 22.06.2026  | Student Project Work   |  |  |
| 5          | 23.06.2026  | Presentation & Evaluation of Student Projects  |  | <ol style="list-style-type: none"> <li>1. Valedictory Session</li> <li>2. Certificate distribution</li> <li>3. Prize distribution</li> </ol>                                       |



- **Targeted Participants:** B.Sc. (Honours) and B.Sc. (Multidisciplinary) students of Semester III onwards
- **Resource Persons (Tentative):**
  - **Dr. Subhamoy Ghatak**  
**Assistant Professor**  
**Vidyasagar College**  
**Kolkata-700006**
  - **Dr. Barnali Kundu**  
**Guru Nanak Institute of Technology**  
**West Bengal 700110**
  - **Mr. Suman Das**  
**Asst. Prof. Department of Electrical Engineering,**  
**MCKV Institute of Engineering,**  
**West Bengal-711204**
  - **Dr. Arindam Midya**  
**Assistant Professor**  
**City College, Kolkata-700009**

*Arghya Sekhar*  
*Principal*  
**Vidyasagar Metropolitan College**  
**Kolkata-700 006**