DEPARTMENT OF ELECTRONICS

LIST OF ADD-ON COURSES

1	**ANDROID PHONE CONTROLLED ROBOT USING 8051 MICROCONTROLLER AND BLUETOOTH MODULE**
2	**ONE MONTH PYTHON SUMMER TRAINING PROGRAM**

Add on Course "Android Phone controlled robot using 8051 microcontrollers and Bluetooth module"

2019-2020

By

Department of Electronics

Vivekananda College

IQAC recommendation

IQAC, Vivekananda College, Thakurpukur, met on 03 May 2019, to envisage, formulate, and design Add-On Courses, beyond the prescribed Curriculum.

A. It was decided that all the departments of Humanities, Science and Commerce would design and formulate 30 hour Add-On Courses for 2019-20 Academic calendar, as per UGC guidelines.

B. It was decided that the Departments would be free to choose the Courses based on their (subject) relevance, practicality, and feasibility.

C. It was decided that the Departments would have a Course Coordinator, who would design the Course and Course material in consultation with all teachers of the Department.

D. It was decided that each Department would design its format.

E. It was decided that the Departments would be encouraged to use and utilize their resources while formulating the Add-On Courses, rather than relying on Outsourcing.

F. IQAC would send its recommendations to the Principal/TIC for perusal and implementation.

03/5/19

Co-ordinator
I Q A C
Vivekananda College
Kolkata-700 063

Ref. No. ....

Date **08·5·19**

Notice

It is hereby notified that Vivekananda College, Thakurpukur, will offer Add-On Courses to All Honours students for the Academic year 2019-20.

Each Department will offer an Add-On Course as per UGC guidelines. Each Course will be structured & overseen by a Course Coordinator, selected from the respective Department. Departmental Heads are requested to take up the matter on an urgent basis.

08·5·19

Principal
Vivekananda College
Thakurpukur Kol-63

Department of Electronic Science

Vivekananda College
Thakurpukur, Kol-63

NOTICE

Date-30.08.2019

Add on Course "Android Phone controlled robot using 8051 microcontrollers and Bluetooth module", Department of Electronics, Vivekananda College

A departmental meeting will be held on 03.09.2019 at 2 P.M to discuss the following agenda. All teachers are requested to kindly attend the meeting.

✓ Agenda of the meeting:

i) Introduction of Add-on course on "Android Phone controlled robot using 8051 microcontrollers and Bluetooth module" UG Sem-II, UG Sem-IV students and 1+1+1 3rd year students.
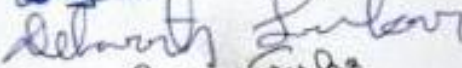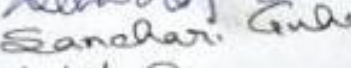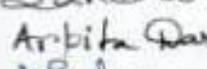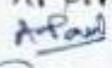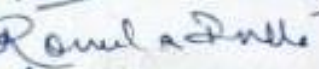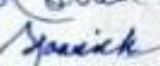
By order

Alak Halder

HOD

Department of Electronic Science
Vivekananda College
Thakurpukur, Kol-63

Add on Course Title: Android Phone controlled robot using 8051 microcontrollers and Bluetooth module.

Resolution of the departmental meeting held on 03.09.2019

Teachers and staff present in the meeting:

Prof. Alak Halder
Prof. Debarati Sarkar
Prof. Sanchari Guha
Prof. Arpita Das
Prof. Anjan Paul
Prof. Romela Dutta
Mr. Somnath Mollick

Minutes of the meeting:

1. In the Departmental meeting dated 03.09.2019 the teachers of Department of Electronics unanimously decided that a thirty two hour hands on approach as an Add on course would be offered to the students for a holistic development in the field of technology.

2. In the meeting it was also decided that the "Android Phone controlled robot using 8051 microcontrollers and Bluetooth module" topic would be divided among the teachers of the department namely Anjan Paul, Sanchari Guha and Romela Dutta with Alak Halder (HOD) as the course co-ordinator.

3. The module of the course was accepted by all teachers of the department with their respective ideas.

4. Certificates would be given to each student post successful completion of the above course.

Department of Electronics
Vivekananda College
Thakurpukur, Kol-63

✓ **Course details with Faculty Planning**

COURSE DETAILS	32 HRS	FACULTY
Android Phone controlled robot using 8051 microcontrollers and Bluetooth module. Explanation of designing a robot using DC motors and how the direction of DC motors will be controlled by the commands received from the android application.	8	ALAK HALDER
Explanation of how the status of the robot is sent back to the Android app. It uses interfacing of HC-05 Bluetooth module with 8051 microcontrollers.	6	SANCHARI GUHA
Explanation and interfacing of 8051 microcontroller (AT89S52) • HC-05 Bluetooth module • L293D Motor Driver • Robot chassis • DC Motors (2) • Wheels (2) • Castor Wheel • Jumper wires • Bluetooth terminal	6	ROMELA DUTTA

android app		
The steps to show how to install and use the Bluetooth terminal app. Checking of the Code and explanation of how the character is sent and received by 8051 Microcontroller to rotate the required motors.	8	ANJAN PAUL
Defining some functions which are used in the program. Configure 8051 microcontroller for serial communication**.**	2	SANCHARI GUHA
Send status of robot to android app. Controlling the four motors using 8051 microcontroller. Controlling the robot using DTMF with 8051, if you don't have android phone.	2	ROMELA DUTTA

Department of Electronic Science
Vivekananda College (Thakurpukur)
Diamond Harbour Road, Kol-63

TO
THE PRINCIPAL
VIVEKANANDA COLLEGE
THAKURPUKUR, KOLKATA-700063

Respected sir,

This is to bring to your kind information that department of Electronic Science, Vivekananda College, Thakurpukur will be conducted an Add-on course on the topic "Android Phone controlled robot using 8051 microcontrollers and Bluetooth module" to our students for the academic session 2019-20 dated 09-11-2019.
Please allow us to conduct the course as per UGC NAAC guidelines.

Yours faithfully

Alak Halder (HOD)
Department of Electronics

Enclosures
1. Resolution of the departmental meeting.
2. Proposal and course details

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Department of Electronics
Vivekananda College
Thakurpukur, Kol-63

Add on Course Title: "Android Phone controlled robot using 8051 microcontrollers and Bluetooth module".

ADD ON CLASS ROUTINE

SERIAL NO.	NAME OF THE FACULTY	DATE	NO. OF CLASSES (One hour per class) T=THEORY P=PRACTICAL	TOPIC
1	Prof. ALAK HALDER	9.11.2019	2T	Explanation of designing a robot using DC motors
		10.11.2019	2T	Contd. Explanation of designing a robot using DC motors
		10.11.2019	1P	Designing a robot using DC motors using hardware
		16.11.2019	1T	Explanation of how the direction of DC motors will be controlled by the commands received from the android application.
		16.11.2019	2P	Practical conducted on changing direction of DC motors controlled by the commands received from the android application.
2	Prof. SANCHARI GUHA	17.11.2019	2T	Explanation of how the status of the robot is sent back to the Android app.
		17.11.2019	1P	Practical conducted on how the status of

				the robot is sent back to the Android app.
		23.11.2019	3T	Interfacing of HC-05 Bluetooth module with 8051 microcontrollers.
3	Prof. ROMELA DUTTA	24.11.2019	2T	Explanation and interfacing of 8051 microcontroller (AT89S52) • HC-05 Bluetooth module • L293D Motor Driver • Robot chassis • DC Motors (2) • Wheels (2) • Castor Wheel • Jumper wires • Bluetooth terminal app
		24.11.2019	1P	Interfacing of 8051 microcontroller (AT89S52) • HC-05 Bluetooth module • L293D Motor Driver • Robot chassis • DC Motors (2) • Wheels (2) • Castor Wheel • Jumper wires Bluetooth terminal app
		30.11.2019	3T	Explanation of the above mentioned modules

4	Prof. ANJAN PAUL	7.12.2019	2P	The steps to show how to install and use the Bluetooth terminal app.
		7.12.2019	2T	Bluetooth terminal architecture
		8.12.2019	2P	Checking of the Code and explanation of how the character is sent and received by 8051 Microcontroller to rotate the required motors.
		8.12.2019	2T	DC motor
5	Prof. SANCHARI GUHA	14.12.2019	2T	Defining some functions which are used in the program. Configure 8051 microcontroller for serial communication.
6	Prof. ROMELA DUTTA	15.12.2019	2T	Send status of robot to android app. Controlling the four motors using 8051 microcontroller. Controlling the robot using DTMF with 8051, if you don't have android phone.

IQAC recommendation

IQAC, Vivekananda College, Thakurpukur, met on 14/Sept/2021, to envisage, formulate and design Add-On Courses, beyond prescribed Curriculum

A. It was decided that all the departments of Humanities, Science and Commerce would design and formulate 30 hour Add-On Courses for the session 2021-22, Academic calendar, as per UGC guidelines.

B. It was decided that the Departments would be free to choose the Courses on the basis of their (subject) relevance, practicality and feasibility.

C. It was decided that the Departments would have a Course Coordinator, who would design the Course and Course materials, in consultation with all teachers of the Department.

D. It was decided that each Department would design its own format; and could follow a blended mode of instruction.

E. It was decided that the Departments would be encouraged to use and utilize their own resources while formulating the Add-On Courses, rather than relying on Outsourcing.

F. IQAC would send its recommendations to the Principal/TIC for perusal and implementation.

14/09/21

Co-ordinator
I Q A C
Vivekananda College
Kolkata-700 063

Ref. No. ....

Date. 21/9/21

Notice

It is hereby notified that Vivekananda College, Thakurpukur, will offer Add-On Courses to All Honours students for the Academic year 2021- 22.

Each Department will offer an Add-On Course as per UGC guidelines. Each Course will be structured & overseen by a Course Coordinator, selected from the respective Department. Departmental Heads arerequested to take up the matter on an urgent basis.

21/9/21

Principal

Principal Vivekananda College
Thakurpukur, Kol-63

Department of Electronic Science
Vivekananda College
Thakurpukur, Kol-63

Notice   Date: 01-05-2022

An online meeting of the faculty members and staffs of our department will be held on 6th May, 2022 at 7.30 P.M at gmeet to consider the following agenda.

Agenda:

1. Discuss about introduction of an Add-On course
2. To determine a resource person
3. Discuss the amount of fees for the participants
4. Miscellaneous.

All faculties and staff are requested to attend the meetings positively.

(A. Halder)
Head of the Department

Department of Electronic Science
Vivekananda College
Thakurpukur, Kol-63

Minutes of the meeting held on 06-05-2022

A meeting with the faculty members and stuff of our department has been held on 6th May, 2022 at 7.30 P.M at Gmeet.

I) Teachers present in the meeting at gmeet:
1. Prof Alak Halder
2. Prof Debarati Sarkar
3. Prof Sanchari Guha
4. Prof Arpita Das
5. Prof Anjan Paul
6. Prof Romela Dutta
7. Sri Somnath Mallik

II) Minutes of the meeting

The minutes of the meeting are

A. All faculty and staff are universally decided that our Electronics department would be arranged a "One Month Python Summer Training Program" for the students who are completed their higher secondary examination or pursuing any above qualification. It was also decided in the meeting that Mr Pratap Jantua, Network Security Consultant, Nigeria as speaker and Prof. Alak Halder & Prof Debarati Sarkar of Department of Electronic Science would be the Course Coordinator for the Add-On Course.
B. The Course structure of the course on "One Month Python Summer Training Program" submitted by Prof Debarati Sarkar was accepted by all teachers of the department.
C. Participant will be charged the amount of Rs-300.00
D. Certificates would be given to each student at the successful completion of the Course through the email.
E. A Flyer will be designed by Prof Debarati Sarkar for advertising and online registration

Flyer for the Program

To
The Principal
Vivekananda College,
Thakurpukur, Kolkata 700063

Respected Sir,

This is to inform you that from this academic year, we are introducing an Add-on course for the students who have at-least completed their Higher Secondary Examination.

The course "One Month Python Summer Training Program" will be conducted through online platform Gmeet and participant will be charged nominal amount Rs-300.00. The course is scheduled to take place on Saturdays and Sunday from 28.05-2022 and timing is given into the flyer.
Your cooperation is highly appreciated.
Thanking you,

Sincerely,

Alak Halder
Head of Department
Department of Electronic Science.

Enclosure:

1. Resolution of the departmental meeting held on 06.05.2022
2. Proposal and Course structure for Introducing Add-on Program
3. Flyer of the Program

ONE MONTH PYTHON SUMMER TRAINING PROGRAM

Date : 28.5.2022 to 19.6.2022

SL. No.	Content	Training time in hours (32 Hrs.)
1	Introduction ,Python as a language, installing python	2
2	Functions and recursions	2
4	Configuration python path variables, Python code editor	2
5	Understanding python variables and data types	4
6	Python vocabulary and programming steps.	2
7	Operations in python	2
8	Python Classes	2
9	Programming and analysis (Practical)	4
10	Combination of strings and bitwise operators	2
11	Assignments checking and corrections	2
12	Comprehending and comprehensions	3
13	Web applications	2
14	Projects (Traffic signal using Python/QR scan using Python)	2
15	Conclusion	1

IQAC recommendation

IQAC, Vivekananda College, Thakurpukur, met on 18/June/2022, to envisage, formulate and design Add-On Courses, beyond prescribed Curriculum. The IQAC has also decided to organise a program on staff training:

A. It was decided that all the departments of Humanities, Science and Commerce would design and formulate 30 hour Add-On Courses for 2022-23, Academic calendar, as per UGC guidelines.

B. It was decided that the Departments would be free to choose the Courses on the basis of their (subject) relevance, practicality and feasibility.

C. It was decided that the Departments would have a Course Coordinator, who would design the Course and Course materials, in consultation with all teachers of the Department.

D. It was decided that each Department would design their own format; and could follow a blended mode of instruction.

E. It was decided that the Departments would be encouraged to use and utilize their own resources while formulating the Add-On Courses, rather than relying on Outsourcing.

F. IQAC would send its recommendations to the Principal/TIC for perusal and implementation.

G. The IQAC would also organise a Staff Training programme - 'Effective Working Style 'Conducted by IPE Of Professional Excellence On 25th June 2022 .

18/06/22

Co-ordinator
I Q A C
Vivekananda College
Kolkata-700 063

VIVEKANANDA COLLEGE
(GOVT. SPONSORED) (NAAC ACCREDITED GRADE 'A')

Ref. No.................................

Date.................................
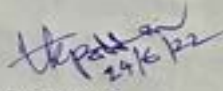
Notice

It is hereby notified that Vivekananda College, Thakurpukur, will offer Add-On Courses to All Honours students for the Academic year 2022-23.

Each Department will offer an Add-On Course as per UGC guidelines. Each Course will be structured & overseen by a Course Coordinator, selected from the respective Department. Departmental Heads are requested to take up the matter on an urgent basis.

Principal

Principal
Vivekananda College
Thakurpukur, Kol-63

Department of Electronic Science
Vivekananda College (Thakurpukur)
Diamond Harbour Road, Kol-63
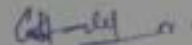
NOTICE   Date-03-03-2023

A departmental meeting will be held at our department on 14-03-2023 at 2 P.M to discuss the following agenda. All teachers and staffs are requested to kindly attend the meeting.

Agenda of the meeting:

i) Introduction of Add-on course on "Android Phone controlled robot using 8051 microcontrollers and Bluetooth module" for the UG students from the session 2022-2023.

ii) Resource person to be decided.

iii) Decision to be taken about organizer

iv) Miscellaneous

A HALDER
HOD
Department of Electronic Science

Department of Electronic Science
Vivekananda College (Thakurpukur)
Diamond Harbour Road, Kol-63

Resolution of the departmental meeting held on 14-03-2023

- **Teachers present in the meeting:**

  Prof. Alak Halder

  Prof. Debarati Sarkar

  Prof. Sanchari Guha

  Prof. Arpita Das

  Prof. Anjan Paul

  Prof. Romela Dutta

- **Minutes of the meeting:**
  1. In the Departmental meeting dated 14-03-2023 the teachers of Department of Electronics unanimously decided that a thirty two hour hands on approach as an Add on course would be offered to the students for a holistic development in the field of technology.
  2. All the teacher of Electronic Science unanimously decided that Prof. Alak Halder will be performed as coordinator of the program.
  3. It is decided that departmental resources will be utilized for this program.
  4. The module of the course was accepted by all teachers of the department with their respective ideas.
  5. In the meeting it was also decided that the "Android Phone controlled robot using 8051 microcontrollers and Bluetooth module" topic would be divided among the teachers of the department namely Prof. Anjan Paul, Prof. Sanchari Guha and Prof. Romela Dutta with Prof. Alak Halder (HOD) as the course co-ordinator.
  6. Certificates would be given to each student who will attend regularly and successful completion of the above course.

Department of Electronic Science
Vivekananda College (Thakurpukur)
Diamond Harbour Road, Kol-63

TO
THE PRINCIPAL
VIVEKANANDA COLLEGE
THAKURPUKUR, KOLKATA-700063

Respected sir,

This is to bring to your kind information that department of Electronic Science, Vivekananda College, Thakurpukur would be conducting an Add-on course on the topic "Android Phone controlled robot using 8051 microcontrollers and Bluetooth module" to our students for the academic session 2022-23 dated 14-03-2023.

Please allow us to conduct the course as per UGC NAAC guidelines.

Yours faithfully
Alak Halder(HOD)
Department of Electronics

Enclosure

1. Resolution of the departmental meeting.
2. Proposal and course details.

Department of Electronic Science
Vivekananda College (Thakurpukur)
Diamond Harbour Road, Kol-63

Add on Course Title: **Android Phone controlled robot using 8051 microcontrollers and Bluetooth module.**   **Course details with Faculty Planner**

COURSE DETAILS	32 HRS	FACULTY
Android Phone controlled robot using 8051 microcontrollers and Bluetooth module. Explanation of designing a robot using DC motors and how the direction of DC motors will be controlled by the commands received from the android application.	8 (4days)	PROF. ALAK HALDER
Explanation of how the status of the robot is sent back to the Android app. It uses interfacing of HC-05 Bluetooth module with 8051 microcontrollers.	6 (3days)	PROF. SANCHARI GUHA
Explanation and interfacing of 8051 microcontroller (AT89S52) • HC-05 Bluetooth module • L293D Motor Driver • Robot chassis • DC Motors (2) • Wheels (2) • Castor Wheel • Jumper wires • Bluetooth terminal android app	6 (3days)	PROF. ROMELA DUTTA
The steps to show how to install and use the Bluetooth terminal app. Checking of the Code and explanation of how the character is sent and received by 8051 Microcontroller to rotate the required motors.	8 (4days)	PROF. ANJAN PAUL
Defining some functions which are used in the program. Configure 8051 microcontroller for serial communication.	4 (2 days)	PROF. SANCHARI GUHA
Send status of robot to android app. Controlling the four motors using 8051 microcontroller. Controlling the robot using DTMF with 8051, if you don't have android phone.	2 (1 day)	PROF. ROMELA DUTTA