



## BHARATI VIDYAPEETH'S COLLEGE OF ENGINEERING, KOLHAPUR

Accredited by NAAC With 'A' Grade  
Approved by AICTE, New Delhi & Affiliated to Shivaji University, Kolhapur  
Near Chitranagari, Kolhapur - 416013 (MS)  
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FOUNDER CHANCELLOR  
**Dr. Patangrao Kadam**  
M.A., LL. B., Ph. D.

PRINCIPAL  
**Dr. Vijay Ghorpade**  
M.E., Ph. D. (Computer)

# NAAC SSR CYCLE- 2



Criterion 1	Curricular Aspects
Key Indicator 1.2	Academic Flexibility
1.2.2 Percentage of students enrolled in Certificate/ Add-on/Value added programs and also completed online MOOC programs like SWAYAM, NPTEL etc. as against the total number of students during the last five years	



## BHARATI VIDYAPEETH'S COLLEGE OF ENGINEERING, KOLHAPUR

- **Organizing Department:** Electronics & Telecommunication Engineering.
- **Name of Add-on Course:** Add-on Course “Raspberry Pi”
- **Course Code :** ETC192001
- **Name of Coordinator:** 1. Mr. S.S.Pawar  
2. Mr. M.S.Sonawane
- **Name of Resource Person:** 1. Mr. S.S.Pawar  
2. Mr. M.S.Sonawane
- **Date of Activity:** 03/08/2019 to 12/10/2019.
- **Participant:** E&TC and CSE Students (80 Students)
- **Details of Activity:**

Raspberry Pi is a series of small single-board computers developed in the United Kingdom by the Raspberry Pi Foundation in association with Broadcom. The Raspberry Pi project originally leaned towards the promotion of teaching basic computer science in schools and in developing countries. It is widely used in many areas, such as for weather monitoring, because of its low cost, modularity, and open design. A good knowledge of Raspberry Pi will help improve the employment potential of your students.

- **Outcome of Activity:** To create awareness about Raspberry pi and use of Raspberry Pi for various applications to electronics engineering student.
- **How it Bridges gap between Industry and Academia:** Raspberry Pi provides a powerful open source Hardware and software for engineering and scientific applications. Knowledge of Raspberry Pi creates industry ready student using open-source software and hardware.

• **Photo:**



**Mr. S.S.Pawar/ Mr. M.S.Sonawane**  
Course In-charge

**Dr. K. R. Desai**  
HOD

**Dr. V. R. Ghorpade**  
Principal



**Social Transformation through Dynamic Education**  
**BHARATI VIDYAPEETH'S**  
**COLLEGE OF ENGINEERING KOLHAPUR**  
**DEPARTMENT OF ELECTRONICS & TELECOMMUNICATION ENGINEERING**  
**Add-on Course "Raspberry Pi"**

- **Course Code : ETC192001**

**Course Objectives:**

To create awareness about Raspberry pi and use of Raspberry Pi for various application to electronics engineering student.

**Course Outcomes:**

**On successful completion of the course, the students should be able to**

1. Understand the features of the Raspberry pi.
2. Understand the peripheral resources of Raspberry pi.
3. Implement python programming for application of Raspberry pi.
4. Build simple application projects using Raspberry pi board.

**COURSE CONTENTS**

<b>Session</b>	<b>Contents</b>	<b>Hours</b>
1.	Introduction of Raspberry Pi.	01
2.	Familiar with Raspberry Pi hardware.	03
3.	Study of input/ output ports.	02
4.	Study of different resources/blocks/ peripherals of Raspberry Pi.	04
5.	Study of Operating system of Raspberry Pi.	02
6.	Hands on: Installation of Operating System on Raspberry Pi.	03
7.	Hands on: Programming with Raspberry Pi.	03
8.	Hands on: Various Sensors used with Raspberry Pi.	03
9.	Hands on: Interfacing Sensors to Raspberry Pi.	03
10.	Hands on: Programming for various sensors.	04
11.	Hands on: Building projects using Raspberry Pi.	04

**Hardware Requirement:**

- ✓ Raspberry Pi Hardware KIT.
- ✓ Various Sensors, Ethernet cable, power supply adaptor.
- ✓ Desktop PC/Laptop, keyboard, monitor, SD card.
- ✓ LCD Projector with screen

**Resource Person:**

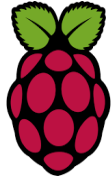
1. Mr. Sanjay S. Pawar
2. Mr. Manik S. Sonawane



**Mr. S.S.Pawar/ Mr. M.S.Sonawane**  
**Course In-charge**



**Dr. K. R. Desai**  
**HOD**



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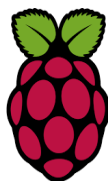
“Raspberry pi”

This is to certify that Mr. / Ms. Anikita M. Patil has successfully completed the add-on course on “Raspberry Pi “in an online mode, organized from 03/08/2019 to 12/10/2019 by the Department of Electronics & Telecommunication Engineering of Bharati Vidyapeeth's College of Engineering, Kolhapur.

Mr. S.S.Pawar/ Mr. M.S.Sonawane  
Course In-charge

Dr. K. R. Desai  
HOD

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Principal



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CERTIFICATE

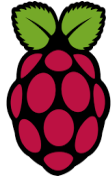
"Raspberry pi"

This is to certify that Mr. / Ms. Siddhi S. Patole has successfully completed the add-on course on "Raspberry Pi" in an online mode, organized from 03/08/2019 to 12/10/2019 by the Department of Electronics & Telecommunication Engineering of Bharati Vidyapeeth's College of Engineering, Kolhapur.

Mr. S.S.Pawar/ Mr. M.S.Sonawane  
Course In-charge

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"Raspberry pi"

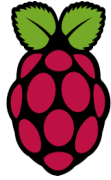
This is to certify that Mr. / Ms. Patil Priti J. has successfully completed the add-on course on "Raspberry Pi" in an online mode, organized from 03/08/2019 to 12/10/2019 by the Department of Electronics & Telecommunication Engineering of Bharati Vidyapeeth's College of Engineering, Kolhapur.

Mr. S.S.Pawar/ Mr. M.S.Sonawane  
Course In-charge

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“Raspberry pi”

This is to certify that Mr. / Ms. **Dharmaraj Renge** has successfully completed the add-on course on “**Raspberry pi**” in an online mode, organized from 03/08/2019 to 12/10/2019 by the Department of Electronics & Telecommunication Engineering of Bharati Vidyapeeth's College of Engineering, Kolhapur.

Mr. S.S.Pawar/ Mr. M.S.Sonawane  
Course In-charge

Dr. K. R. Desai  
HOD

Dr. V. R. Ghorpade  
Principal









68	Kaileas Balasaheb Shinde	<u>Kaileas</u>	<u>Kaileas</u>	<u>Kaileas</u>	<u>Kaileas</u>	<u>Kaileas</u>	<u>Kaileas</u>	<u>Kaileas</u>	<u>Kaileas</u>	<u>Kaileas</u>	<u>Kaileas</u>	<u>Kaileas</u>
69	Chandradip Suresh Patil	<u>SPatil</u>	<u>SPatil</u>	<u>SPatil</u>	<u>SPatil</u>	<u>SPatil</u>	<u>SPatil</u>	<u>SPatil</u>	<u>SPatil</u>	<u>SPatil</u>	<u>SPatil</u>	<u>SPatil</u>
70	Poojeet Dhanaji Ghotane	<u>Poojeet</u>	<u>Poojeet</u>	<u>Poojeet</u>	<u>Poojeet</u>	<u>Poojeet</u>	<u>Poojeet</u>	<u>Poojeet</u>	<u>Poojeet</u>	<u>Poojeet</u>	<u>Poojeet</u>	<u>Poojeet</u>
71	Pratham Jay Prakash Khivansomey	<u>Pratham</u>	<u>Pratham</u>	<u>Pratham</u>	<u>Pratham</u>	<u>Pratham</u>	<u>Pratham</u>	<u>Pratham</u>	<u>Pratham</u>	<u>Pratham</u>	<u>Pratham</u>	<u>Pratham</u>
72	Prathamesh Suresh Kaddoli	<u>Prathamesh</u>	<u>Prathamesh</u>	<u>Prathamesh</u>	<u>Prathamesh</u>	<u>Prathamesh</u>	<u>Prathamesh</u>	<u>Prathamesh</u>	<u>Prathamesh</u>	<u>Prathamesh</u>	<u>Prathamesh</u>	<u>Prathamesh</u>
73	Pratik R. Chougale	<u>Pratik</u>	<u>Pratik</u>	<u>Pratik</u>	<u>Pratik</u>	<u>Pratik</u>	<u>Pratik</u>	<u>Pratik</u>	<u>Pratik</u>	<u>Pratik</u>	<u>Pratik</u>	<u>Pratik</u>
74	Saarthak S. Jadhav	<u>S.S. Jadhav</u>	<u>S.S. Jadhav</u>	<u>S.S. Jadhav</u>	<u>S.S. Jadhav</u>	<u>S.S. Jadhav</u>	<u>S.S. Jadhav</u>	<u>S.S. Jadhav</u>	<u>S.S. Jadhav</u>	<u>S.S. Jadhav</u>	<u>S.S. Jadhav</u>	<u>S.S. Jadhav</u>
75	Harish R. Poreele	<u>Harish</u>	<u>Harish</u>	<u>Harish</u>	<u>Harish</u>	<u>Harish</u>	<u>Harish</u>	<u>Harish</u>	<u>Harish</u>	<u>Harish</u>	<u>Harish</u>	<u>Harish</u>
76	Atik I. Mullig	<u>Amullig</u>	<u>Amullig</u>	<u>Amullig</u>	<u>Amullig</u>	<u>Amullig</u>	<u>Amullig</u>	<u>Amullig</u>	<u>Amullig</u>	<u>Amullig</u>	<u>Amullig</u>	<u>Amullig</u>
77	Shamsao V. Desai	<u>Shamsao</u>	<u>Shamsao</u>	<u>Shamsao</u>	<u>Shamsao</u>	<u>Shamsao</u>	<u>Shamsao</u>	<u>Shamsao</u>	<u>Shamsao</u>	<u>Shamsao</u>	<u>Shamsao</u>	<u>Shamsao</u>
78	Karan D. Kumbhar	<u>Kumbhar</u>	<u>Kumbhar</u>	<u>Kumbhar</u>	<u>Kumbhar</u>	<u>Kumbhar</u>	<u>Kumbhar</u>	<u>Kumbhar</u>	<u>Kumbhar</u>	<u>Kumbhar</u>	<u>Kumbhar</u>	<u>Kumbhar</u>
79	Vinay R. Patil	<u>VPatil</u>	<u>VPatil</u>	<u>VPatil</u>	<u>VPatil</u>	<u>VPatil</u>	<u>VPatil</u>	<u>VPatil</u>	<u>VPatil</u>	<u>VPatil</u>	<u>VPatil</u>	<u>VPatil</u>
80	Manish R. Jadhav	<u>MRJadhav</u>	<u>MRJadhav</u>	<u>MRJadhav</u>	<u>MRJadhav</u>	<u>MRJadhav</u>	<u>MRJadhav</u>	<u>MRJadhav</u>	<u>MRJadhav</u>	<u>MRJadhav</u>	<u>MRJadhav</u>	<u>MRJadhav</u>

S.S. Pawar  
 Mr. S.S. Pawar  
 Instructor