



**AICTE Training and Learning
(ATAL) Academy Sponsored One
Week
Online
Faculty Development Program
(FDP)**

On

***“Research Trends in
Separation &
Purification Techniques”***

**From
13th to 17th September, 2021**

REGISTRATION PROCESS:

- Course Registration is free for all the participants
- Registration must be made through online mode only
- Use the following link for online registration:
- <https://atalacademy.aicte-india.org/signup>

CHIEF PATRON

Prof. A.M. Rawani
(Director, NIT Raipur)

PATRON

Dr. Prabhat Diwan
(Dean (R&C), NIT Raipur)

CHAIRMAN

Dr. A.K. Poonia
(Head & Associate Professor,
Chemical Engg., NIT Raipur)

COURSE COORDINATORS

Dr. P.K. Chaudhari
(Associate Professor, Chemical Engg., NIT Raipur)

Dr. J. Anandkumar
(Assistant Professor, Chemical Engg., NIT Raipur)



ADDRESS FOR CORRESPONDENCE

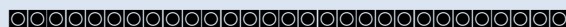
Dr. P.K. Chaudhari
(Associate Professor)

Dr. J. Anandkumar
(Assistant Professor)

Department of Chemical Engineering
National Institute of Technology Raipur
G.E. Road, Raipur, (Chhattisgarh)

Email: pkchaudhari.che@nitrr.ac.in &
anandj.che@nitrr.ac.in

Contact No.: +91-9406145088, +91-9669715209



**AICTE Training and Learning (ATAL)
Academy Sponsored One Week
Online
Faculty Development Programme
On**

***“Research Trends in Separation
& Purification Techniques”***

**From
13th to 17th September, 2021**



Organized by



**AICTE Training and Learning (ATAL)
Academy**

&

**National Institute of Technology Raipur
Raipur-492 010 (Chhattisgarh)**

ABOUT THE INSTITUTE

National Institute of Technology Raipur situated in the capital of Chhattisgarh, has proven to be 'avant-grade' in the field of science and technology over past few decades in this region. With sweet memory of foundation ceremony by our president Hon'ble Dr. Rajendra Prasad on 14th September 1956 the institute started with two departments namely Metallurgical and Mining Engineering. Later the inauguration of the Institute building was done by our Prime Minister Hon'ble Pt. Jawahar Lal Nehru on 14th March 1963. From 1st December 2005, the institute has become the National Institute of Technology. It is well connected with Mumbai, Delhi and all metro cities by regular flights and is on the main Howrah-Mumbai railway route. The institute is 5 km from the Raipur railways station and 18 km from airport on NH-6, the Great Eastern Road.

ABOUT DEPARTMENT

The Chemical Engineering Department was established in the year 1962 under the aegis of Government College of Engineering and Technology, Raipur (now National Institute of Technology Raipur, Raipur). The Department is offering undergraduate course (B.Tech. in Chemical engineering), one post-graduate course (M.Tech. in Chemical Engineering) and Ph.D. programme (Research in various Chemical Engineering & Allied areas). UG course (B.Tech. in Chemical Engineering) was accredited by NBA for a period of 5 years till 30-06-2021.

VENUE

**DEPARTMENT OF CHEMICAL ENGINEERING
NIT RAIPUR, G.E. ROAD, RAIPUR-492010,
CHHATTISGARH, INDIA**

OBJECTIVES

The aim of this program is to provide a platform for interaction, exchange of knowledge and innovative ideas in recent research trends in separation & purification technologies used in Chemical, Biotechnology, Environmental technology & Chemistry, among the experts from industry, R&D sector and reputed academic institutes with the faculty members, research scholars, young scientists, post graduate and under graduate students of various organizations.

THEME / SCOPE

This online Faculty Development Programme on research trends in separation & purification technologies is proposed to provide a thorough exposure to the recent and future research trends in the field of Separation and Purification technology. Distinguishing features of this programme include expert lectures on present and future technological advancements by distinguished experts from IITs, NITs, CSIR laboratories and Industries. The proposed FDP will provide opportunity to faculty, engineers, students, industrial people and other beneficiaries to know the latest advancements in the areas of Chemical, Energy, Biotechnology and environmental technology/engineering/science. This programme will also focus on the future challenges, issues and other demands of stockholders to be taken care by the researchers in separation and purification methods with economical & environmental perspective. The course will also cover the detailed discussion about the modernization and simplification of separation techniques, and the instruments as well as laboratories pertinent to purifications process.

TOPICS TO BE COVERED

This event will be conducted in an interactive atmosphere providing better scope for discussion. Emphasis will be on a highly participative style of learning with primary focus on following topics:

- *Advances in Membrane Separation Processes*
- *Modern Physio-Chemical & Bio-Separation & Purification Processes for Environmental Management*
- *Advanced Purification methods for Chemical Industries*
- *Separation Techniques for Energy Management*
- *Applications of Nanotechnology & Polymer Science in separation & Purifications Technology*
- *Applications of Analytical Equipments (AAS, GC, GC-MS, FTIR, HPLC, Rheometer etc.) related to the separation and purification techniques*
- *Other topics related to the theme of the FDP*

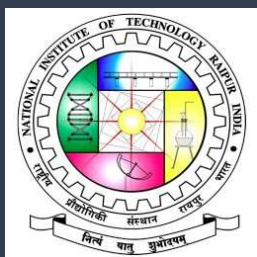
TARGETED PARTICIPANTS

UG & PG Students
Research Scholars
Faculty & R&D persons
Industrial Delegates

REGISTRATION FEE DETAILS (IN INR): FREE

PARTICIPATION CERTIFICATE

- A performance evaluation test will be conducted at the end of the FDP.
- Minimum 80% attendance and scoring 60% marks in test is mandatory to get the participation certificate.
- The participation certificate will be issued online through ATAL Academy portal to the eligible participants only.



NATIONAL INSTITUTE OF TECHNOLOGY RAIPUR
(DEPARTMENT OF CHEMICAL ENGINEERING)

&
ATAL ACADEMY SPONSORED FACULTY DEVELOPMENT PROGRAM
ON

"RESEARCH TRENDS ON SEPARATION & PURIFICATION TECHNIQUES"

[13TH - 17TH SEPTEMBER, 2021]

[Registration Link: <http://atalacademy.aicte-india.org/signup>]



FDP – SCHEDULE

Date / Time→	9.30 – 10.00 AM	10.00 AM – 12.00 PM	12.00 – 12.15 PM	12.15 – 02.15 PM	2.15 – 3.00 PM	3.00 – 5.00 PM
Day-1 (13 th Sep 2021) Monday	Inauguration	Session-1 Keynote Lecture Novel Membranes for Post-Combustion CO ₂ -Separation, Direct Methanol Fuel Cell and Organic Solvent Nanofiltration [Prof. Bishnupada Mandal, IIT Guwahati]	Tea Break	Session-2 Advances in Membrane Materials and Technologies for Separation Processes [Prof. Arthanareeswaran, NIT Trichy]	Lunch Break	Session-3 New Dimensions in Wastewater Treatment with Hybrid Process [Prof. Anand Kishore Kola, NIT Warangal]
Day-2 (14 th Sep 2021) Tuesday		Session-4 Desulphurization of Liquid Fuel [Prof. Vimal Chandra Srivastava, IIT Roorkee]		Session-5 Ionic Liquid as a Novel and Green Solvent for Separation and other Applications in Process Industry [Dr. Kailas Wasewar, VNIT Nagpur]		Session-6 Wastewater Treatment using Inverse Fluidized Bed Bioreactors (IFBR) [Prof. Sivasubramanian, NIT Calicut]
Day-3 (15 th Sep 2021) Wednesday		Session-7 Light Driven Nanomaterials: A Leap from Laboratory to Real Life Application [Dr. Saravanan Pichiah, IIT Dhanbad]		Session-8 Efficient Biomass Recovery through Auto-flocculation: Use of Genetically Engineered Microbes & Replacing Conventional Centrifugal Separation [Dr. Surajit Debnath, Tripura]		Session-9 Forward osmosis membrane based advanced wastewater treatment [Dr. Alka. A. Mungray, SVNIT Surat]
Day-4 (16 th Sep 2021) Thursday		Session-10 Application of Analytical instruments for Separation and Purification Technique: Part 1 [Prof. Kaustubha Mohanty, IIT Guwahati]		Session-11 Separation of Different Boiling Fractions, Impurities Quantification, Identification and Importance with Respect to Petroleum Products Purification in Crude Assay [Dr. Raj. K. Singh, CSIR-IIP, Dehradun] Recovery of Valuables from Reverse Osmosis (RO) Reject Generated in Tannery [Dr. Boopathy Ramasamy, CSIR-IMMT, Bhubaneswar]		Session-12 Application of Separation Techniques in Refinery Operations [Mrs. Komal Mahawar, IOCL, Mathura] Treatment of Industrial Wastewater by Membrane Separation Technique [Dr. P.K. Chaudhari & Dr. J. Anandkumar, NIT Raipur]
Day-5 (17 th Sep 2021) Friday		Session-13 Application of Analytical instruments for Separation and Purification Technique: Part 2 [Prof. Kaustubha Mohanty, IIT Guwahati]		Session-14 Advanced Purification Methods for Chemical Industries with Focus on Byproduct Gas Purification in Steel Industry [Ms. Bonya Mukherjee, SAIL-BSP, Bhilai]		Quiz / Exam, Feedback & Valedictory Function



NATIONAL INSTITUTE OF TECHNOLOGY RAIPUR
(DEPARTMENT OF CHEMICAL ENGINEERING)

&
ATAL ACADEMY SPONSORED FACULTY DEVELOPMENT PROGRAM
ON
"RESEARCH TRENDS ON SEPARATION & PURIFICATION TECHNIQUES"
[13TH - 17TH SEPTEMBER, 2021]

[Registration Link: <http://atalacademy.aicte-india.org/signup>]



FDP - SPEAKERS



DR. BISHNUPADA MANDAL
(Professor, IIT Guwahati)



**DR. VIMAL CHANDRA
SRIVASTAVA**
(Professor, IIT Roorkee)



DR. KAUSTUBHA MOHANTY
(Professor, IIT Guwahati)



DR. G. ARTHANAREESWARAN
(Professor, NIT Trichy)



DR. ANAND KISHORE KOLA
(Professor, NIT Warangal)



DR. V. SIVASUBRAMANIAN
(Professor, NIT Calicut)



DR. SARAVANAN PICHIAH
(Associate Professor, IIT Dhanbad)



DR. KAILAS WASEWAR
(Associate Professor, VNIT Nagpur)



DR. RAJ KUMAR SINGH
(Pr. Scientist, IIP-CSIR, Dehradun)



DR. BOOPATHI RAMASAMY
(Sr. Scientist, IMMT-CSIR,
Bhubaneswar)



MS. BONYA MUKHERJEE
(General Manager, SAIL-BSP, Bhilai)



DR. SURAJIT DEBNATH
(Head, MLT, Tripura)



**DR. PARAMESH KUMAR
CHOUDHARY**
(Associate Professor, NIT Raipur)



DR. ALKA. A. MUNGRAY
(Associate Professor, SVNIT Surat)



DR. J. ANANDKUMAR
(Assistant Professor, NIT Raipur)

How To Register in Workshop?

Use the below URL

<https://atalacademy.aicte-india.org/signup>

Follow the steps to signup/sign in to register and apply



Register

Please read scheme document 2020-2021 carefully before applying

[Already have an account? Sign in!](#)

Select Role

Title Name

Date of Birth Select Gender

Email

+91 Mobile Number *

Password

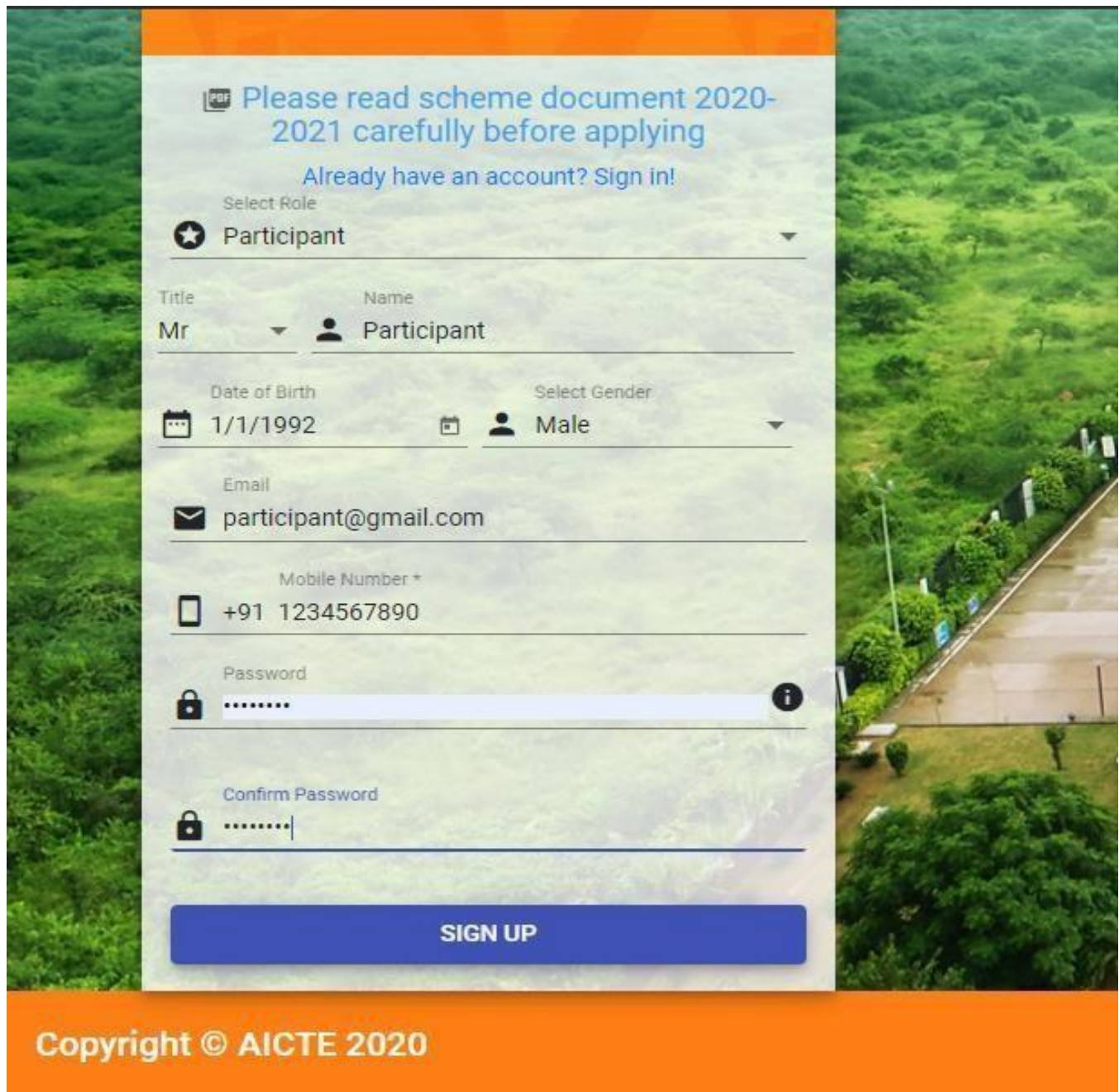
Confirm Password

SIGN UP



PARTICIPANT REGISTRATION

Participants need to register with basic details and choose **Role** as **Participant**.



The image shows a registration form for a participant, overlaid on a background image of a green landscape with a path. The form is titled "Please read scheme document 2020-2021 carefully before applying" and includes a link "Already have an account? Sign in!". The form fields are as follows:

- Select Role:** A dropdown menu with "Participant" selected.
- Title:** A dropdown menu with "Mr" selected.
- Name:** A text input field with "Participant" entered.
- Date of Birth:** A date picker showing "1/1/1992".
- Select Gender:** A dropdown menu with "Male" selected.
- Email:** A text input field with "participant@gmail.com" entered.
- Mobile Number *:** A text input field with "+91 1234567890" entered.
- Password:** A password input field with "*****" entered.
- Confirm Password:** A password input field with "*****" entered.

A blue "SIGN UP" button is located at the bottom of the form. The footer of the page reads "Copyright © AICTE 2020".

After successful registration, participant will get one **verification email and OTP**, on provided email and phone respectively.

PARTICIPANT LOGIN

Once participant verifies the email, he will be able to login to the portal, as shown below.

ATAL AICTE

Home Contact Us FAQs Login

 Login

Please read scheme document 2020-2021 carefully before applying

Email

 participant@gmail.com

Password



SIGN IN

[Forgot Password?](#) [Sign up now!](#)

PARTICIPANT PORTAL

After login Participants will see the “**General Details**” form. This form only contains basic details about the participant and details provided at the time of registration will be automatically displayed here, as shown below.





Participant

participant@gmail.com

General Details

Profile

Workshops

Attendance

Feedback

Test Marks



Participant Details

Participant Details

Name :	Mr. Participant
Gender :	Male
Phone :	1234567890
Email :	participant@gmail.com
Date of birth:	1992-01-01

Father's Name *

Whatsapp Number

Alternate Email

Select State

Select District

Address *

Pincode *

Employee ID *

Designation *

Specialization *

Experience of Teaching (Years) *

Experience of Teaching (Months) *

Save As Draft

Copyright © AICTE 2020

All rights reserved.

PARTICIPANT GENERAL DETAILS FORM

Participants need to fill the “General Details” form as shown below. Once submitted after filling details, they can see submitted details and edit if required. Filling this form is **mandatory** before applying for workshop.

Participant Details

Name :	Mr. Participant
Gender :	Male
Phone :	1234567890
Email :	participant@gmail.com
Date of birth:	1992-01-01

Father's Name *

 TEST FATHER'S NAME

Whatsapp Number

 1234567890

Alternate Email

 test_participant@gmail.com

Select State

 ANDAMAN AND NICOBAR ISLANDS

Select District

 Nicobars

Address *

 604 South Arnold Avenue Warwick, RI 02886

Pincode *

 546065

Employee ID *

 123123132

Designation *

 Professor

Specialization *

 Test Specialization

Experience of Teaching (Years) *

 2

Experience of Teaching (Months) *

 1

Save As Draft

General Details Form

PDP(Professional Development Program) for Students of UG/PG

If you want to apply for PDP(Only for Students UG/PG), select designation as **Student**. After selecting student and submitting you have to fill one more form next to General Details i.e **Institute Details**. Filling this form is also mandatory for Applying to PDPs(Professional Development Programmes)

Participant Institute Details

Institute Name *

LTI

Select Institute Type

Private

Select Institute Program

MCA

Institute Address *

Mahape

Select State

Maharashtra

Select District

Mumbai Suburban

Institute Pincode *

400043

Institute Town/village *

Mahape

Institute website *

Intinfotec.com

Level

PG

Institute NIRF ranked?

No

Institute NAAC Accredited?

No

Institute NBA Accredited?

No

Upload ID Card

Browse

Upload Photo

Browse

Upload Signature

Browse

(Formats: jpg, jpeg, png, Dimentions: width=900px,height=1420px, Size: Upto 1 mb)

(Formats: jpg, jpeg, png, Dimentions: width=231px,height=229px, Size: Upto 1 mb)

(Formats: jpg, jpeg, png, Dimentions: width=231px,height=229px, Size: Upto 1 mb)

Save

PARTICIPANT PROFILE

Details filled at the time of registration will be auto populated here. Participants can edit their **title/salutation, gender and Date of Birth** only.



Logout 



Participant

participant@gmail.com

- General Details
- Profile
- Workshops
- Attendance
- Feedback
- Test Marks

Participant Profile

Participant Details

Name:	Mr. Participant
Gender:	Male
Date of birth:	1992-01-01
Phone:	1234567890
Email:	participant@gmail.com

Edit

Copyright © AICTE 2020

All rights reserved.

APPLY FOR WORKSHOP

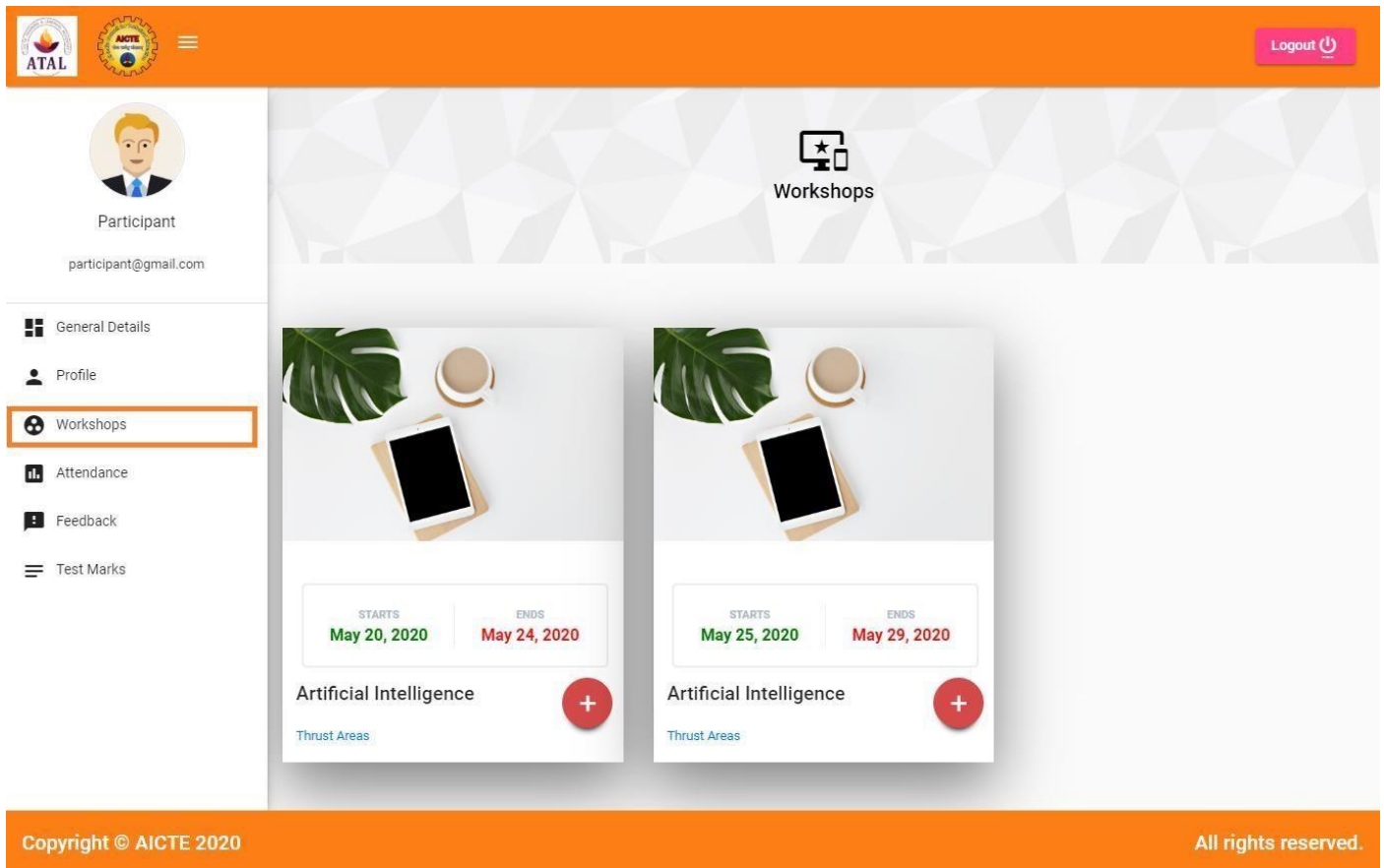
Participants can see all the workshops created by the coordinator, by clicking on the “**Workshops**” tab.

Participant can apply for the workshop, by clicking on the plus (+) button. Once he applied successfully, one popup will be displayed, mentioning “Applied Successfully”.

For applying to the workshop, participant should meet following conditions:

- Participants cannot apply for multiple workshops having the same dates.
- One participant cannot apply to one workshop multiple times. □
- General details should be submitted.
- Institute Details(Only for Students) should be filled.

After successfully applying for workshop, it will go for approval to co-ordinators, once they approve the participants then only participants can attend that workshop.



The screenshot displays the user interface for a participant to apply for workshops. The top navigation bar is orange and contains the ATAL and AICTE 2020 logos on the left, a menu icon in the center, and a 'Logout' button on the right. Below the navigation bar, the left sidebar shows the user's profile (Participant, participant@gmail.com) and a list of menu items: General Details, Profile, Workshops (highlighted with an orange border), Attendance, Feedback, and Test Marks. The main content area has a header with a 'Workshops' icon and a background image of a desk with a smartphone, a coffee cup, and a plant. Below the header, there are two workshop cards, both titled 'Artificial Intelligence'. Each card displays the start and end dates: 'STARTS May 20, 2020' and 'ENDS May 24, 2020' for the first card, and 'STARTS May 25, 2020' and 'ENDS May 29, 2020' for the second card. Both cards have a red circular button with a white plus sign (+) for applying. The bottom of the page features an orange footer with 'Copyright © AICTE 2020' on the left and 'All rights reserved.' on the right.

APPLIED WORKSHOPS

In this tab, participants can see all the workshops they have applied for with their status as Approved or Applied.



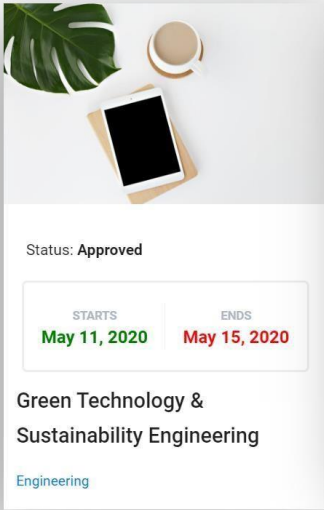
Logout 



Participant
manoj@gmail.com

- General Details
- Profile
- Workshops
- Applied Workshops
- Attendance
- Feedback
- Test Marks
- Certificate

Applied Workshops

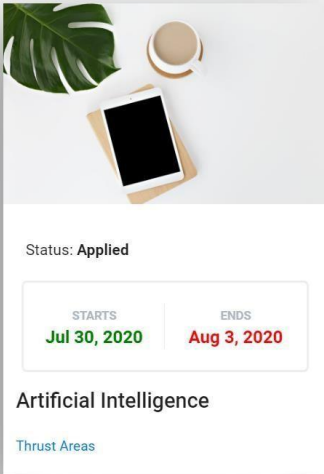


Status: **Approved**

STARTS	ENDS
May 11, 2020	May 15, 2020

Green Technology & Sustainability Engineering

[Engineering](#)



Status: **Applied**

STARTS	ENDS
Jul 30, 2020	Aug 3, 2020

Artificial Intelligence

[Thrust Areas](#)

Copyright © AICTE 2020

All rights reserved.

PARTICIPANT ATTENDANCE FOR WORKSHOP

In this tab participants can see their attendance marked by co-ordinators for applied workshops by clicking on icon in red circle shown below.



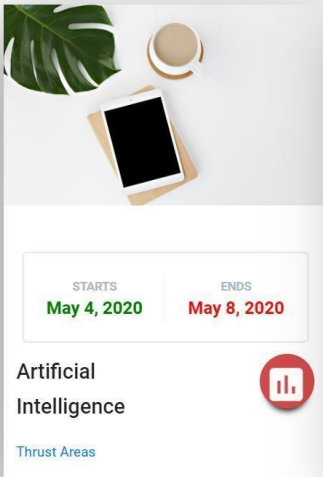
Logout 



Participant
part@gmail.com

-  General Details
-  Profile
-  Workshops
-  Attendance
-  Feedback
-  Test Marks
-  Certificate

Attendance

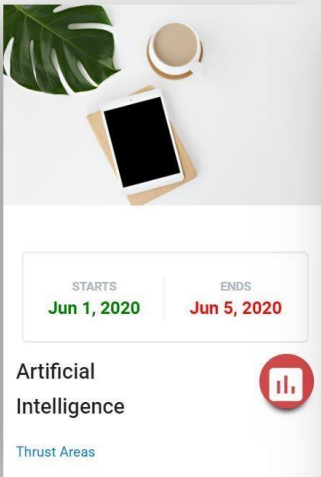


STARTS
May 4, 2020

ENDS
May 8, 2020

Artificial Intelligence

Thrust Areas

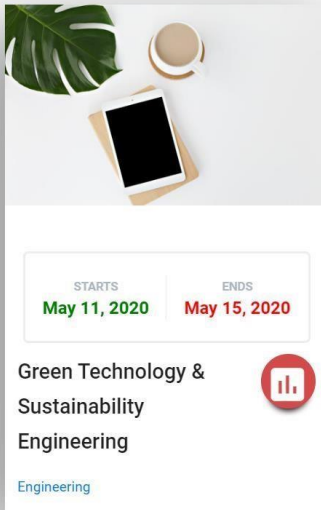


STARTS
Jun 1, 2020

ENDS
Jun 5, 2020

Artificial Intelligence

Thrust Areas



STARTS
May 11, 2020

ENDS
May 15, 2020

Green Technology & Sustainability Engineering

Engineering

Copyright © AICTE 2020

All rights reserved.

Attendance when clicked on icon of first workshop.



Logout 



Participant

part@gmail.com

 General Details

 Profile

 Workshops

 Attendance

 Feedback

 Test Marks

 Certificate



Attendance

Attendance Details

Date	Status
May 7, 2020	Present
May 4, 2020	Present
May 5, 2020	Present
May 6, 2020	Present
May 8, 2020	Absent

FEEDBACK ON WORKSHOPS COMPLETED

In Feedback, participants can see workshops which they have completed and they can provide anonymous feedback on workshops by clicking on icon in red circle. Only admin can see feedback was submitted by which participant but co-ordinators cannot see.

The screenshot displays the AICTE portal interface for a participant. The top navigation bar is orange and contains the ATAL and AICTE logos, a menu icon, and a 'Logout' button. The left sidebar shows the user's profile (Participant, part@gmail.com) and a list of navigation options: General Details, Profile, Workshops, Attendance, Feedback, Test Marks, and Certificate. The main content area has a 'Feedback' header with a monitor icon. Below this, two workshop cards are shown. Each card features a decorative image of a smartphone, a coffee cup, and a leaf. The first card is for 'Artificial Intelligence' (Thrust Areas) with a start date of Jun 1, 2020 and an end date of Jun 5, 2020. The second card is for 'Green Technology & Sustainability Engineering' (Engineering) with a start date of May 11, 2020 and an end date of May 15, 2020. Both cards include a red circular icon with a white exclamation mark, indicating a feedback form is available. The footer is orange and contains the text 'Copyright © AICTE 2020' and 'All rights reserved.'

After clicking on icon, a feedback form will appear which participants have to fill and submit.





Logout 



Participant
part@gmail.com

General Details

Profile

Workshops

Attendance

Feedback

Test Marks

Certificate



Feedback

Feedback form: 5

Details about the workshop attended by the participant

Area in which workshop attended (please select title) *

Thrust Areas

Workshop held at (Institute/Organisation Name)

K.J Somaiya College Of Science and Commerce

From 6/4/2020 To 6/8/2020

Name Manoj Mobile Number 7738030654 Email manoj0mishra02@gmail.com

Please select the appropriate input about the workshop

Course Code 1234

Overall instructions * Average Explanation of concepts * Below average Questions and discussions / interaction * Good

Usefulness of program * Average Content of the programme (topic covered) * Average Practical and hands on Training provided * Good

Delivery methods * Excellent Trainers approach * Very good Overall satisfaction * Very good

Training center facilities like Classrooms, Laboratory, canteen and accommodation etc * Very good

Do you have any suggestion(s) as to how we could improve similar programmes/activities in future?

Suggestion No Suggestion

Any other feedback/suggestion/complaint for Training Programme ? Please provide your descriptive comments?

Feedback Feedback Provided

Submit Feedback

Copyright © AICTE 2020

All rights reserved.

After submitting, participants cannot give feedback again for that workshop.

PARTICIPANT WORKSHOP MARKS

Here participants can see marks given to them in eligible workshops by coordinators.




Logout



Participant
part@gmail.com

- General Details
- Profile
- Workshops
- Attendance
- Feedback
- Test Marks

Participant Workshop Marks

Search

ID	Marks Obtained	Total Marks
1	70	80
3	None	None

Items per page: 5
1 - 2 of 2

Copyright © AICTE 2020
All rights reserved.

CERTIFICATE

In this tab, participants can see all the workshops that are eligible (Attendance should be more than 80% and marks should be more than 60%) for certificate. By clicking on icon in red, Participants can download their certificates.

Participants can download certificate only after certificate approval by admin and overall attendance should have submitted by co-ordinator for that workshop. Mandate for should also be submitted by co-ordinator for certificate generation.



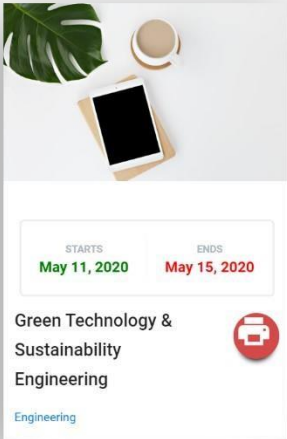

Logout



Participant
manoj@gmail.com

- General Details
- Profile
- Workshops
- Applied Workshops
- Attendance
- Feedback
- Test Marks
- Certificate

Workshops



Copyright © AICTE 2020
All rights reserved.

THANK YOU !

