



AICTE – Training And Learning (ATAL) Academy



Proposal for Conduction of AICTE Training and Learning (ATAL) FDP

on

“Recent Advances in Hydraulic Modelling (RAHM-2023)”

4th – 9th December 2023



Organized by

**Mining Engineering Department
Rajkiya Engineering College Sonbhadra
(An AICTE Approved Government Engineering College)
Churk-231206, Uttar Pradesh, India**

www.recsonbhadra.ac.in

ABOUT AICTE ATAL Programme

AICTE Training And Learning (ATAL) Programme is an initiative by AICTE which aims at empowering faculty to achieve goals of Higher Education such as access, equity and quality. This programme is designed to fulfill the need to train the young generation in skill sector and having faculty & technicians to be trained in their respective disciplines. It was felt that Training with latest tools and technologies is vital to keeping an institute competitive and more productive. Training is required for increasing the knowledge and skills of students to make them more employable to acquire global competencies. It also transforms them to harmonize with society and most importantly to make them a good citizen of the country.

Objective of ATAL Academy:

- To set up an Academy which will plan and help in imparting quality technical education in the country
- To support technical institutions in fostering research, innovation and entrepreneurship through training
- To stress upon empowering technical teachers & technicians using Information & Communication Technology
- To utilize SWAYAM platform and other resource for the delivery of trainings.
- To provide a variety of opportunities for training and exchange of experiences. Such as workshops, Orientations, learning communities, peer mentoring and other faculty development programmes.
- To support policy makers for incorporating training as per requirements

About Rajkiya Engineering College Sonbhadra (REC- Sonbhadra)

Rajkiya Engineering College, Sonbhadra was established by the Government of Uttar Pradesh in the year 2015 with one branch, Computer Science & Engineering with annual intake of Sixty (60). Later on, in 2016 two new branches Electronics Engineering and Electrical Engineering with intake of 60 each have been started. The college has been shifted to its own fully residential campus located at Churk, Robertsganj, Sonbhadra in the month of July 2017 and all academic activities from the session 2017-18 are conducted from its own campus. The fully residential campus consists of two Academic Buildings, Administrative building, Workshop, Hostels (Boys and Girls), Student Activity Centre, College Canteen, Grocery Store, round-the-clock Wi-Fi, electricity & water supply and other facilities for recreation.

About Mining Engineering Department (MED)

The Mining Engineering Department was established in 2023. The departments have highly qualified, committed, and well-experienced faculty members with various specializations. The faculties are involved in organizing and participating in several seminars, conferences, and workshops in addition to enhancing their academic responsibilities. They have also published research papers in various national and international journals of repute and presented papers at conferences in India. Over the years, the departments have become a center of excellence, providing in-depth technical knowledge and opportunities for innovation and research, with well-equipped computer facilities and smart classrooms.

Course Content: Water storage, distribution and optimization Ground water management Hydrology and its application Water quality assurance and controlling pollution Remote sensing and GIS application Instrumentation, Data Handling and Analysis IoT for Hydraulic Modelling, Artificial Intelligence application Hands-on session of Tools and Software used in AI and Water resource management Law for sustainable water resource management.

Target Audience: Faculty Members, Research Scholars, Master Research Students and Industry Professionals

How to apply: The registration for the FDP can be done through Atal academy online portal on the link: <https://atalacademy.aicte-india.org/login>

Registration Fee: There is no fee to attend this FDP

Chief Patron

Prof. J. P. Pandey

Hon`ble Vice Chancellor

Dr. A.P.J. Abdul Kalam Technical University, Lucknow

Patron

Prof. Geetam Singh Tomar

Director, REC Sonbhadra

Coordinator

Dr. Devendra Kumar Tripathi

Associate Professor, REC Sonbhadra

Co-coordinator

Dr. Ravi Prakash Tripathi

Assistant Professor, REC Sonbhadra

Organized by

Mining Engineering Department

Rajkiya Engineering College Sonbhadra

(An AICTE Approved Government Engineering College

Associated College of Dr. A.P.J. Abdul Kalam Technical
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Recent Advances in Hydraulic Modelling (RAHM-2023)

4th – 9th December, 2023

[Offline: 9:30 to 5:30]

Detail Session Plan

Day 1	Day 2	Day 3	Day 4	Day 5	Day 6
9:00 – 9:30 Inauguration					
9:30 – 12:00 Session 1 Application of Soft Computing Techniques in Hydraulic Engineering	9:30 – 12:00 Session 3 Climate Change and its Statistical Analysis	9:30 – 12:00 Session 5 WQA and Pollution Control in India	9:30 – 12:00 Session 7 Resistance to flow in open channel- can AI decipher?	9:30 – 1:00 Industrial visit	9:30 – 12:00 Session 10 Artificial Intelligence in Hydrological Modelling
12:00 – 1:00 Article-1 Discussion	12:00 – 1:00 Article-1 Discussion	12:00 – 1:00 Article-2 Discussion	12:00 – 1:00 Article-2 Discussion		12:00 – 1:00 Reflection Journal
1:00 – 2:00 Lunch					
2:00 – 4:30 Session 2 Hydraulics of Open Channels, Sediment Transport And Turbulence Study in Open Channels	2:00 – 4:30 Session 4 IOT-based Hydraulic Modelling	2:00 – 4:30 Session 6 Modelling Unit Hydrograph for Flood Estimation	2:00 – 4:30 Session 8 Application of PSO and GA in WRM	9:30 – 12:00 Session 9 River Engineering and Computer based Modelling	4:00 – 5:00 Valedictory Session
4:30 – 5:30 Practical sessions/Labs	4:30 – 5:30 Practical sessions/Labs	4:30 – 5:30 Practical sessions/Labs	4:30 – 5:30 Practical sessions/Labs	4:30 – 5:30 Practical sessions/Labs	4:00 – 5:00 Valedictory Session

Article-1: Ravi Prakash Tripathi, K. K. Pandey; Experimental study of local scour around T-shaped spur dike in a meandering channel. *Water Supply* 1 March 2021; 21 (2): 542–552. doi: <https://doi.org/10.2166/ws.2020.331>.

Article-2: Ravi Prakash Tripathi, K. K. Pandey; Numerical investigation of flow field around T-shaped spur dyke in a reverse-meandering channel. *Water Supply* 1 January 2022; 22 (1): 574–588. doi: <https://doi.org/10.2166/ws.2021.253>

Tentative List of Speakers

1. Prof. K. K. Pathak, Professor, IIT BHU, Varanasi
2. Prof. P. K. S Dikshit, IIT BHU, Varanasi
3. Dr. K. K. Pandey, IIT BHU, Varanasi
4. Prof. Anurag Ohri, , IIT BHU, Varanasi
5. Prof. Govind Pandey, Professor, MMMUT, Gorakhpur, UP
6. Prof. H. K. Pandey, MNNIT Prayagraj
7. Dr. Satanand Mishra CSIR AMPRI, Bhopal
8. Dr. Harinarayan Tiwari Managing Director, Floodkon
9. Prof. Bimlesh Kumar IIT Guwahati
10. Prof. Devendra Mohan IIT(BHU), Varanasi

