About the University

Guru Ghasidas Vishwavidyalaya (GGV), the only Central University, situated in Bilaspur, Chhattisgarh and is appropriately named after great Satnami Saint Guru Ghasidas, who championed the cause of the downtrodden and waged a relentless struggle against all forms of social evils and injustice prevailing in the society. The University is providing quality higher education and research to socially and economically challenge youths of the region. It is spread over about 655 acres of land. Having more than 8000 students and research scholars on roll, it conducts more than 62 demand-driven courses in 32 departments under 11 Schools of Studies in addition to National Centres for Endangered Languages, HRDC and Accelerator Based Research (NCAR). The university is blessed to be in a region having magnificent social and cultural heritage, especially the tribal traditions and practices, wonderful legacy of the inherent intellect and a rich bio-diversity.

About the Department

The department of Civil engineering is one of the youngest departments of the School of Studies of Engineering, GGV. The department is offering under graduate program in Civil Engineering and PG in Structural Engineering along with Ph.D. Program. Within its short span the department is on its way to carve a niche for itself among the leading technological institutes of India. The department is also offering consultancy & testing services for the external agencies, in addition to the internal consultancy services for the University. The department has developed state-of-the-art infrastructure including fully equipped laboratories to impart world class education. Extracurricular event is a regular phenomenon to ignite the minds of graduating buds.

Chief Patron

Prof. Alok Kumar Chakrawal

Hon'ble Vice-Chancellor, GGV, Bilaspur

Patron

Prof. Shailendra Kumar

Registrar, GGV Bilaspur

Convener

Prof. T. V. Arjunan

Dean, SoS (E & T), GGV , Bilaspur

Co-Convener

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Head, Civil Engineering Department

Coordinator

Dr. M. Chakradhara Rao

Associate Professor, Civil Engineering Department

Co-Cordinator

Mr. Rochak Pandey

Assistant Professor, Civil Engineering Department

Advisory Committee

Dr. R K Choubey, *Associate Professor, Department of CE*

Dr. VVSS Kumar Dadi, *Asso. Professor, Department of CE*

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

On

Sustainable Construction Materials and Technologies (SCMAT)

(21 – 25 February 2022)

Organised by

Department of Civil Engineering

SoS of Engineering & Technology

Guru Ghasidas Vishwavidyalaya

(A Central University)

Bilaspur- 495 009 (C.G.)

About ATAL Academy

All India Council for Technical Education (AICTE) through its newly established AICTE Training And Learning (ATAL) Academy have started unique faculty development programs in various thrust areas of modern technology. ATAL Academy successfully conducted 5 days face to face 190 FDP (Faculty Development programs) in nine thrust areas for A/Y 2019-20 and approximate 10000 faculty members. In 2020-21, 1000 online FDP are being conducted and more than one lakh participants have already participated including faculty, Research Scholar, PG students, CBSE teachers and Industry persons. The online FDP of 20-21 has been recognized as a world record by World Book of Record, London. This is also important that FDP sessions are recorded and available on portal so that anyone can learn in the future. ATAL Academy have also included 15 FDPs on blended learning and flipped classroom which is very important in post covid-19 scenario as to teach participants how to conduct classes in virtual mode and make them comfortable taking online exams and assignments. In the backdrop of announcement of National Education Policy (NEP) 2020, ATAL Academy is working in the direction of NEP, keeping in view the values and morals of Indian Education System. This is the largest online FDP program of the world where more than 40% female participants have joined.

About FDP

Industrial growth, construction boom, rapid urbanization, changing lifestyles, and unsustainable consumption patterns, have all lead to the generation of huge construction and demolition waste and are causing huge pressures on the limited urban landfill space. Around 30% to 40% of the urban solid wastes come from construction and demolition (C&D) activities. Further, due to enormous growth in industrial development, the consumption of cement is substantially increased in the recent times and the cement manufacturing industry produces annually about 1.35 billion tons of the greenhouse gas emissions which are about 7% of the total greenhouse gas emission by man-made to the atmosphere. To reduce the emission of greenhouse gases it is very much essential to replace OPC with alternative green building material. In India during 2017-18, the fly-ash produced was approximately 196 MT, out of which only 68% (approximately) could be utilized in various sectors and the remaining is simply dumped on land. Similarly, the Iron manufacturing industries produced on an average 12 million tonnes of slag during 2016-17 and this would rise to 27 million tonnes by 2030. Further, every year approximately 20 million tonnes of paddy is produced in India. This gives around 24 million tonnes of rice husk and 4.4 mil/ion tonnes of Rice Husk Ash every year. Handling of such a huge quantity of these wastes is a big challenge for the solid waste management. Therefore, on one hand there is a lot of concern about the natural resources such as virgin aggregates, and greenhouse gases emission particularly the CO_2 emission from the cement manufacturing industry and on the other hand, there is an increase in the generation of construction and demolition waste (C&DW), fly-ash, blast furnace slag and rice husk ash and its handling is a burning issue from the environmental point of view. Accelerated urbanization has also led to the spending of billions on construction for infrastructure and public sector building programs, which has resulted in an increasing need for construction materials and the management of related construction wastes. Utilization of C&D and industrial wastes as an alternative to the conventional materials in the construction not only reduces the problems of waste generation but also reduces the consumption of natural resources and emission of CO_2. Further, it reduces the environmental pollution and leads to the sustainable construction. The major themes of the FDP is as follows

- Recycled aggregate from C&D Waste and its applications
- Geopolymer concrete
- Self - compacting concrete
- Sustainable construction technologies
- Adaptive, Functional and Bio-Mimicked Fibers
- Marine Clay Based LC^3 Binder for Sustainable Construction
- Sustainable design of long span bridges
- Clay based pozzolana for concreting

Selection and Certification Criteria

Selection will be done based on first-cum-first serve basis and the confirmed candidates will be notified on receipt of registration form latest by 15th February 2022. The certificate shall be issued to those participants who are registered on ATAL Portal www.aicte-india.org/atal and attended the program with minimum 80% attendance and score minimum 60% marks in the test.

Who can Participate

The program is open to all members of AICTE/UGC Affiliated Institutes/Universities i.e. faculty Members/Research Scholars/PG Students/ Government Employees /Industry Persons.

Registration Process

- No registration fee will be charged from faculties and students.
- Registrations can be done online using the link: www.aicte-india.org/atal
- Last date of registration is 14t1h February 2022.
- Joining link for the online sessions will be shared to the selected participants on their registered Email.

Contact Address

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Department of Civil Engineering
Guru Ghasidas vishwavidyalaya (A central university), Bilaspur, Chhattisgarh, India

AICTE Training & Learning (ATAL) Academy Sponsored
One Week Online Faculty Development Program (FDP)
On
Sustainable Construction Materials & Technologies (SCMAT)
21st – 25th February 2022

Date	10-00 AM to 12-00 Noon	12-00 Noon to 12-15 PM	12-15 PM to 02-15 PM	02-15 PM to 03-00 PM	03-00 PM to 05-00 PM
Monday 21-02-2022	Inaugural Session & Session – 01 Adaptive, Functional and Bio-Mimicked Fibers for Modern Fiber Reinforced Concrete Prof. Nemkumar Banthia Professor and Canada Research Chair The University of British Columbia, Vancouver, Canada	Tea Break	Session – 02 Marine Clay Based LC^3 Binder for Sustainable Construction Dr. S Pradhan Asst. Prof. , Civil Engineering Department BITS Pilani	Lunch Break	Session – 03 Self-Compacting Concrete with Sustainable Materials Dr. Dinakar, P. Civil Engineering Department IIT Bhubaneswar
Tuesday 22-02-2022	Session – 04 Sustainable Materials and Life Cycle Assessment of Blended Cements Prof. Rathish Kumar P Professor Civil Engineering Department, NIT Warangal	Tea Break	Session – 05 Clay based pozzolana for concreting Prof. T D Gunneswara Rao Civil Engg. Dept., NIT Warangal	Lunch Break	Session – 06 Construction by Concrete 3D printing: Possibilities and Challenges Dr. Rahul A.V. Asst. prof. Civil Engineering Dept. IIT Tirupati
Wednesday 23-02-2022	Session – 07 Geopolymer Concrete from Alkali-activation of Fly ash and Slag Prof. KVL Subramaniam Civil Engg Dept., IIT Hyderabad	Tea Break	Session – 08 Sustainable Development of Building and Greenhouse Integrated Photovoltaic Thermal System with Earth Air Heat Exchanger Dr Sarat Kumar Panda Asso. Prof., Civil Engg Dept., IITISM Dhanbad	Lunch Break	Session – 09 Modelling of fracture parameters for crack propagation in recycled aggregate concrete Prof. Shailendra Kumar Civil Engineering Department GGV, Bilaspur
Thursday 24-02-2022	Session – 10 Sustainable Design of Long Span Bridges-A Global Perspective Sri Saibaba Ankala ME, IRS, MBA Hyderabad	Tea Break	Session – 11 Fly ash Concrete Subjected to High Temperature Prof. K. Srinivasa Rao Civil Engineering Department, Andhra University, Visakhapatnam	Lunch Break	Session – 12 Wellness & Stress Management Dr. Agam Das Goswami Assistant Professor VIT, Amaravathi
Friday 25-02-2022	Session – 13 Recycled Aggregate Based Concrete: Insightful Discussion Prof. Sudhir Kumar V Barai, Director, BITS Pilani & (Professor, Civil Engg Dept., IIT Kharagpur)	Tea Break	Session – 14 Recent Advances in Construction Technologies Dr S P S Rajput Assistant Professor Civil Engg Dept., MANIT Bhopal	Lunch Break	Interaction, Feedback and Valedictory Session