

## AICTE-ISTE SPONSORED INDUCTION/REFRESHER PROGRAME (ONLINE)

# ADVANCES IN MATERIALS PROCESSING AND CHARACTERIZATION

January 05-11, 2022



ORGANIZED BY: DEPARTMENT OF MECHANICAL ENGINEERING DAV INSTITUTE OF ENGINEERING AND TECHNOLOGY, JALANDHAR, PUNJAB - 144008

### **About the Program**

In the era of global competitiveness, advance materials are a major thrust area for research. 21st century has seen rapid advancement in materials in search for compatibility in aerospace applications, quest to develop biocompatible materials for implantation, ever increasing reliance on electronic goods and thus development in semiconductors. Composites, metals and advance polymers for 3D printing applications and environment friendly materials as new age materials are other curious domains in the material science for exploration. Progress in health care, energy, aviation, computing and several other domains depend on development in materials science. The race to develop new materials capable of exhibiting high strength to weight ratio, biocompatibility, ability to response to a stimulus and miniaturization required for nanotechnology applications has led the metallurgists and scientists to work extensively on developing and characterizing such materials for the related applications.

The course has been comprehensively structured to impart quality training to the participants by familiarizing with the current advancements in the material development, their processing and characterization together with the applications and shall also provide ample research avenues and related opportunities.

## **About the Institute**

DAV Institute of Engineering and Technology was established in 2001 under the aegis of DAV College Trust & Management Society, New Delhi. DAV College Managing Committee (DAVCMC) is the executive body of the said Trust and is the largest nongovernmental educational organization in India, managing a chain of about 900 institutions in India and abroad. Over the years, this nodal organization has played a stellar role in rejuvenating the Indian society intellectually, emotionally and spiritually. DAV institutions are known for the highest level of dedication, sincerity, commitment and discipline and have established a reputation for academic excellence and character building. DAVIET is the first Engineering Institute of DAV College Trust and Management Society. Approved by AICTE and affiliated to IKG Punjab Technical University, the Institute is accredited by NAAC with "A" Grade & Recognized by UGC under Section 2(f). The institute is located in the heart of city and spread over an area measuring about 18 acres possessing extremely beautiful landscape with a running canal on its back and historical Burlton Park on its front. The institute has been ranked as top college of Engineering and awarded the certificate of excellence for exemplary contribution is the field of Higher Education and is also ranked 15th amongst the Best Private Engineering Colleges of North India by India Today MDRA Survey 2019. DAVIET is carrying out original research of significance and cutting edge technology development. The institute also came up with some in-house developed products in its endeavor to combat COVID-19. It imparts training to students to make them competent, motivated engineers and scientists. The Institute not only celebrates freedom of thought, cultivates vision and encourages growth, but also inculcates human values and concern for the environment and the society. We believe in creating professionals equipped with right skills and attitude by endowing them with high moral values, sound intellectual powers, refined analytical and decision making skills.

## **About the Organizing Department**

Established in the year 2003, Department of Mechanical Engineering of the institute currently runs undergraduate courses with an annual intake of 60 students and as part of Regional Centre of IKG Punjab Technical University, Jalandhar, has also got a sanctioned intake of 25 students for post graduate courses leading to M.Tech. in Mechanical Engineering. The department is determined to provide the best of technical education to its students aimed at creating employable professionals and entrepreneurs. Regular use of Industry Week, an innovative practice conceived to enhance the skill, employability and entrepreneurial acumen of students, is one such exercise aimed at providing skill oriented education by bringing industry and academia in close proximity. Student activities, effective classroom teaching with judicious use of technology and focus on holistic development are some of the key features of education in the department

## Key areas to be covered

The focus of the program will be on imparting training to the participants in the domain of, but not limited to, the current developments and opportunities in the following key areas of materials processing and characterization:

- Additive Manufacturing
- Composite Materials
- Shape Memory alloys
- Smart Thermoplastic Materials
- High Entropy Alloys
- Bio Materials
- Metamaterials
- Friction Stir Processing
- Engineering Wetting and Superhydrophobicity
- Cold Spray and Applications

## Registration

No registration fee. Limited seats available. Preference will be given to ISTE members. Certificates will be awarded to the participants who will satisfy the requirement of a minimum of 80% attendance and 60% or more marks in **i**) atleast 3 out of total 5 quizzes (to be held one on each day) during the program AND **ii**) in the final assessment test to be held on the concluding day of the program. Online Registration by the eligible participants may be done on the given link :

#### https://forms.gle/aJzaZ6GkhC8QcXYq6

## **Important Dates**

Last Date for submission of online registration: 02.01.2022 Confirmation of selection: 03.01.2022







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Organized By: Department of Mechanical Engineering DAV Institute of Engineering and Technology Jalandhar (Punjab) - 144008

#### **PARTICIPANTS' REGISTRATION FORM**

Name in Full		
Designation		
Department		
Institute		4
Contact No		
Email ID	YANND	

ISTE Membership No., if a member\_

#### **Declaration by the applicant**

If selected, I agree to abide by the rules and regulations of the Induction / Refresher program and shall attend the sessions and appear for quizzes/test as per the norms of the program.

Signature of the Participant

Recommended

Head of the Department/Institute (with seal)



## Advances in Materials Processing and Characterization

#### Patron Hon'ble Dr. Punam Suri Padam Shri Awardee President DAVCMC, New Delhi

Program Co-Chair Ramandeep S. Johal HoD (Mechanical Engineering) DAVIET Jalandhar Program Chair Prof. Dr. Manoj Kumar Principal DAVIET Jalandhar

Program Coordinator Dr. Gaurav K. Dhuria Associate Professor (ME) DAVIET Jalandhar

#### **Organizing Committee**

Mr. Pankaj Sadana, Asstt. Prof.
Dr. D. Priyadarshi, Asstt. Prof.
Mr. S K Uppal, Asstt. Prof.
Dr. Ankush Kohli Asstt. Prof.

Mr. Chetan Darshan, Asstt. Prof. Dr. Aman Maini, Asstt. Prof. Dr. Gurveen Singh, Asstt. Prof.

#### **Address for Correspondence**

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