



# AICTE Training and Learning (ATAL) Academy Sponsored ONLINE



## Faculty Development Programme

on

# Material Science and Engineering approaches for Food System Design

(MSEAFSD-2021)

20<sup>th</sup> - 24<sup>th</sup> December 2021



**Organized by:**

**Department of Food Engineering & Technology,  
Tezpur University (A Central University),  
Napaam, Assam-784028 India**

### Eligibility:

Faculty members, Research Scholars, and PG students from various government or private Engineering Colleges / Institutions / Universities in the area of Food Process Engineering & related field are eligible to participate in the programme.

### Registration:

**[Closing Date: 16<sup>th</sup> Dec. 2021]**

All the Participants are requested to Register for this FDP through Online by using the following link: <https://atalacademy.aicte-india.org/signup>

### Coordinator:

**Prof. Brijesh Srivastava,**  
**Dept. of FET; Tezpur University**  
**Mobile: +91-7635804240**  
**email: [brijesh@tezu.ernet.in](mailto:brijesh@tezu.ernet.in)**

- Eligible Participants will be selected based on First Come First Serve basis (Max seat 200).
- Through online mode only. **The link will be provided later.**
- E-certificate will be issued to those Participants who have attended the Program with minimum 80% Attendance and scored minimum 60% Marks in the Online Test which will be conducted at end of the Programme.

### PATRON

Prof. V. K. Jain, Hon. Vice Chancellor, TU

### ADVISORS

Prof. D. K. Bhattacharyya, Pro-Vice Chancellor, TU  
Prof. S. K. Sinha, Dean, School of Engineering, TU  
Prof. Nandan Sit, Head, FET, TU  
Prof. Charu Lata Mahanta, FET, TU  
Prof. Sankar Chandra Deka, FET, TU  
Prof. Manuj kumar Hazarika, FET, TU  
Prof. KSMS Raghavarao, IIT Tirupati  
Prof. H.N. Mishra, IIT Kharagpur  
Dr. N.K. Rastogi, CFTRI, Mysore  
Prof. P.P. Srivastav, IIT Kharagpur

Eminent subject experts and researchers from prestigious academic institutes and Industries will deliver lectures on following topics on application in food processing:

- *Micro to Macro Level Structures of Food Materials*
- *Food Functionalization and properties improvisation*
- *Food stability and ingredients interactions*
- *Phase and State Transitions and Related Phenomena in Foods*
- *Food Biopolymer Gels, Microgel and Nanogel Structures, Formation and Rheology*
- *Interfacial Phenomena in Structured Food*
- *Food Structures and Delivery of Nutrients*
- *Materials Science of Freezing and Frozen Foods*
- *Emerging Processing Technologies on Food Material Properties*
- *Materials Science Approaches Towards Food Design*

### Organising Committee

Dr. Laxmikant S. Badwaik,  
Dr. Poonam Mishra,  
Dr. Amit Baran Das  
Dr. Nishant R Swami Hulle

### Technical Committee

Dr. Nishant R Swami Hulle  
Mr. Sourav Chakraborty  
Ms. Tabli Ghosh  
Dr. Dipankar Kalita  
Dr. Arup Jyoti Das  
Mr. Labadeep Kalita  
Ms. Swdwmsri Mashahary

**For further detail about the programme visit: <http://www.tezu.ernet.in/dfpt/>**



# “Material Science and Engineering Approaches for Food System Design (MSEAFSD-2021)”

from **20 – 24<sup>th</sup> December 2021**

Programme	Topic	Speaker
<b>Day-01 [20<sup>th</sup> Dec 2021]</b>		
Registration	Online Joining	
	Inaugural Session	Distinguish Guest
Lecture – 01	Food Stability and Ingredient Interactions	<b>Dr. Rekha Singhal</b> ICT, Mumbai, India
Lecture – 02	Micro to Macro Level Structures of Food Materials	<b>Dr. CL Mahanta</b> Tezpur University, India
Lecture – 03	Emerging Processing Technologies on Food Material Properties	<b>Dr. RK Singh</b> University of Georgia, USA
<b>Day-02 [21<sup>st</sup> Dec 2021]</b>		
Lecture – 04	Mechanistic Understanding of Food Processes	<b>Dr. Ashim K Datta</b> Cornell University, USA
Lecture – 05	Rheological Methods and Modeling, And Their Applications in Product Development	<b>Dr. Suwendu Bhattacharya</b> CFTRI, Mysore, India
Lecture – 06	Starch Modification: Novel Approaches for Food Product Development	<b>Dr. Nandan Sit</b> Tezpur University, India
<b>Day-03 [22<sup>nd</sup> Dec 2021]</b>		
Lecture – 07	Recent Advances in Membrane Processing for Food Product Development	<b>Dr. NK Rastogi</b> CFTRI, Mysore, India
Lecture – 08	Electrical-Field Assisted Nonthermal Food Processing for Enhancing Mass Transfer	<b>Dr. Brijesh Srivastava</b> Tezpur University, India
Lecture – 09	Formation And Stability of Bubble Containing Food Structures	<b>Dr. Keshavan Niranjan</b> University of Reading, UK
<b>Day-04 [23<sup>rd</sup> Dec 2021]</b>		
Lecture – 10	Application of Optical Sensing Technology for Food Quality, Authenticity, and Adulteration Detection	<b>Dr. Mohammed Kamruzzaman</b> University of Illinois, USA
Lecture – 11	Food Biopolymer Gels, Microgel and Nanogel Structures, Formation and Rheology	<b>Dr. D.C. Saxena</b> SLIET, Longowal, India
Lecture – 12	Machine Learning Approaches in Food Characterization and Process Design	<b>Dr. MK Hazarika</b> Tezpur University, India
<b>Day-05 [24<sup>th</sup> Dec 2021]</b>		
Lecture – 13	State/Phase Transitions, Ice Recrystallization, And Quality Changes in Frozen Foods Subjected to Temperature Fluctuations	<b>Dr. Shyam S. Sablani</b> Washington State University, USA
Lecture – 14	Introductory session on Life Skills	TBA
Evaluation	Evaluation of participants through online test	
	Valedictory	Distinguish Guest