

Engr. Hamna Batool

Lecturer

Department of Food Engineering,
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Profile

Motivated Food Engineering Lecturer and Aspiring Research Scholar with a demonstrated history of academic excellence, research innovation, and teaching experience. Equipped with expertise in **food processing systems**, food preservation techniques, and sustainable food production. Seeking a Ph.D. opportunity to further explore emerging technologies, optimize processing efficiency, and contribute valuable insights to food engineering and technology. Dedicated to fostering innovation, improving food quality and safety, and addressing global challenges in food processing and sustainability

Professional Experience

Lecturer (80% Teaching 20% Research) 2024-Cont.

Department of Food Engineering, University of Agriculture, Faisalabad

Course(s):

Dairy Processing Engineering	Food Operations 1	Meat, Poultry and Egg Processing
Food Processing and Engineering	Food Quality Control	Engineering Properties of Food

Food Safety Consultant, Freelance, Remote based 2023-2024

Key responsibilities involve

- HACCP plans including SOPs for various products of a UK based bakery
- Vegan product based survey studies

Research Assistant, Faisalabad, Pakistan 2023

Main Activities and Responsibilities: Conducting comprehensive literature reviews and background research to support project development, designing and implementing research methodologies and protocols to collect and analyze data effectively, collaborating with interdisciplinary teams to develop research strategies and achieve project objectives, contributing to the preparation of research reports, manuscripts, and grant proposals and management of workplace by leading her team

High School Teacher, The Educators, Faisalabad 2018-2022

Teaching and preparing students with respect to moral and social values. Time management learning. Enhanced managerial and communication skills

Internee, Shezan International Limited, Lahore 2017

Teaching and preparing students with respect to moral and social values. Time management learning. Enhanced managerial and communication skills

Education

M.Sc. (Hons.) Food Engineering, University of Agriculture, Faisalabad 2018-2021

Final grade: 3.94/4.00 | Grade A⁺ with 1st position in batch (Silver Medalist)

- Thesis: Production of Citrus Peel Powder by Using Different Drying Techniques for Value Addition

"Thesis focused on production of citrus peel powder using solar tunnel dryer, microwave dryer, and hot air oven. Quality tests, including physio-chemical and analytical analyses, were conducted, with microwave drying emerging as the most efficient method based on selected percentage analysis."

B.Sc. Food Engineering, University of Agriculture, Faisalabad 2014-2018

Final grade: 3.58/4.00

Courses 2016-Cont.

30+ Online and physical short courses from Coursera and other platforms in Food systems, Artificial Intelligence, Data analytics, Project Management and Research Methodologies etc. for soft and technical skills enhancements

Fellowships

Ecosphere Shift, Co-Founder 2024-Cont.

A virtual, non-profit platform to spread awareness about ESG, SDGs

NYCCC Fellowship, National Youth Club for Climate Change, Pakistan 2024

2 Months online course empowering youth for climate action

Science Fuse Fellowship, Science Fuse, Pakistan 2023-2024

Field(s) of study: Career Fellowship

McKinsey Forward Program, McKinsey & Company 2023-2024

Field(s) of study: Fellow Learner for professional growth

Pink Cohort Incubate, National Incubation Center Faisalabad 2023

Dedicated to promote Female Entrepreneurship

Women Engineers Development Sub-Committee Punjab, PEC, Co-opted member 2022-2024

An initiative by Pakistan Engineering Council (PEC) through governing member to foster Women engineers' empowerment

Projects

HACCP plan Baking Industry 2024

Design and Development of 3in1 Breakfast Maker (Final year project) 2018

Design and Fabrication of single Screw Extruder (Final year project) 2018

Design of Prototype Flame Peeler (Class Project) 2017

Operation Design of Sugar Industry 2017

Research Interests

AI-based cyber-physical systems for smart agriculture cum horticulture, and controlled environment agriculture.

Specific elements include computer vision, robotics, and machine/deep learning.

Food Processing | Artificial Intelligence | Machine Learning | Nano Technology | Spectral Imaging | HACCP |

Extrusion | Novel Emerging Food Processing Techniques | Food Safety and Quality |

Achievements and Honors

Graduated as Silver Medalist in Masters of Food Engineering from University of Agriculture Faisalabad 2023

Registered Engineer from Pakistan engineering Council, PEC Reg. No. FOOD00098 2021

Awarded with Prime Minister Laptop scheme for consistently performing well in academics 2016

Awarded with funded academic merit scholarship for three years by Higher Education Commission, Pakistan	2015-2018
Secured Merit Scholarship for academic excellence from University of Agriculture Faisalabad	2015

Conference, Seminars, Trainings

AI for Everyone, Trainee	2025
PEC Generative AI Training, Trainee	2025
Post Induction Training and Professional Development, UAF Pakistan, Trainee	2024
CPD Seminar on Business Process Transformation, Participant	2024
International conference on Food Process Engineering, University of Agriculture, Faisalabad, Participant	2018
International Seminar on Food Process Engineering & Industrial Linkage University of Agriculture, Faisalabad, Participant	2019
CPD Seminar on Business Process Transformation, PEC, Participant	2016

Skills

| MS Office | Food Safety and Management System | HACCP level 4 | AutoCAD | Endnote | Mendley | Generative AI |