

Curriculum Vitae

1: Personal Details

Name: SANA HASSAN(PhD)

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Designation: Currently working as Assistant Professor at Department of Industrial Engineering and Management, Faculty of Quality and Industrial Systems Engineering, University of the Punjab

2: Degrees

Completed 2023

PhD in Manufacturing Engineering

Research work: Performance evaluation of modified cutting tools in finish hard turning of newly developed DC53 tool steel.

University of Engineering and Technology, Lahore, Pakistan.

Completed 2014

Masters in Manufacturing Engineering

Research work: Metal Ceramic Composites: Effect of bond number on mechanical properties.

University of Engineering and Technology, Lahore, Pakistan

Completed 2007

B.sc Industrial and Manufacturing Engineering

Research work: A journey from MRP (material requirement planning) to ERP (enterprise resource planning): a case of Pakistan's textile sector.

University of Engineering and Technology, Lahore, Pakistan

3: List of courses and labs supervised

Sr. No.	Name of engineering courses	Labs supervised
1	Materials engineering	Materials engineering
2	Engineering Mechanics	Engineering Mechanics
3	Computer aided manufacturing (CAM)	Computer aided manufacturing (CAM)
4	Advance Manufacturing Processes	Conventional Machining/workshop
5	Entrepreneurship	
6	Facilities planning, warehousing and Material Handling	
7	Lean production system	
8	Flexible manufacturing systems	
9	Production Planning and control	

10	Automation and robotics	Automation and robotics
11	Plant Maintenance	
12		Project Management
13	Health, safety and environment engineering	
14	Quality tools and techniques	Quality tools and techniques
15	Human resource management	

4: Other education and expertise

- 3 days training course from Pakistan Industrial Technical Assistance Center on Programmable Logic Controllers.
- 6 weeks training course from Pakistan Industrial Technical Assistance Center on Engineering Drafting.
- One week Faculty Orientation Program from Human Resource Development Center, Punjab University Lahore.
- One week in service Faculty Training Program from Department of Micro biology and Molecular Genetics, Punjab University Lahore.
- Successfully completed One week training course from TEVTA, Lahore on Programming CNC lathe, held from 20-2-12 to 25-2-2012 .
- One week training course from PIQC Institute of Quality, Lahore on Six Sigma Green Belt as intimated by SQII Singapore
- Developed a PLC trainer board, in collaboration with PITAC Lahore to control multiple electrical devices, for the automation and robotics lab of IQTM.
- Attended one day CPD short course on Renewable Energy Technologies (Solar Energy) held on Jan 28,2013 at IEP , Lahore.
- Attended one day workshop on structural equation modeling (SEM) using AMOS held on April 6th,2013. Organized by ORIC, PU.
- Participated in a training program on Six Sigma Green Belt held on 27-30th September,2013. Organized by National Productivity Organization (NPO), Pakistan Lahore.
- Successfully completed Project planning, Scheduling and Progress Monitoring course held on 17-20August, 2015 at National Institute of Design and analysis (NIDA), Lahore.
- Participated in a awareness seminar on HEC research projects under technology development fund held on 10th august 2018 organized by ORIC, PU.
- Participated in seminar on World Quality Day held in University of the Punjab, in 2018.
- Organized and participated in a 2 day training on Modeling and Simulation of Lean Production Systems, held on February 6 and 7, 2019 at IQTM, PU.
- Participated in one day training workshop on HOW TO IMPLEMENT OBE IN HEIs held on November 2nd, 2019. Organized by Institute of Human skill development.
- Participated in the "engineering innovative award" at the Pakistan auto show 2022, organized by the Pakistan association of automotive parts and accessories manufacturers (PAAPAM) held in expo center Lahore 29-31st July,2022.
- Participated in 1st engineering capstone expo-22 arranged by PEC, held on September 19,2022 at Falettis hotel Lahore.
- Participated in two-day advanced training on OUTCOME BASED EDUCATION AND ASSESSMENT SYSTEM OF ACCREDITATION (OBE/OBA) for PEC program

- evaluators, faculty and quality directors from HEIs held at UET lahore,24-25 August,2022.
- Attended two-month online training on Data Analytics boot camp offered by ATOMCAMP Pakistan held from 5th August,24-5th Oct,24.

5: Language Skills

Native language :Urdu
Other languages: English

6: Current Employment

Start Date: 2010
Job Title: Lecturer
Employer: Institute of Quality and Technology Management, University of the Punjab
Start Date: 2024
Job Title: Assistant Professor
Employer: Institute of Industrial Engineering and Management, Faculty of Quality and Industrial Systems Engineering, University of the Punjab, Lahore Pakistan.
Job status: Full time Government Employee

7: Previous Work Experience

After graduation, I started my career in 2007 as an After Sales Engineer in Honda Atlas Cars, Pakistan. Worked in the factory for one year and then switched to academia.

8: Career Breaks

No career breaks. However, I have travelled with my husband (for his official work) to Amsterdam and Paris from 2012 till 2019. Every time I used to take one month unpaid leaves and stayed there as a house wife.

9: Research Grants

- 1: Research grant availed by university of the Punjab in 2016, Rs. 150,000/- which was used for the development of Programmable logic controller boards (PLC) for training of Industrial engineering final year students for automation and robotics lab.
- 2: Research grant availed by university of the Punjab in 2018, Rs. 150,000/- which was used for the development of metal ceramic composites using aluminum and alumina matrix to analyze the effect of bond number on mechanical properties.
- 3: Research grant availed by university of the Punjab in 2020, Rs. 200,000/- to purchase tools and materials to work on CNC turning machine.
- 4: Research grant availed by university of the Punjab in 2023, Rs. 200,000/- to work on wire edm machining of metals.

10: Research Supervision (MS Industrial Engineering and Management)

- 1: Six sigma DIMAC methodology application in air condition manufacturing system. (2017)

- 2: Combination of heuristic and simulation for assembly line balancing: a case study of automotive industry. (2017)
- 3: Sustainable disinfection using android based UVC robot. (2017)
- 4: Investigating the impact of after sales services on battery industry performance. (2015)
- 5: Integration of VSM and simulation to reduce waiting time in radiology department. (2022)
- 6: Green innovative practices and its impact on environmental and organizational performance: a case of Pakistan pharmaceutical sector. (2022)
- 7: Comparative assessment of dry and cryogenic turning of AISI D2 tool steel using CBN cutting tools. (2023)

11: Other key academics merits

- Controller examination at Institute of Industrial Engineering and Management.
- Outcome Based Education System (OBE) implementation committee member.
- Industrial liaison in charge.
- Internship program in charge
- Arranging recruitment drives in collaboration with the top industries in Pakistan.

12: Scientific and Societal Impact

ENTERPRENURSHIP JOURNEY

Design, developed and tested an ultra violet C (UVC) radiation based disinfecting prototype for health care related pathogens. The prototype has been presented on multiple forums:

- Presented a research paper titled “ Android based UV-C disinfecting mobile unit” at 3rd Asia pacific international conference on emerging engineering (APICEE21), held on 5-6th March,2021. Organized by Indus University Karachi.
- Participated in the NASSER BIN HAMAD youth creativity award held in 2021.
- Presented our startup named GREEN DISINFECTION in the national startup championship organized by superior university held at expo in 2022.
- Presented the research work in 3rd KANS scientific competition held in 2023.

The system is still under testing, and the team is planning to market it.

13: Membership

PAKISTAN ENGINEERING COUNCIL membership. Registration number is INDUS/736

14: Conference Proceedings

1: Constraints of using Coal Fly Ash in agriculture: An innovative approach.

1Amna Faisal 1*Sana Hassan 1Shazray Khan

1Institute of Quality and Technology Management (IQTM), University of the Punjab, Pakistan.

ISEM 2020 *THE 5th INTERNATIONAL SYMPOSIUM ON THE ENVIRONMENT AND MORALS.*

2: Presented a research paper titled “ Android based UV-C disinfecting mobile unit” at 3rd Asia pacific international conference on emerging engineering (APICEE21), held on 5-6th March,2021. Organized by

Indus University Karachi.

3: Participated in organizing 2nd International Conference on Assessing Quality in Higher Education, Punjab University Lahore.

4: Participated in organizing 3rd International Conference on Assessing Quality in Higher Education, Punjab University Lahore.

5: Delivered an oral presentation entitled “A Improvement in the performance of computer numeric controlled (CNC) router by OEE for digital pattern manufacturing” at 11th annual International Industrial Engineering and Operation Management Conference virtually held on 7-11th March,2021.

6: Application of Value Stream Mapping as Lean Tool along with Arena Simulation in Public Health Care Services: A Case of the Radiology Department

Sana Hassan & Asim Amjad Lecturer at Department of Industrial Engineering and Management Faculty of Quality and Industrial Systems Engineering, University of the Punjab Pakistan.

International conference on Industrial Engineering and Operations Management Manila, Philippines, March 7-9,2023

7: The Driver of Green Innovation Practices and Its Impact On Organizational And Environmental Performance: Evidence From Pharmaceutical Sector Of Pakistan.

Sana Hassan, Rida Zaniab, Muhammad Hamza Ihtisham

1st International Conference on Women Development in Engineering, Science and Technology (WD-EST'23) October 03-05, 2023

8: Application of Value Stream Mapping as Lean Tool along with Arena Simulation in Public Health Care Services: A Case of the Radiology Department.

Sana Hassan & Saher Afshan

1st International Conference on Women Development in Engineering, Science and Technology (WD-EST'23) October 03-05, 2023

REFREES

1: Name: Dr. Rakhshanda Naveed

Assistant Professor at Department of Industrial and Manufacturing Engineering

Organization: University of Engineering and technology, Lahore, Pakistan.

Contact: rakhshanda@uet.edu.pk

2: Name: Dr. Sarmad Ali Khan

Associate Professor at Department of Industrial and Manufacturing Engineering

Organization: University of Engineering and Technology, Lahore, Pakistan.

Contact: drsarmad@uet.edu.pk

3: Name: Prof. Dr. Usman Awan

Director at Institute of Quality and Technology Management

Organization: University of the Punjab, Lahore, Pakistan.

Contact: director.iqtm@pu.edu.pk

4: Name: Dr. Mohamad Shafique

Director at Institute of Industrial Engineering and management

Organization: University of the Punjab, Lahore, Pakistan.

Contact: mshafiq.iqtm@pu.edu.pk

5: Name: Dr. Hakeem ur Rehman

Assistant Professor at Institute of Quality and Technology Management

Organization: University of the Punjab, Lahore, Pakistan.
Contact: hakim.iqtm@pu.edu.pk