

Hira Sultan

Assistant Professor

I aim to contribute by advancing innovative research, fostering critical thinking, and promoting collaborative learning. My goal is to generate impactful scientific knowledge that addresses real-world challenges and enriches the global scientific research.



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Khi, PAK



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LANGUAGES

English

Urdu

EDUCATION

2022 – 2025

Ph.D. (Chemistry) NED University of Engineering & Technology CGPA 3.87

2013-2017

MS (Chemistry) Jinnah University for Women C.G.P.A 3.63

2006-2010

B.S (Chemistry) University of Karachi 1st division

2004-2006

INTERMEDIATE A

2002-2004

MATRICULATION A+

RESPONSIBILITIES

- Teaching
- Class Advisor (First year , Undergraduate)
- Research Supervisor
- Class Counselor
- OBE Member

PROFESSIONAL EXPERIENCE

November 2018 till Date

Lecturer

Department of Chemistry N.E.D. University of Engineering and Technology

January 2014-October

Lecturer (Contract)

Department of Chemistry N.E.D. University of Engineering and Technology

COURSES TAUGHT IN UNDERGRADUATE & POSTGRADUATE

B.E. Courses

- Applied Chemistry and Applied Chemistry for Engineers

B.S. Courses

- Inorganic Chemistry
- Physical Chemistry
- General Chemistry
- Inorganic Chemistry
- Fats & Oils
- Separation Technique

M.S. Courses

- Separation Technique
- General Chemistry
- Electroanalytical Technique

THESIS/PROJECT

- Ph.D. thesis on Synthesis and Applications of Novel Crown Ethers based on Medicinal Compounds. Under the supervision of Dr. Nuzhat Arshad and Co-Supervision of Dr. Alessandro Mandoli.
- MS thesis on “Synthesis, Characterization and Biological Activities of Transition Metal Chelates” under supervision of Dr. Noshab Qamar and Co-supervision of Prof. Dr. Khalid Muhammad Khan S.I.T.I in the year 2017
- Co- Supervise final year Project on “Synthesis of Biological Compounds and their micro analytical techniques”
- Co- supervise final year project on “Synthesis of silver Nano particles by using vitamins and amino acids”
- Co- Supervise of ISP (MS) on “Synthesis, characterization and biological activities of Schiff bases”
- Supervise final year project on green synthesis of Nanoparticles and its application
- Supervise final year project on Synthesis of mixed ligand complexes of amino acids and their biological activity.
- C-Supervise Adsorption of textile waste on modified & unmodified adsorbent.
- Supervise Final year project on Electrochemical studies of Atenolol in different buffer system.
- Supervise final year project on derivatives of caffeic acid and their antioxidant properties.
- Supervising final year project on Solgel synthesis and its application in dye degradation studies.
- Supervising final year project on metal chelates of 8-HQ-5-CA.
- Supervising MS Thesis on synthesis and isolation of eriodictyol and its biological applications.

HONORS/AWARDS

- Qualified for the Scholarship of Faculty Development Program
- Member of Outcome Based Education System (OBE) in NED University of Engineering & Technology
- Class Advisor & Class Counselor of First Year (Undergraduate Program)

- Qualified GAT General in 2015

TRAININGS/WORKSHOPS

- Attended session for Accelerate your research using Elsevier's Scopus, Jan 13, 2002
- Participated in KIBGE workshop on "Planning, Execution and Successful Accomplishment of Research Degree", April 2014, Dr. A. Q Khan Institute of Biotechnology and Genetics, University of Karachi
- Participated in 09 Days Workshop on "Current Analytical and Computational Techniques in Chemistry (HPLC)", June 2014, Federal Urdu University of Arts, Science & Technology.
- 03 Days Workshop on "Analytical Techniques", September 2014, Jinnah University for Women.
- Participated in 5th Workshop on "Developing Industry Driven Technology", January 2015, N.E.D University of Engineering and Technology.
- Faculty Development Program by HEC
- Awareness of Intellectual Property and Commercialization Policy, 12th November 2019
- Understanding of Harassment Rules and Prevention, 25th November 2019
- Preparation of Course file, 06 January 2020
- Importance of feedback analysis, 22 January 2020
- Online Evaluation & assessment of Students, 2nd December 2020
- HEC's Undergraduate Policy 2020-21, 29th June 2021
- Duties and Responsibilities of Class Advisors, 18th October 2021
- OBE System Framework 28th – 31st December 2021
- Data Base Development and network Administration, 28th – 29th March 2022
- How to write effective project proposal, 29th September 2022
- Molecular Docking Workshop on May 24, 2025.
- Online training on Analytical Method Validation, April 26, 2025.

COFERENCES/SEMINARS

- Participated in "IYCr South Asia Summit Meeting on Vistas in Structural Chemistry", April 2014, H.E.J Research Institute, International Centre for Chemical and Biological Science.
- Participated in Seminar on "Use of Mass Spectrometry in Organic Chemistry", November 2015, Federal Urdu University of Arts, Science &

Technology.

- Participated in one –day Training Workshop on “Approaching towards Comprehensive Elimination of Persistent Organic Pollutants (Pesticides) in Pakistan”, 2017, Ministry of Climate Change, Govt. of Pakistan.
- Participated in poster presentation in 28th National and 16th International Chemistry Conference on Global Changes and Chemistry, 20th -22nd November 2017, FUUAST.
- Participated in oral presentation in 2nd international conference on advanced material and process engineering, 12th and 13th December 2017, NEDUET.
- Oral presentation in 2nd international conference on advanced material and process engineering on Adsorption of Methylene Blue and Malachite Green on bark of guaiacum officinale “A Low cost effective Adsorbent”, 12th and 13th December 2017, NEDUET.
- Participated in 1st international industrial Chemistry conference , 26th – 28th Feb 2021, NEDUET
- Poster Presentation in 1st International industrial Chemistry Conference, 26th -28th February 2021
- Participated in hands on training workshop on HPLC, NEDUET.
- Attended 1 credit hour course on @ Laboratory safety and security, 14th Jan 2022, LEJ.
- Organized talk on Alleviating Planet and the people (Outreach Program in in collaboration with UNICEF and UNDP, 26th Jan 2022
- Participated in 15th International Symposium on Natural Product Chemistry (ISNPC-15)”, during February 21st -24th, 2022.
- Organized One Day Seminar on Role of Chemist in Pharmaceutical Industries by BOSCH Pharmaceutical, Pvt. Ltd, 29th June 2022.
- Organized One Day Recruitment Drive for Undergraduate Students by Matco. Foods, 21st September 2022.
- Organized 2nd International Industrial Chemistry Conference, 3rd – 4th March 2023.

PUBLICATIONS

- Noshab Qamar, Hira Sultan, Khalid Mohammed Khan, Rafia Azmat, Raheela Naz, Abdul Hameed and Mehreen Lateef, 8-Hydroxyquinoline-Methionine Mixed Ligands Metal Complexes: Preparation and Their Antioxidant Activity, Chemistry Select (2019), 4, 3058 –3061
- Noshab Qamar, Hira Sultan, Ahmad Raheel, Maria Ashfaq, Rafia Azmat, Raheela Naz, Mehreen Lateef, Khalid Mohammed Khan and Tanzila Arshad, Heterochelates of metals as an effective anti - Urease agents couple

with their docking studies, Pak. J. Pharm. Sci., Vol.32, No.3(Suppl), May 2019, pp.1179-1183

- Sultan, Hira, Nuzhat Arshad, and Mehreen Lateef. "Novel Crown Ether-Functionalized Fusidic Acid Butyl Ester: Synthesis, Biological Evaluation, In Silico ADMET, and Molecular Docking Studies." *Molecules* 30.9 (2025): 2033.

PATENT

- Novel Crown Ethers based on Fusidic Acid C-21 Butyl Ester: Preparation of potent antioxidant and antiulcer agents.

REFERENCES

- References will be submitted upon request