

Curriculum Vitae (Saba Fakhar)

Lecturer, NED University of Engineering and Technology, Karachi, Pakistan

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An enthusiastic, dedicated professional in prestigious educational institution, having seventeen Years of teaching experience with strong academic background, multi-tasking skills and Organizational / administrative expertise.

Professional Experience:

- **Lecturer:** From 1st April 2010 to date in Department of Electronic Engineering, NED University of Engineering & Technology, Karachi, Pakistan.
- **Lab-coordinator:** Since September 2018 to date in Department of Electronic Engineering, NED University of Engineering & Technology, Karachi, Pakistan.
- **Lab Incharge:** Since 2011 to date in Basic Electronics Laboratory-I, Department of Electronic Engineering, NED University of Engineering & Technology, Karachi, Pakistan.
- **Counselor:** for undergraduate students (Batch 2020).
- **Member:** Final year project evaluation /examiner committee.
- **Member:** Self Assessment Report (SAR) preparation committee for PEC Re-accreditation process.
- **Incharge SENTEC** (Society for the promotion of Science, Engineering & Technology- SENTEC) : From July 2010 to August 2012 , NED University of Engineering & Technology, Karachi, Pakistan.
- **Lecturer:** From 1st March 2006 to 31st March 2010, Department of Electronic Engineering, Usman Institute of Technology, Karachi, Pakistan.
- **Lecturer(visiting faculty):** From July 2005 to December 2005 at Department of Electrical Engineering, NED University of Engineering & Technology, Karachi, Pakistan.
- **Assistant Engineer:** From October 2005 to November 2005 at Logitrac Company.

Teaching Experience:

Courses Taught (at Undergraduate Level)

- Electromagnetic Fields
- Power Electronics
- Integrated Circuits
- Electrical Machines
- Basic Electronics
- Electronics I
- Electronics II
- Network Analysis
- Electronic Devices and Circuits
- Basic Electrical Engineering

Demonstrated/conducted Practical of following Courses

- Digital Integrated Circuit
- VLSI System Design
- Solid State Devices
- Programming Language
- Basic Electronics
- Electronic Devices and Circuits
- Digital Electronics
- Power Electronics

Have revised the workbook of following courses

- VLSI System Design
- Basic Electronics
- Electronic Devices and Circuits
- Digital Electronics
- Electronics-II

Academics Details:

- **Masters of Engineering (Telecommunication):** From 2007 to 2009, achieved CGPA 3.7 out of 4.0 from Electrical Engineering Department, NED University of Engineering & Technology, Karachi, Pakistan.
- **Bachelor of Engineering (Electrical Engineering):** From Jan 2001 to Dec 2004, secured 78%age (weighted percentage with 81% in BE) from Department of Electrical Engineering, NED University of Engineering & Technology, Karachi, Pakistan

Teaching and Administrative Responsibilities:

- Conducting lectures to undergraduate students by means of demonstration, practical, discussion and tutorials
- Supervisor and manager of all undergrad laboratories for smooth conduction of practical by ensuring availability of functional resources.
- Undergraduate time table coordinator
- Active participation in preparation of self-assessment report for PEC-reaccreditation process of Electronic Engineering Department, NED University of Engineering & Technology, Karachi, Pakistan.
- Active participation in compliance of OBE system as a teacher and lab coordinator.
- Participated as an Organizer in International Conference on Emerging Trends in Telecommunication and Electronic Engineering (INTERACT-15-16th March 2023) organized by Department of Electronic Engineering, NED University of Engineering & Technology, Karachi, Pakistan.
- Preparing teaching materials and revising laboratory manuals for the progress of students
- Utilizing the skills and qualities by handing over assignments to students
- Assigning, assisting and assessing student project work
- As faculty incharge, supervised various teams for participation in various project exhibition in engineering universities and institutions.
- Actively participated in Syllabus revision of electronic courses at undergrad level.
- Actively participated in PEC Re-accreditation visit preparation.
- Performing other duties entrusted by higher authorities

Research Interest:

- Data Acquisition and Control
- Artificial Intelligence
- Machine learning applications in proactive detection

- Integration of Power Electronics technology in smart grid and substations

Publications:

- “Semantic Segmentation for various application: Research Contribution and Comprehensive Review”, published in MDPI Engineering Proceedings. 5th May 2023.
- “Design and development of low cost data embedded acquisition and control system in virtual instrumentation”, International Journal of Scientific and Engineering Research-IJSER, July 2013

Trainings/ Workshop/ Seminar Conducted and attended

- Conducted a Training session, Titled “Psychomotor Domain Assessment” in 2022 at Department of Electronic Engineering, NED University of Engineering & Technology, Karachi, Pakistan.
- Attended Trainings on “Complex Engineering Activities” conducted by Departmental OBE Cell, Department of Electronic Engineering, NED University of Engineering & Technology, Karachi, Pakistan.
- Attended several Trainings on “OBE implementation” , conducted by COBEC, Department of Electronic Engineering, NED University of Engineering & Technology, Karachi, Pakistan.
- Attended an “International Conference on Emerging Trends in Telecommunication and Electronic Engineering-INTERACT- 2023, organized by Department of Electronic Engineering, NED University of Engineering & Technology, Karachi, Pakistan on 15-16th March 2023.
- Attended Research Seminar, conducted by ORIC department at Sir Syed University of Engineering & Technology in September 2021.
- Attended an online training on “effective use of Google classroom for teaching and assessment” conducted by NED University of Engineering & Technology, Karachi, in 2020
- Attended First International conference organized by Electronic/telecommunication department, NED University of Engineering & Technology, Karachi in 2018.
- Participated as project evaluator in HUPEC-2018 organized by Hamdard University, December 2018.
- Attended two day training on “Resource Sharing and optimization”, 2018. □ Attended a talk on “organic electronic and Photonic devices”, 2017.
- Organized SPEC (Student project exhibition and competition-2014) at NED University of Engineering & Technology, Karachi, as faculty head.
- Supervised and assessed several undergraduate projects.
- Attended seminar on practical education on photonics, Jan 2012, at NEDUET
- Attended two days’ workshop on internal QMS Auditor training by Quality Management Cell, December 2011, NED University of Engineering & Technology, Karachi,.
- As incharge-SENTEC , organized an all Pakistan Project Exhibition and Quiz competition at NED University of Engineering & Technology, Karachi, in July 2011.
- Three days training on Effective teaching practices, 2011, at NED University of Engineering & Technology, Karachi,.

- Attended and supervised team for participation in National Engineering Robotics Competition 2011- NUST- Islamabad as Incharge SENTEC.
- Two day training on Research Orientation, 2010, at NED University of Engineering & Technology, Karachi.
- Two day Training on Role of Teacher as Examiner and Invigilator, September 2010, at NED University of Engineering & Technology, Karachi.
- Three days workshop on mentorgraph, August 2010, at NED University of Engineering & Technology, Karachi.
- Two day workshop on Machine Vision, August 2010, at NED University of Engineering & Technology, Karachi.
- Seminar on guidance of Robots and Fuzzy logic, 2010, at NED University of Engineering & Technology, Karachi.
- Workshop on HEC digital Library, 2010, at NED University of Engineering & Technology, Karachi.
- Supervising and assessing various semester projects.

Skills/Expertise:

- Verilog Simulator (Modelsim), Quartus
- NanoHub software
- MATLAB
- Circuit simulation in NI Multisim, OrCAD
- Programming in C
- Electronic circuit Layout designing using Microwind

Professional Affiliation:

- Pakistan Engineering Council (Registration number: Elect-22046)