

Talha Bin Nadeem

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LECTURER

CAREER OBJECTIVE:

Aspiring to work with an organization where I can impart my education and industrial expertise to students. To constantly upgrade my knowledge and pursue a research-oriented career in field of engineering.

ACADEMIC QUALIFICATION:

- **M.E.M. in Energy & Plant Management**
NED University of Engineering and Technology, Karachi, Pakistan
CGPA: **3.88** on scale of 4.00
Year of Passing: 2018
- **B.E. (Bachelor of Engineering) in Mechanical Engineering**
NED University of Engineering and Technology, Karachi, Pakistan
CGPA: **3.87** on the scale of 4.00 (**2nd Position**)
Year of Passing: 2014
- Intermediate from Adamjee Govt Science College, Karachi, Pakistan
A-1 Grade with 87.5%
Year of Passing: 2010
- SSC (Science Group) from Dawn Public School, Karachi, Pakistan
A-1 Grade with 89.5%
Year of Passing: 2008

PROFESSIONAL EXPERIENCE:



NED UNIVERSITY OF ENGINEERING & TECHNOLOGY
(December 2018 to Date)

Designation: Lecturer
Department of Mechanical Engineering

Courses Taught:

Taught following courses to the students of undergraduate and postgraduate program.

- ✓ ME-558 Energy Modelling and Forecasting
- ✓ ME-224 Internal Combustion Engines (Theory & Practical)
- ✓ ME-116 Basic Mechanical Engineering (Theory)
- ✓ ME-112 Thermodynamics (Theory)
- ✓ ME-214 Computer Programming & Applications (Theory & Practical)

Students' Feedback:

Courses	Semester	ISO Students' Feedback
ME-214 Computer Programming & Applications	Spring 2021	8.719
ME-224 Internal Combustion Engines	Fall 2020	8.395
ME-116 Basic Mechanical Engineering	Fall 2020	8.846
ME-215 Internal Combustion Engines	Fall 2019	9.462
ME-214 Computer Programming & Applications	Spring 2019	9.165
ME-215 Internal Combustion Engines	Fall 2018	8.142

Administrative Responsibilities:

- Performed a leading role in PEC visit 2021 by clearing several queries of their representatives.
- Worked as a coordinator for **preparation of course files** for **PEC visit 2021**.
- Also prepared several **criterion files** for **PEC visit 2021**.
- Prepared lab manual of **ME-322 IC Engines and Powerplant Lab**.
- Currently working as a **Focal Person** for NAVTTC – **PM Skill for All Programs** offered in Department of Mechanical Engineering.
- As a **LMS Facilitator**, performed a leading role to train faculty members for recording video lectures and conducting online sessions.
- Prepared and submitted online departmental **Self-Assessment Report (SAR)** in 2020 for PEC accreditation.
- Prepared a detailed procurement list of equipment for **IC Engine lab** for **PC-1**.
- Currently working on the modification of the **website of Department of Mechanical Engineering**. Successfully added all the course content, books, and course learning outcomes (CLOs) of all the courses offered in B.E. and M.E. program of Mechanical Engineering department on website.
- Also working on the modification of **website for International Mechanical Engineering Conference (IMEC)** by Institution of Engineers Pakistan (IEP).
- Focal Person for the implementation of **G-Suite** in Department of Mechanical Engineering.
- Prepared a **tutorial video** to help and guide all students regarding the use of G-Suite account uploaded on the official webpage of MED.

Fundings and Journal Publication:

Funding

- Awarded funding on project titled, **“Design and Fabrication of Vertical Axis Wind Turbine (VAWT) using Magnetic Levitation (MagLev)”** by NED Alumni Association of Southern California (NEDAASC).

Published/Accepted Manuscript

- **Talha Bin Nadeem**, Ahsan Ahmed, Asad A. Naqvi, Muhammad Saad, Azan Ali Abbasi, Syed Muhammad Usama Arshad, and Farooq Ahmed, “Designing of heating, ventilation, and air-conditioning (HVAC) system for workshop building in hot and

humid climatic zone using CLTD method and HAP Analysis - A comparison”, **Arabian Journal for Science and Engineering**, 2022.

- Asad A. Naqvi, **Talha Bin Nadeem**, Ahsan Ahmed, and S. Asad Ali Zaidi, “Techno-economic design of grid-tied PV system for a residential building”, **Advances in Energy Research**, Volume 8 (1), pp. 59-71, 2021.
- Asad A. Naqvi, **Talha Bin Nadeem**, and Ahsan Ahmed, “Designing of an off-grid Photovoltaic system for a remote location”, **TECCIENCIA**, Volume 16 (31), 2021.
- Ahsan Ahmed, Asad A. Naqvi, **Talha Bin Nadeem**, and Muhammad Uzair, “Experimental investigation of dust accumulation on the performance of the photovoltaic modules: A case study of Karachi, Pakistan”, **Applied Solar Energy**, Volume 57 (5), pp. 370-376, 2021.

Under Review Manuscript

- Ahsan Ahmed, **Talha Bin Nadeem**, Asad A. Naqvi, Mubashir Ali Siddiqui, Muhammad Hamza Khan, Muhammad Saad Bin Khalid, and Syed Muhammad Ammar, “Investigation of PV utilizability on university buildings: A case study of Karachi, Pakistan”, **Renewable Energy**.
- Asad A. Naqvi, Ahsan Ahmed, **Talha Bin Nadeem**, Talha, Muhammad Hamza Tariq, Rayyan Ahmed Abbasi, and M. Ahmed Raza Siddiqui, “Optimized working fluid for waste heat recovery Organic Rankine Cycle”, **Energy**.
- Asad A. Naqvi, Faaz Ahmed Butt, **Talha Bin Nadeem**, Muhammad Anas, Abu Ali, Bilal Qamar, and Umar Shahid, “Photovoltaic powered electrolyzer for the production of clean Hydrogen”, **Proceedings of the Institution of Mechanical Engineers, Part A: Journal of Power and Energy**.
- Asad A. Naqvi, **Talha Bin Nadeem**, and Ahsan Ahmed, “Efficiency improvement of photovoltaic module for air cooling”, **Applied Engineering Letters**.

Supervised Final Year Projects:

Session 2021-22

- Design and Feasibility study of the Solar Powered Carport for University Campus parking.
- Techno-economic analysis of Rooftop Grid Tied PV System under Pakistan’s net metering/feed-in tariff (FIT) scheme using HOMER.

Session 2020-21

- Designing of HVAC system for new workshop building of K-Electric in Korangi town gas turbine power station via HAP software.
- Design and analysis of Shell and Tube type Heat Exchanger in compliance with International Standards.
- Designing and fabrication of Vertical Axis Wind Turbine using Magnetic Levitation (MagLev).

Session 2019-20

- Design of HVAC System for Latifa Hospital (UAE).



NATIONAL REFINERY LIMITED - (Sept 2015 to Dec 2018)

Designation: Maintenance Engineer

Department: Maintenance Department

Key Responsibilities:

- Responsible for the complete maintenance activities of Boiler & its Auxiliaries including **preventive & break-down maintenance**.
- Responsible for conducting **Boiler Annual Shutdown**.
- Planning & organizing **manpower, materials & spares** for Routine maintenance activities & Annual shutdown of Boiler.
- Responsible for the generating **Purchase Requisitions**, follow up of the materials from concerned vendors.
- Responsible for **coordinating all documents** related to boiler area including **Annual Shutdown & all other Routine Maintenance Reports and Spare parts lists**.
- To utilize **ERP System (SAP ECC6 Plant Maintenance Module)** for creating Maintenance Order, monitoring inventory level, raising Notice of Requirement & Notice of Manufacturing, Budgeting/Costing of maintenance jobs, issuing Job Completion Certificates, issuing Material Requisition Slips etc.
- Maintenance & trouble shooting of Rotary equipments such as **Centrifugal Pumps, Reciprocating & Screw Compressors** as well as Stationary equipments such as **Heat Exchangers, Cooling Towers & Storage Tank**.
- To ensure all **Fire Preventive** equipment was maintained and tested to insure its 100% operation.
- Co-ordination with **Projects Department** & responsible for the **Modifications** for the better performance/availability of the equipments.
- Co-ordinate with contractors for any sort of Modifications in Utility Area including **Boilers, Water Treatment Plant & RO Plants** and its **Tanks**.
- To receive all types of work permits including **Hot work permit, Crane operation permit, confined space entry permit, electrical energize/de-energize permit and cold work permit**.
- Authorized to sign **Material requisition slip** for issuance of material from warehouse.
- To evaluate and check **final measurements** for issuance of **job completion certificates**.
- Familiar with international codes & standards like **API 610, API 618, API 682 & TEMA**.

Turnaround/Planned Shutdowns:

1) Lube-II Refinery Turnaround 2017

- Worked as a **Critical Pipelines (CPL)** coordinator in Lube-II Refinery Turnaround 2017.
- Completed all the **pipelines modification** jobs proposed by Operations and Project Department in accordance with ASME B31.

- Carried out all the **process pipelines** repair/replacement jobs recommended by inspection team in accordance with ASME B31.
- Coordinated with DESCON Engineering Limited personals for completion of all jobs.

2) **Fuel Refinery Turnaround 2016**

- Served in Inspection Team for **Pressure Vessels and Reactors** in Fuel Refinery Turnaround 2016.
- Carried out initial inspection of pressure vessels and reactor.
- Pre-cleaning and post-cleaning final inspection of pressure vessels and reactor in accordance with **API 510** and **ASME Section VIII**.
- Providing recommendations for maintenance jobs (if required).
- Box-up of pressure vessels and reactors after completion of all jobs.



AUVITRONICS LIMITED (House of Habib)-(Apr 2015 to Sept 2015)

Designation: Trainee Engineer

Department: Maintenance Department

Key Responsibilities:

- Implementation and monitoring of all mechanical related works at floor as per approved drawings and methods and **safety rules (HSE)**.
- Estimation, preparation and assignment of the resources such as **manpower, materials, consumables, equipment, tools, etc.**, required for all mechanical and related works prior to execution.
- Designing of the **layouts** of the existing & under construction building in Port Qasim plant.
- Make the **Preventive Maintenance Schedule** of the Port Qasim plant **Injection Molding machines**, its accessories & other Utilities equipment such as **compressors, boiler, chillers, cooling towers** and **AHU Systems**.

TECHNICAL SOFTWARES

- MATLAB
- ANSYS (ICEMCFD, CFX, CFD Post, Workbench)
- Hourly Analysis Program (HAP)
- Minitab
- RET Screen
- Unigraphics NX-8
- Turbo C

HONOURS, AWARDS AND ACHIEVEMENTS

- **2nd Position Holder** in Mechanical Engineering Department of Batch 2010-11.
- Secured **second highest CGPA** in Masters in Engineering and Management (Energy and Plant Management) programme offered in Mechanical Engineering Department.
- Awarded a **4-year** merit scholarship in undergraduate.
- Awarded a laptop in **Prime Minister Scheme** in Phase I.
- 3-month certified course of **Web Engineering** from Centre for Continuing Engineering Education (CCEE) in NED University of Engineering and Technology.
- Certified Course of **Unigraphics NX8** from **NED University of Engineering and Technology**.

PERSONAL SKILLS

- Good grasp over **engineering** procedures & **documentations**
- Ability to **learn fast** and work under **pressure** and **deadlines**
- Enthusiasm to accept **new challenges** and have **strong communication skills**
- **Innovative, self-confident, problem solving, decision making & team player**
- Awareness of **Health and Safety Environment (HSE)**
- Effective **leadership** skills

COMMUNICATION SKILLS

Fluent in written and spoken: **English and Urdu**

INTERESTS

Cricket and Music