

ERUM KHAN

EDUCATIONAL INFORMATION

2008 - 2010	M.E. Mechanical (Design Engineering) from NED University (1 st position, 3.55 CGPA).
1998 - 2002	B.E. Mechanical (exams held in Nov. 2001) in A-1 Grade (11 th position, 80.73%), from NED University of Engineering and Technology, Karachi.
1995 -1997	H.S.C. in 1 st division (A Grade, 73.3%) from B.I.E. Karachi.
1993 -1995	S.S.C. in 1 st division (A-1 Grade, 85.5%) from B.S.E. Karachi.

PRESENT STATUS

NED University of Engineering & Technology

(from 1st Dec. 2011 to till date)

Recently join NED University as Assistant Professor (Adhoc) in Mechanical Engineering department. I am teaching Production Engineering – I (theory) and Engineering Drawing (practical).

Subjects of Interest (practical experience)

- CAD/CAM
- CAD (ME)
- Design Engineering (ME)
- Production Engineering
- Engineering Drawing
- Machine Design
- Solid Mechanics and Stress Analysis

Agriauto Industries Limited (HOH)

(from 1st Aug. 2008 to 16th Dec. 2011)

Worked as Deputy Manager in Design & Development Department and was responsible for:

Project Planning & Monitoring

- Process / technical study of part.
- Parts costing.
- Preparation of project proposal; in order to perceive the project feasibility.
- Development of bill of material.
- Material consumption requirement and optimization of material consumption to minimize wastage.
- Material ordering for sample, pilot lot and volume production.
- Project planning & scheduling, from designing to mass production.
- Monitoring of project plan.
- Technical documentation preparation.
- Preparation of SQAM (Supplier Quality Assurance Manual) documents.
- Technical data compilation for Input Output ratio and forwarding it to Commercial Depart.

Designing

- Product designing (part modeling and drawing generation).
- Reverse engineering of sheet metal parts and sheet metal dies designing.
- Designing and manufacturing of sheet metal jigs and fixtures.
- Designing and manufacturing of tooling for machined parts.
- Designing and manufacturing of Inspection gauges.

General Execution

- Development of OTS, Pilot Lot and VP.

- Define checking and manufacturing standard for different products.
- Coordination with different departments for timely availability of 3Ms.
- Correspondence with vendors for development of parts.
- Coordination/liaison with customer and responding to customer queries on corporate email account.
- Conduct trainings
- TS-16949 Audits

Projects (Achievements):

- Instrument Panel (242L-Corolla)
 - Development of 21 components of Instrument Panel for 242L Corolla, including part modeling, die designing, inspection jig designing, drawing generation, die manufacturing, assembly, OTS, pilot lot and volume production.
- Instrument Panel (IMV-Helix)
 - Designing of 21 components of Instrument Panel of IMV Helix for IMC, including part modeling, die designing, inspection jig designing and drawing generation.
- Chain Cover (Motorcycle)
 - Development of 10 components of motorcycle chain cover for replacement market, including reverse engineering (scanning, surfacing and parts modeling), dies designing, welding and inspection fixtures designing, manufacturing of dies and fixtures, assembly, OTS, pilot lot and volume production etc.
- Case Damper CD70, Case Damper CD100, Pipe Fork CG125, Piston Rod CG125 (AHL)
 - Development of above mentioned projects for Atlas Honda Limited, including costing, project feasibility, arrangement of raw material, process flow finalization, designing and manufacturing of production tooling, designing and manufacturing of inspection tooling, PQC documentation, OTS making, Pilot lot making and start of volume production.

National Institute of Design and Analysis (NIDA) (from 10th March 2008 to 30th July, 2008)

Worked as Senior Instructor. NIDA is funded by Ministry of Industries, Production & Special Initiatives, Govt. of Pakistan. This is an interactive countrywide initiative involving contemporary distance learning techniques to bring Design & CAD/CAM to every location in Pakistan. These centers are to upgrade technology in industry with a focus on design using software tools.

My responsibilities in NIDA were:

- Conduct trainings on different CAD/CAM related technologies
- Prepare training course outline
- Execute design related projects and provide design consultancy
- Marketing for design project

Simcon International (Pvt.) Ltd. (from 15th Jan. 2003 to 15th March 2008)

Worked as Deputy Manager and Head of CAD/CAM/CAE Department. Core responsibilities in CAD/CAM/CAE department were to manage the activities related to:

Business Development:

- Marketing and sales of CAD/CAM/CAE software and hardware in which Simcon deals.
- Dealing and negotiating with customers.
- Making comparison of product with other available products.
- Liaison with the principal companies.
- Organizing seminars and workshops in consultation with principal companies to promote their products in Pakistan.
- Provide technical support, after sales support and trouble shooting of both software and hardware.
- Organizing and conducting corporate trainings on different CAD/CAM/CAE related technologies.

- Prepare training course outline.
- Preparation of technical proposal and quotation as per customer requirements.
- Prepare business plan with appropriate strategies for each product and communicate to respective principals for subsequent follow up.
- ISO related activities of CAD/CAM/CAE department.

Technical:

- 3D Part Modeling (that include Product Development, Reverse Engineering 3D applications) by using Imageware, Unigraphics and SolidEdge.
- 3D Scanning by using Konica Minolta and point processing by using Polygon Editing Tool (PET).
- Rapid Prototyping by using world class 3D Systems SLA (Stereo-lithography).

I have experience of:

- 3D Part Modeling by using drawings, IGES data, Point Cloud Data and by CKD part.
- Mold Designing and Electrode Extraction
- Die Designing
- Jigs and Fixtures Designing
- 3D Scanning
- Rapid Prototyping
- Drafting i.e., 2D Drawings Generation
- CAM (Tool Path Generation)
- Marketing and Sales
- Trainings

Projects (Achievements):

- Karakoram Deck Assembly
 - Designing and Manufacturing of 55 components of Karakoram Deck, including part modeling, assembling, die designing, welding jig designing, inspection jig designing, CNC and conventional machining, etc...
- Development of Greenton London Beauty Box
 - 3D Part Modeling of 18 plastic parts of beauty box for skin treatment.
- SMPL Mufflar
 - Designing and Manufacturing of 18 components of motorcycle silencer including parts modeling, dies designing, welding and inspection fixtures designing, etc.
- Motorcycle Fuel Tank
 - Designing and Manufacturing of 8 components of motorcycle fuel tank for Diamond Industries
- Etc...

ISO 9001-2000

- For the implementation of ISO 9001:2000 Quality Management System, worked as Management Representative (MR) Coordinator. I was involved in the Procedures Writing, Issuing, Implementing and then Maintaining records of the whole company, also External Audits, scheduling and conducting Internal Audits, organizing MR meetings, conducting sessions for the awareness of ISO 9001:2000 and internal audit.

INDUSTRIAL TRAINING CONDUCTED

- Mold Designing (using UG NX-5)
- Sheet Metal Forming Simulation (using AutoForm)
- Advanced CAD/CAM (using UG NX-5)
- 3D CAD Modeling (using UG NX-5)
- Advanced Sheet Metal Forming Simulation (using AutoForm)

- Advanced 2D Drafting (using UG NX-3)
- Inhouse trainings on UG-NX5, 3D Scanner, Quality Control & Assurance, Internal Audits, ISO 9001-2000, MS Officer etc.

TRAININGS ATTENDED

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| ○ AutoForm Software (Sheet Metal Forming Simulation) | (In Simcon by AutoForm representative from UK) |
| ○ Stereo lithography (SLA) Machine (Rapid Prototype) | (In Simcon by 3D Systems representative from Germany) |
| ○ SolidEdge (Designing) | (In Simcon by UGS representatives from Singapore) |
| ○ AVEVA (Plant Designing) | (In Simcon by AVEVA representative from Dubai) |
| ○ Internal Quality Auditing | (In Simcon by PIQC) |
| ○ Quality Management System | (In Simcon by PIQC) |
| ○ Mechanical Desktop | (In NED by AutoDesk) |
| ○ AutoCAD | (In NED by AutoDesk) |
| ○ Team Survivor | (In Agriauto) |
| ○ Igniting Commitments | (In Agriauto) |

INDUSTRIAL EXPERIENCE

Successfully completed six months Graduate Trainee Engineer Internship at International Power (HUBCO Power Station) at HUB. Department visited were:

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|---|--|
| ○ Planning and Quality | ○ Performance and Efficiency |
| ○ Commercial and Procurement | ○ Chemistry and Environment |
| ○ Operation (Plant) | ○ Outages and Project (Annual Overhauling) |
| ○ Electrical Engineering | ○ Instrument and Control |
| ○ Mechanical Engineering Section (Day-to-Day Maintenance) | |

Also gain experience of Turbine (Steam), Condenser (16,000 tubes), Boiler (1013 tons/hr), and different types of Pumps (Feed Pump at 200 bar), Generator (21.5 KV and 323 MW), Transformer (Step up 21.5KV to 500 KV), Valves, their working principle, operation & maintenance, dismantling and assembling, inspection and testing (NDT) etc.

COMPUTER SKILLS

Designing and Simulation Software

- Polygon Editing Tool (3D Scanning software with Konica Minolta to handle Point Cloud Data)
- Imageware (certified)
- Unigraphics *Solid Modeling, Free Form Modeling, Assembling, Drafting, Mold Wizard, CAM* (certified)
- Solid Edge (certified)
- AutoForm (certified)
- Fast Blank
- AutoDesk Mechanical Desktop (certified)
- AutoCAD 2000 (certified)
- 3D Non Contact Digitizing (Konica Minolta Scanner)
- Faroarm Platinum (CAM2Q)
- Rapid Prototype
- Ansys & ProE (Partially)

General

Windows XP, MS Office (MS Word, MS Power Point, MS Excel, MS Outlook, MS Project, MS Visio), Internet, Intranet, Acrobat Distillar, Acrobat Writer, Imaging, Paint, ACDSee, Snagit etc.

INTERNSHIP

KARACHI SHIPYARD

19th June to
28th July, 2000

- Design Office
- Mechanical Shop & Foundry
- Ship Repair
- Quality Control, Quality Assurance
- Inspection and Testing
- Engineering Planning
- One year experience in National Refinery Limited (Reforming Unit) for final year project.

SCHOLARSHIPS

- Received University Assistance Scholarship.
- Received Syeda Mubarak Begum Scholarship from Badar Ali Foundation (Packages Limited Lahore).

INTEREST AND ACTIVITIES

- Taken part in debate, essay writing and quiz competition.
- Reading newspapers and magazines.

REFERENCES

- Mr. Ahmad Safi
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- Mr. Saeed Rizvi
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