

Cover letter

BSc degree

I have a Bachelor of Science (BSc) in mechanical engineering from Jordan University of Science and Technology, June 2003. Although the BSc degree in Jordan is five years degree, I finished the whole credit hours within four years only with GPA equal to 75.0 %. Many modules were passed to cover the recent advances in mechanical and mechatronics engineering, such modules: mechanical design (three subjects), vibration engineering, thermo-fluid systems, automatic control, fuzzy logic and control, system dynamics, numerical analysis, C++ programming, CAD tools ...etc. Subjects outlines are available upon your request. On the other hand, a solid background has been achieved on: mathematics, numerical analysis, programming language (C++ and Matlab 6.5 Simulink). The engineering training, I spent two months practical training at Vocational Training Corporation, Jordan.

My training emphasized on mechanical system maintenance particularly the electromechanical systems of automobiles, also I was sponsored to visit Aleppo University, Syria for four weeks during my training. My graduation project title was "Automatic material handling system", through this project an automatic handling system was designed and controlled.

MSc degree

I have a Master of Science (MSc) in mechanical engineering –specialized mechatronics engineering- from Jordan University of Science and Technology, December 2006, with total GPA 86.4 %. The MSc degree in Jordan comprises a course work which lasts for 18 months, followed by MSc thesis with minimum 12 months duration. Regarding to the course work, nine advance subjects were passed and one seminar. Such subjects: IT for engineering, embedded systems design, advance control systems, MEMS engineering, advance modeling and simulation, advance programming tools (C++), systems integration ...etc. Through these subjects, a thorough understanding of mechatronics engineering was attained.

The MSc thesis was about MEMS modelling and simulation, in particular modeling and simulation of an integrated electromagnetic micropump for particle laden application. The research work revolved about modeling and simulation of a novel concept of electromagnetic micropump. A high level of analytical skill and optimization were needed to complete the design. The Matlab Simulink was utilized to simulate and optimize the overall system, while a FEMM finite element package was used to validate the simulated electromagnetic response.

PhD degree

I have a Doctor of Philosophy (PhD) in electronics engineering from Cork Institute of Technology, Ireland. My area of dissertation research was protection of miniaturized embedded systems under different

Cover letter

mechanical forces. The research work had many challenges and objectives mainly modelling and simulation of nonlinear dynamic systems. Modelling included developing a complex and nonlinear models analytically and numerically, while simulation included simulating the developed models using Multi-Physics finite element solver, e.g. ANSYS. The work was ended by validating the models experimentally using different experimental set-up. The main income of my PhD research was getting a high level of scientific knowledge on materials modelling and simulation particularly the nonlinear ones, nonlinear FEA, structure design and optimization, system integration, embedded system design and solid mechanics. More details would be provided upon your request.

Industrial Experience

One year as a technical services engineer in the Jordan Aircraft Maintenance Company (JorAMCo). I worked in the production department facing directly the aeroplane systems, carrying out the necessary technical tasks such as: periodical and preventative maintenance, faults diagnosis, and Engineering Order (EO) which comes directly from manufacturer to modify electrical/mechanical systems.

Then, I worked for National Electrical Power Company (NEPCo) from October 2004 till March 2008. I held a technical service engineer position in the department of transportation. Main responsibility was maintaining and developing the electromechanical systems of different crane brands. The crane system was including electrical control boards, hydraulic systems, and high-voltage-insulator washing machines. The remarkable performance I had shown forced the company to promote me in the first year to be a leader of a technical team consisted of 15 highly qualified technicians. Other responsibilities were assigned such as on/off-vehicle maintenance, external purchasing, tenders and reporting.

Others

Academically, my extensive course work in the mechanical engineering department at Jordan University of Science and Technology has allowed me to gain a wide and comprehensive knowledge on mechanical and mechatronics engineering. While a high level of research skills, experience, and publications are from the PhD degree and MSc thesis.

Technically, my proven track record of successfully performing variety kinds of complex technical/industrial problems makes me an ideal candidate for conducting the desired research work with high quality and competitive time.

Personally, I am a leadership, innovative, quantitative, methodological, well organized, energetic, confident, analytical and hard worker.