

CURRICULUM VITAE

NAME : **Prof. Dr. Bassam Al-Helou.**

TITLE : President of Zarqa University
Professor of Mechanical Engineering,

MARITAL STATUS: Married

OFFICE ADDRESS : Zarqa University
P.O Box 132222 – Zarqa13132
Jordan
Tele: 962-5- 3821100

EMAILS : president@zu.edu.jo
heloub@hotmail.com

EDUCATION:

Ph.D: Mechanical Eng. Technical University of Budapest, Hungary (BME), 1992.
Process Planning. Dissertation title “**CONSTRUCTION AND ECONOMIC PROBLEMS OF HEAT RECOVERY SYSTEMS IN AIR CONDITIONING**”.

M.Sc. Mechanical Eng. Technical University of Budapest, Hungary (BME), 1989.
Process Planning. Dissertation title “**AIR CONDITIONING SYSTEMS FOR SWIMMING POOLS**”.

WORK EXPERIENCE:

2017 – present President of Zarqa University.

2016 – 2017 Vice President of Zarqa University.

2013 - Present Professor of Mechanical Engineering in Mechanical Engineering Department at Zarqa University.

2012- 2013 Associate Professor of Mechanical Engineering in Mechanical Engineering Department at Zarqa University.
Head of Mechanical Engineering Department.

2010- 2012 Associate Professor of Mechanical Engineering in Electrical Engineering Department at Zarqa University.

Sept.- October 2010	Dean of Faculty of Engineering Technology at Zarqa university
2008- 2010	Associate Professor of Mechanical Engineering in Civil Engineering Department, at Al-Isra University.
May 2007 – October 2008	Director, Center for Consultation, Continuous Education, and Community Service.
	Associate Professor of Mechanical Engineering in Civil Engineering Department.
2006 - 2007	Associate Professor of Mechanical Engineering, in Electrical Engineering Department. Chairman of Engineering Workshops
2004 – 2006	Assistant Professor of Mechanical Engineering, in Electrical Engineering Department, and Chairman of Engineering Workshops at Al-Isra University, Jordan
2001-2003	Assistant Professor of Mechanical Engineering in Electrical Engineering Department at Al-Isra University. Head of Electrical Engineering Department, Chairman of Engineering Workshops.
1993- 2000	Assistant Professor of Mechanical Engineering in Electrical Engineering Department. Chairman of Engineering Workshops at Al- Isra University. Amman, Jordan.
1998/1999	Part time Assistant Professor at Applied Science University. Jordan.
1994 –1995	Design Engineer at Albiadeer Engineering Office, Amman, Jordan.
1989 –1991	Design Engineer at AETV company, (German - Hungarian company).

APPRECIATION CERTIFICATES:

- A certificate of appreciation from His Majesty King Abdullah II, for participating in the third session of the Committee to evaluate the award of His Majesty King Abdullah II. 2007.
- A certificate of Appreciation from (USAID) program, for active participation in the national program Faculty For Factory, (FFF) 2006

SABBATICAL LEAVE: I spend the sabbatical leave in the summer of 2016, at Leoben University in Austria.

ADDITIONAL EXPERIENCE:

- General Secretary of the International Arab Conference on Quality Assurance, since 2017.
- Editor in Chief of "Zarqa Journal for Research and Studies in Humanities, Since 2017.
- Editor in Chief of the International Journal of Quality Assurance, Since 2017.
- Researcher and Evaluator at The Higher Council of Science and Technology, Industrial Research and Development Fund, since 1999 up to now.
- Chairman of Committee of Scientific day "Research and Industry" April, 2010.
- Member of the Graduate studies of the Faculty Engineering, 2010.
- Member of evaluation committee of Global Conference on Renewable Energy Approaches for Desert Regions [GCREADER] Amman, Jordan 28-31 October 2008.
- Member of the Committee of Accredited Evaluation at JUMP (European) program.
- Founder of the Department of Mechanical Engineering, and a co-founders of the Energy Department at Zarqa University.
- Member of the evaluation committee of the National Program Faculty for Factor, from 2008 to 2010.
- Member of the Committee of Accredited Evaluation in King Abdullah II for Excellence of the Prize Evaluation Council of 2007 to Excellence Government Performance and Transparency.
- Coordination committee member of the National Program Faculty for Factor, 2007 to 2010.
- Member of the committee of the Center for Consultation, Center for Consultation, Continuous Education and Community Service at Al-Isra University. 2006 to April 2009.
- Conducted research in the areas of Mechanical and Industrial Engineering.
- Engaged in several administrative committees to improve the quality of education at Al-Isra University.
- Organization committee member of the 3rd Jordanian Mechanical and Industrial Engineering Conference, Amman 09-12 May 1999.
- Participated in a multi-national study to improve and serve the local community needs in Sahab industrial city 1994 (Chairman of Group).
- Comprehensive exam committee member in Jordan, 1995/1996.
- Co-founders of the Faculty Engineering at the University of Isra.

CONFERENCES:

- The Third Asian-Arab International Conference on Higher Education "Re-Formation of Higher Education", Malaysia Kuala Lumpur , 25-26 Jun, 2018.

"Higher Education and Quality Assurance, Quality Assurance and Accreditation, Best Practices."

- The Eighth International Arab Conference on Quality Assurance in Higher Education, Lebanon 11-13 April, 2018, "Culture of Quality".
- The Third Arab Turkish Conference on Higher Education, 13-15 Feb. 2018.
- The Seventh Session of the General Conference of the Federation of the Universities of the Islamic World (FUIW). Morocco, Rabat, 13-14 Feb. 2017.
- 4th International Scientific Conference on Applied Sciences and Engineering. Langkawi Malaysia, Sulfur Dioxide, Carbon and Nitrogen Oxides Effects on the Environment of Zarqa Governorate. 3-4 Oct. 2015.
- The 14th Jordan Science Week, Science and Technology for Sustainable Development, Amman, 3-6 May 2009.
- The 11th Jordan Science Week, Amman, 28 Sep1/10/ 2007.
- The 1st Regional Conference on Developing Service Markets and Value Chains, Amman 19-21 February 2007.
- The 3rd Minia International Conference for Advanced Trends in Engineering. 3-5 April 2005. "Research and Development in Jordanian Industry According to the Effect of Financial Support".
- The ICT Innovation Partnership Symposium, Amman, 7-8 December, 2004. I was appointed by the organizing committee of the conference to deliver a lecture on Industrial Research and Development Fund: Experiences in Bridging Academia with Industry.
- Solar Energy Conference, Amman, Jun 30- July 3-2003.
- 4th Jordanian International Mechanical Engineering Conference, Amman, 8-10 October 2001.
- International Conference of Energy Systems, 2000 ICES, 2K Amman, 25-28 Sept.2000.
- Water Nation Conference, 11-13 September 1999.
- 3rd Jordanian Mechanical and Industrial Engineering Conference, Amman 09-12 May 1999.
- 2nd. Jordanian International Conference for Mechanical Engineering, Amman, 1-5 June 1997. (The Optimum State of Heat Exchanger Bundle of Tubes of Parallel Streams).
- 1st Jordanian Mechanical Engineering Conference, Amman, 25-28 June 1995.

PUBLISHED WORKS:

1. **Bassam Al-Helou** and Thomas Kienberger.
Heat Exchanger Design According to Economical Parameters, sent to publication, (International Journal of Automotive and Mechanical Engineering)
2. **Bassam Al-Helou**
Air Pollutants Effects on the Environment of the Al-Durra Site in Aqaba City, sent to publication. International Journal of Innovative Research in Science, Engineering and Technology. Vol. 5 No.2, 1976-1983, 2016. DOI:10.15680/IJIRSET.2016.0502145

3. **Bassam Al-Helou**
Sulfur Dioxide, Carbon and Nitrogen Oxides Effects on the Environment of Zarqa Governorate. 4th International Scientific Conference on Applied Sciences and Engineering. Langkawi Malaysia, 3-4 Oct. 2015.
4. **Bassam Al-Helou**
Mathematical Analysis of How Electrical Tanning Center Site Affected by Air Pollutants. American Journal of Applied Sciences Vol. 9 (11), 1839-1847, 2012. DOI 10.3844/ajassp.2012.1840.1848.
5. **Bassam Al-Helou.**
Air Pollutant Effects on the Environment of the Al-Hashimyeh Town. International Journal of Environmental Science and Development vol. 3, no. 3, pp. 240-245, 2012. DOI: 10.7763/IJESD.2012.V3.224
6. **Bassam Al-Helou**
Modeling and Comparative Study between a 250 and 1000kg Wiener Machines for Chocolate Softness . International Journal of Applied Science and Engineering. Taiwan, vol.10,(3), 2012.
7. **Bassam Al-Helou**
Increasing Boiler Efficiency by Using Different Measurements and Types of Firetube Plates and Different Nozzles. British Journal of Engineering and Technology. Vol. 1 No.3, 21-38, 2012
8. **Bassam Al-Helou.**
Modification and Development of a Blow Molding Machine. Scientific Research- Engineering, USA, 2012, 4, 188-197.
9. **Bassam Al-Helou**
An Experiment of Chocolate Softness Measurements Using a New Design Machine. Jordan Journal of Mechanical and Industrial Engineering. Vol. 5 (4), 2011.
10. **Bassam Al-Helou**
The Economic Feasibility of Rebuilding Al-Isra University Tunnel – Mechanical Factors. American Journal of Applied Sciences volume 3 (4), 2006.
11. **Bassam Al-Helou and Mohammed Kanan**
Research and Development in Jordanian Industrial According to the Effect of Financial Support. The 3rd Minia International Conference for Advanced Trends in Engineering. 3-5 April 2005.
12. **Bassam Al-Helou and Hisham Hilow**
Evaluating the Effect of Financial Supporting to Jordanian Industries for Research and Development. Journal of Engineering Sciences, University of Assiut Vol.33 (2), pp (469-490), 2005.

- 13. Bassam Al-Helou** and Bashar A. Sinokrot
Air Quality Comparison Between Industrial And Residential Communities,
Environmental And Ecology Journal, Volume 22 (3), 2004 West Bengal, India.
- 14. O. Dhaimat and B. Al-Helou**
The Role of Centrifugal Pumps In Water Supply, Journal of Applied
Sciences, Vol. 4(3), 2004 .
- 15. Bassam Al-Helou**
Study of The Economical Parameters Affecting A Counter Flow Heat
Exchanger. University of Assiut - Journal of Engineering Sciences -
Vol.32 No. (2), 2004.
- 16. Bassam Al-Helou**
Evolving An Inverted Extrusion Piston, Journal of Applied Sciences. Vol.
4 No. (1), 2004.
- 17. Bassam Al-Helou** and O. Dhaimat
Case Study of Rehabilitation of Water Network System in Jordan, Arab
Universities Journal of Engineering Science. Vol.10 (2), 2003, Iraq.
- 18. Bassam Al-Helou**
The Optimum State of Heat Exchanger Bundle of Tubes of Parallel Streams.
2nd Jordanian International Conference for Mechanical Engineering, Amman,
1-5 June 1997.
- 19. Bassam Al-Helou.**
Economy of Heat Recovery Systems. Hungarian (HVAC) 1992/4.
- 20. Bassam Al-Helou**
The Jordanian Climate. Hungarian (HVAC) 1992/7-8
- 21. Bassam Al-Helou**
Regenerative Heat Recovery Systems, Hungarian (HVAC) 1992/11.
- 22. Bassam Al-Helou**
Protecting in Heat Recovery Equipment against Frost. Hungarian (HVAC)
1992/12.

SKILLS:

Excellent teaching, research, leadership and communication skills. Familiar with scientific computer application.

TAUGHT COURSE:

- Heating Ventilating and Air Conditioning (I).
- Heating Ventilating and Air Conditioning (II).
- Heat Transfer

- Thermodynamics I
- Thermodynamics II
- Fluid Mechanics.
- Engineering Analysis (1).
- Engineering Analysis (2).
- Advanced Mathematical Engineering (1)
- Advanced Mathematical Engineering (2)
- Mechanical System for Architecture.
- Engineering Mechanics.
- Engineering Mathematics.
- Numerical Methods.
- Statics.
- Dynamics.
- Lab of Fluid Mechanics.
- Lab of Thermodynamics.
- Lab of Heat Transfer
- Workshop (1).
- Workshop (2).

PROFESSIONAL SOCIETY MEMBERSHIPS:

- Jordan Engineering Association.
- American Society of Heating, Refrigerating and Air-Conditioning.
- Jordan Environment Society.
- Arab Authority of Renewable Energy

INVOLVED COMMITTEES:

- Air Conditioning Systems Committee, Director.
- Boiler's Committee, Director.
- Fire Safety Committee, Director.
- Pipes Committee, Director.
- Artesian Well Committee, Director
- Water of Chlorination Artesian Well Committee, Director

RESEARCH SUPPORTED PROJECTS WITH INDUSTRIAL FIELDS:

Each project took at least 1 year in the factory:

- Design and Manufacturing of Drajech Chocolate Machine, by the Higher Council of Science and Technology, Industrial Research and Development Fund, 2015.
- Design and Manufacturing of Salt Dryer to Reduce the Relative Humidity, by the Higher Council of Science and Technology, Industrial Research and Development Fund, 2013.

- Design and Manufacturing a Machine of Cutting and Production Containerboard Carton, by the Higher Council of Science and Technology, Industrial Research and Development Fund, 2010.
- Developing Chocolate Softness Process, by the Higher Council of Science and Technology, Industrial Research and Development Fund, 2009. In this research we designed and manufactured with a view to increase the chocolate softness. The project has been effectively completed with a manufactured machine of a 1000 kg capacity. The core of the objective of this project is to reduce the particle size of chocolate to reach 20-25 micron in the minimum time.
- Design and Manufacturing of the Filter Paper Roll Cutting Machine, by The Higher Council of Science and Technology, Industrial Research and Development Fund, 2008.
- New method of modification for mixing powder and liquid by using street shaft and preset angle fork” The Higher Council of Science and Technology, Industrial Research and Development Fund., 2007.
- Design and Manufacturing of the Machine that Produces an Internal Metallic Filter for an Oil Filter” by The Higher Council of Science and Technology, Industrial Research and Development Fund, 2007.
- Oil filters efficiency for “Al-Janoub Filters Manufacturing Company” Comparing with different filters for different factories. The Higher Council of Science and Technology, Industrial Research and Development Fund, 2005.
- Development and Maintenance of the Winch and the sailo of the Jordanian and European Factory of Granite, from The Higher Council of Science and Technology, Industrial Research and Development Fund, 2004.
- Development of the Thermal and Drying Oven. From The Higher Council of Science and Technology, Industrial Research and Development Fund, 2003.
- Developing Chocolate Softness Process, by The Higher Council of Science and Technology, Industrial Research and Development Fund 2001. In this research we designed and manufactured with a view to increase the chocolate softness. The project has been effectively completed with a manufactured machine of a 250 kg capacity. The core of the objective of this project is to reduce the particle size of chocolate to reach 20-25 micron in the minimum time.
- Evolving an Inverted Extrusion Piston, Izmeqna Factory, by The Higher Council of Science and Technology, Industrial Research and Development Fund, 2001.
- Industrial Ventilation of Al-Rodoan Granite Factory, by the Higher Council of Science and Technology, Industrial Research and Development Fund, 2000.
- Rehabilitation of Water Network System in Madaba City. Al-Isra University 1996.

STUDIES:

- Assessment of Al-Khzaf Factory, which is located in Zarqa city, Jun 2015.
- Assessment of Iron Factory "Company Iron and Steel Industry of Jordan" which is located in Zarqa city, Jun 2014.
- Conducting the fourth study for the National Fund for Enterprise Support (NAFES) about Rehabilitating the product lines in Alassad Company Factor of Filter and Industry Metals, 2006. Team leader.

- Conducting the third study for the Higher Council of Science and Technology about Evaluating the Effect of Financial Support for Jordanian Industrial Firms, supported by the Fund of Scientific Research and Development in the Industrial, 2004. Team leader.

- Conducting the second study about Rehabilitation of Water Network Systems in Maddaba city for Al-Isra University 2000.

- Conducting the initial study about Sahab industrial City for Al-Isra University 1994. Team leader.

TRAINING PERIODS:

Responsible for several training periods for engineers, the following training periods have been given and supervised:

- **Mechanical Maintenance**
Irbid Municipality, 24-27 Jun 2000.
Cities and Villages Development Bank, 29 Jun-2 July 2002.
Karak Municipality, 11-14 Sep 2002

- **Engine Maintenance**
Irbid Municipality, 5-9 Feb. 2003.
Irbid Municipality, 27-31 Aug. 2003.
Cities and Villages Development Bank, 25-29 Sep 2003.
Cities and Villages Development Bank, 1-7 Jun 2004.
Al-Tafeela Municipality, 20-23 Aug. 2004.
Irbid Municipality, 26-31 Jun. 2005.
Cities and Villages Development Bank, 21-26 Feb. 2005.

RESEARCH PAPERS AND PROJECTS EVALUATED:

I have evaluated many papers, the most important of which are:

- Autoclave Development of Normal Class A to Class B. The Higher Council for Science and Technology, Industrial Research and Development Fund. May, 2014.
- Effect of Fiber-Reinforced Type on the Dynamic Behavior of Composite Plate. IJASE, Taiwan, Sept. 2013.
- Stability Region of Floating Intermediate Support in Shafting with Multiple Universal Joints. Journal of Mechanical Science and Technology, Korea, Mar. 2013.
- Design and Development of New Plastics Washing System of Better Quality and Low Water Consumption. The Higher Council for Science and Technology – Industrial Research and Development Fund. Jun. 2013.
- Effect of Contact Stresses and Sliding Velocity In Altered Tooth-Sum Gearing. Journal of Mechanical Science and Technology. Korea, 2012
- Design and Development of Machine Belts for stone saws, The Higher Council for Science and Technology – Industrial Research and Development Fund, August 2011.
- Design and Development of Paint Oven Heat. The Higher Council for Science and Technology – Industrial Research and Development Fund, August 2010.

- Design and Manufacturing of Electrical Furnace for Heat Treatment. The Higher Council for Science and Technology – Industrial Research and Development Fund, August 2010.
- Fatigue Life Improvement of Spheroidal and Compacted Graphite Cast Iron, Mu'tah Journal Research and Studies, 2009.
- Design and Manufacture of Machine to Bending and Forming of Metals, JUST, 2009
- Stress Analysis on Long Vehicle Chassis for Optimum Design and Minimum Production Cost, JUST. 2008.
- Developing Prototype aiming upgrading the chocolate –biscuits production line to enhance productivity. HCST.
- Re-engineering of Production Processes Using Value Stream Mapping Tool. International Journal of Intelligent Systems Technologies and Applications. Canada.
- Electronic-process of Cost Reduction Systems. HCST.
- Stress analysis on long vehicle classis for optimum design and minimum production cost. HCST.

SOME OF THE TRAININGS RECEIVED:

- Water Supply and Sanitation Plumbing Code Training. May, 29-30, 20011. Ministry of Water and Irrigation, Jordan.

- Completed the special training course designed for the Evaluation Council member of King Abdullah II for Excellence in Governmental performance and Transparency 2007.
- Regional Training Workshop for the Administration Requirement for Reducing Power Consumption and the Effect on Cost Reduction. National Energy Research Center, Amman 4- 8/1/2004.
- Engineering Mathematics with Mathematica and Maple. Al-Balqa Applied University, Al-Husn Polytechnic, 16-19/12/2003.
- Design, Constructing, Maintenance, and Supporting Water Heating Systems Using Solar Energy. National Energy Research Center, Amman 30/6-3/7/2003.

WORKSHOPS:

- Cooperation between Universities and the Private Sector in the Training and Employment, Al-Zytoonah University, 12 March 2007.
- Jordanian-German Winter Academy 2006, Amman February 5th-11th 2006.
- Passive Fire Resistance in Building, corporation with the British embassy in Amman, 1 Mach 2005.
- Jordan National TEMPOS Day. Jordanian University, 26/09/2004.
- Increasing Performance of Heating Boilers. The Higher Council of Science and Technology, Amman 10/02/2004.
- Environment Management for the Small and medium Firms by Internet to Increase Competition of Industries (smite). Amman 16/06/2004.
- Science Day of Jordan University, 11/01/2004.

COMMITTEES IN THE UNIVERSITY:

- New and Renewable Energy Plan.
- Mechanical Engineering Plan
- Study Plan Committee
- Student Discipline Committee
- Social Committee
- Engineering Training Committee
- The 8th Commencement Graduation Committee for Students at Al-Isra University.

EXTERNAL LECTURES:

- I was nominated by “The Higher Council of Science and Technology, Industrial Research and Development Fund” to deliver a lecture of “Success Story in an Industry” in The Higher Council of Science and Technology. 29 Sept. 2013.
- I was nominated by “The Higher Council of Science and Technology, Industrial Research and Development Fund” to deliver a lecture of “Success

Story in an Industry” in the Sixth National Technology Parade, Industry and Universities Creativity to the Challenges of Tomorrow, Mutah University. 7 May 2013.

- I was nominated by “The Higher Council of Science and Technology, Industrial Research and Development Fund” to deliver a lecture of “Success Story in an Industry” King Abdullah II Ibn Hussein Industrial City- Sahab 11 September 2006.
- I was nominated by “The Higher Council of Science and Technology, Industrial Research and Development Fund” to deliver a lecture on “Evaluating the Effect of Financial Support for Jordanian Industrial Firms”, 14 June 2004.

FFF Program (Faculty For Factor):

I have been associated with the following programs:

- National Program-Third cycle, summer 2005.
Project Title “Design and Development of a Machine that Produces an Internal Metallic Filter for an Oil Filter “Alassad Company Factor of Filter and Industrial Metals.
- National Program- Fourth cycle, summer 2006.
Project Title "A Comparative Study between 250 and 1000kg Machines to Determine the Marble Weight Used in Chocolate Softness at a Lesser Time " Philadelphia Chocolate Manufacturing Company.
- National Program-Fifth cycle, summer 2007.
Project Title "Design of the Filter Paper Roll Cutting Machine" Al Janoub Filters Manufacturing Co. Ltd
- National Program-Sixth cycle, summer 2008.
• Project Title "The Development of the Supply System of the Chocolate Production Machine from Manual to Automated" Alliance Chocolate Manufacturing Company-Robert's.
- National Program-Seventh cycle, summer 2009.
Project Title " Modifications and Development of Blow Molding Machine" Choudhary Industries for Machines & Plastic.