FACULTY CURRICULUM VITAE

Name: Dr. Ehab Bani Hani
Rank: Associate Professor - Mechanical Engineering
Title: Manager – Project Based Learning Center

Personal Information

Nationality:	Jordanian
AU Joining Date:	03 Oct 2010
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Professional Information

Education:	**Qualification:** Doctorate **Major:** Mechanical Engineering **College/University:** University of Jordan **Year:** 2009/2010 **Qualification:** Masters **Major:** Chemical Engineering **College/University:** Jordan University of Science and Technology **Year:** 2001/2003 **Qualification:** Bachelor **Major:** Chemical Engineering **College/University:** Jordan University of Science and Technology **Year:** 1996/2001
Specialization:	Thermal power systems
Current Academic Position:	Associate Professor - Mechanical Engineering
Current Professional Positions:	1. Charted Engineers Australia in Mechanical Engineering (CPEng) 2. Manager of Project Based Learning (PBL) center - College of Engineering AU-Kuwait
Previous Administrative Position Held:	1. Academic Advisor

Previous Academic Positions Held:	1. 2004-2006: Teaching Assistant, college of engineering, mechanical engineering department, Jordan University. 2. 2001-2003: Teaching Assistant, College of engineering, department of chemical engineering. Jordan university of science and technology.
Fellowships And Honors:	- Member in the editorial board of international journal of mechanical - systems engineering - Member in the international journal of science, engineering, and innovative research - Member in the editorial board of Engineer's Publication House (EPH) Journal - Member in the editorial board of Journal of Asian Scientific Research - Advisory and Reviewer Board: International Workshop on Mechanical Engineering IWME-2014, IWME-2015 Istanbul, Turkey - Member in the Jordan engineering association - Member in the Royal Society for the Conservation of Nature Amman, Jordan.
Teaching Experience:	20 Years in teaching the following courses: thermodynamics, fluid mechanics, heat transfer, transport phenomena, applied mathematics for engineers, numerical analysis, combustion, chemical reactions engineering, unit operations, statics and dynamics, engineering design and management implementation (PBL), thermal engineering. Supervising graduation projects.
Industrial And Technical Experience:	- 2007-2010: Head of hazardous materials and wastes department – ministry of environment - Jordan - 2006-2010: Site engineer for hazardous waste disposal site - 2000-2001: Process engineer for boilers and steam unit, waste water treatment unit for domestic waste and hospitals waste water. - 2003-2004: water treatment unit.
Research Interest:	Energy and renewable energy - Thermal power systems - environment
Research Grants:	Central Queens land university - AU joint project
Research and Publications including Journal and Books:	**Google scholar account:** https://scholar.google.com/citations?user=aCFH49AAAAAJ&hl=en **Research Gate account:** https://www.researchgate.net/profile/Ehab-Banihani 1. **Ehab Bani-Hani**, Mamdouh El Haj Assad, Yashar aryanfar…et al. Predicting Air Pollutants in Urban Environments Using Artificial Neural Network Models. July 2025, Environmental Engineering and Management Journal. 2. **Ehab Bani-Hani**, Fadi Al-Khatib, Mamdouh El Haj Assad, Mohammad el shabi, Humberto Castellanos, Yashar aryanfar, Ahmad deifallah, Adham Ragab. Optimization of adiabatic flame temperature of natural gas combustion under different conditions. January 2024, Environmental Progress & Sustainable Energy, 43(3). DOI: 10.1002/ep.14356.

3. **Ehab Bani-Hani**, Mamdouh El Haj Assad, Majed Alzara, Ahmed M. Yosri, Yashar Aryanfar, Humberto Castellanos, Soheil Mohtaram, Abdallah Bouabidi. Energy and exergy analyses of a regenerative Brayton cycle utilizing monochlorobiphenyl wastes as an alternative fuel. September, 2023. Energy.

4. Mahmoud K.S. Abozoor's, …., **Ehab Bani-Hani**, Energy and exergy analyses of active solar still integrated with evacuated flat plate collector for New Delhi. September, 2022. Ground water for sustainable development.

5. Ehab Bani Hani, et al., Assessment of a waste energy recovery (WER) unit for power and refrigeration generation: Advanced thermodynamic examination. August 2022. Sustainable Energy Technologies and Assessments.

6. Ma Shaofu, **Ehab Bani Hani**, Hai Tao, Qiang Xu. Exergy, economic, and optimization of a clean hydrogen production system using waste heat of a steel production factory. International Journal of Hydrogen Energy. August, 2021. Elsevier.

7. Mamdouh Assad, Mona albawab, milad sadeqzadeh, mohammad ahmadi, **Ehab Bani Hani**, Amjad moghadam. Space cooling using geothermal single-effect water/lithium bromide absorption chiller. Energy science and Engineering. July, 2021. Wiley.

8. Mehdi ehayi, …, **Ehab Bani Hani**. A critical review of biogas production and usage with legislations framework across the globe. International journal of Environmental Science and Technology. May, 2021.

9. Yuming Chu, **Ehab Bani Hani**, E. Alzahar, E. Obaid, Nehad Ali. Combination of Shehu decomposition and variational iteration transform methods for solving fractional third order dispersive partial differential equations. Numerical Methods for Partial Differential Equations. January, 2021.

10. Abo alfadel Ahmadi, Danial Jamali, Farbud esamilyoun, Ashkan abdo, Milan, Mehdi ehayi, **Ehab Bani Hani**. Energy, exergy, and economic analyses of integration of heliostat solar receiver to gas and air bottom cycles. Journal of cleaner production. January, 2021.

11. M. Hasan, **Ehab Bani-Hani**, The effects of zero and high shear rates viscosities on the transportation of heat and mass in boundary layer regions: A non-Newtonian fluid with Carreau model. Journal of Molecular Liquids, Augst, 2020.

12. m. Assad, **Ehab Bani-Hani**, Applications of nanotechnology in membrane distillation: A review study. Desalination and water treatment. July, 2020.

13. K. Kumar, **Ehab Bani-Hani**, A novel approach for investigation of heat transfer enhancement with ferromagnetic hybrid nanofluid by considering solar radiation. Microsystem technologies. July, 2020.

14. M. Assad, **Ehab Bani-Hani**, Thermal analysis of end pumped fiber lasers subjected to jacket fluid cooling. Thermal Science. July, 2020.

15. L. Abdioye, **Ehab Bani-Hani**, Effects of environmental and turbine parameters on energy gains from wind farm system: Artificial neural network simulations. Wind engineering. April, 2020.

16. Haytham Ayoub, **Ehab Bani-Hani**, Performance and Cost Analysis of Energy Production from Offshore Wind Turbines. Energy engineering. March, 2020.

17. Ehab Bani-Hani, et al., An Experimental Study on Producing a Sustainable Diesel-like Fuel from Waste Engine Oil. Renewable Energy Research and Applications. February 2020.

18. Hamdan Abdullah, **Ehab Bani-Hani**, Thermal Analysis of Organic Rankine Cycle Using Different Organic Fluids. Renewable Energy Research and Applications. February 2020.

19. Bani Hani. E., et al., experimental study on the air flow past a vertical circular cylinder coated with porous material, special topics and reviews in porous media, 2019.

20. Bani Hani. E., et al**.,** Rheological study of sea water contaminated with oil components, polish journal of environmental studies, 2019.

21. Bani-Hani, E., et al., Heat Recovery from the Incineration of Polychlorinated Biphenyls Waste in Rotary Kilns, Energy Engineering: journal of the association of energy engineers, 2019, Vol. 116, No. 2, 22-40.

22. Bani-Hani, E., Lopez, J., Mohanan, G., Data on the Coefficient of Static Friction between Surfaces Coated With Different Sizes of Rubber Granules Produced from Used Tires, Data in Brief, 2019, Vol. 22, No. 1, 940-945.

23. Bani-Hani, E., et al., Evaluating Performance of Horizontal Axis Double Rotor Wind Turbines, Energy Engineering: journal of the association of energy engineers, 2019, Vol. 116, No. 1, 26-40.

24. **Ehab Bani-Hani**, Niegen, Prediction of solar energy produced under different system and environmental conditions for Jordanian stations using artificial neural network. Journal of industrial pollution control, April, 2019.

25. **Ehab Bani-Hani** et al., Enhancing Cooling System of a Combustion Engine by Integrating with a Stirling Cycle. Energy engineering, March 2019.

26. **Ehab Bani-Hani** et al., Experimental Study on wind -solar renewable energy hybrid system. Journal of industrial pollution control. April, 2019.

27. **Bani-Hani, E**., et al., Photovoltaic System as Source of Power In Residential Buildings: Technical and Economical Study, energy Engineering, 2018, Vol. 115, (3), 6-22.

28. Sedaghat, A., **Bani-Hani, E**., et al., Experimental and Theoretical Analysis of a Solar Desalination System Improved by Thermoelectric Cooler And Applying Sun Tracking System, Energy Engineering, 2018, Vol. 115, (6), 62-76.

29. EL Haj Assad, M., **Bani-Hani, E**., et al., Simplified model for thermo- and diffusiophoretic deposition in a heat exchanger, JP Journal of heat and mass transfer, 2018, Vol. 15, (1), 1-13.

30. **Bani-Hani, E.,** et al., Feasibility of Highway Energy Harvesting Using a Vertical Axis Wind Turbine, Energy Engineering, 2018, Vol. 115, (2), 61-74.

31. **Bani-Hani, E**., et al., Factors Affecting the Team Formation and Work in Project Based Learning (PBL) for Multidisciplinary Engineering Subjects, journal of problem-based learning in higher education, 2018.

32. El Haj Assad M, **Bani-Hani EH** and M. khalil. Performance of geothermal power plants (single, dual, and binary) to compensate for LHC-CERN power consumption: comparative study. Geothermal Energy. 2017; 5(1).

33. EL Haj Assad, M, **Bani-Hani, E**, Khanafer, K., Yousef, B., Characteristics of osmotic flow with cavitation in porous media, JP Journal of heat and mass transfer, 2017, Vol. 14, (4), 559-567.

34. **Bani-Hani, E**, Recent applications of biomass wastes in industry for environmental sustainability, Journal of industrial pollution control, 2017, Vol. 33, (2), 1622-1626.

35. **Bani-Hani, E**, et al., Experimental Analysis of an Improved Solar Still System with Cooling Fan and Preheating Oil, Energy Engineering, 2017, Vol. 114, (5), 55-71.

36. **Bani-Hani, E**., et al., Numerical analysis of the incineration of polychlorinated biphenyl wastes in rotary kilns, Journal of Environmental Chemical Engineering, 2016, Vol. 4, 624–632.

37. **Bani-Hani, E**., Khanafer, K., Brogford, C., Applications of porous materials and nanoparticles in improving solar desalination systems, Journal of porous media, 2016, Vol. 19, 993-999.

38. EL Haj Assad, M, **Bani-Hani, E**, New Pneumatic System for Tidal Energy Conversion, Journal of power and energy engineering, 2016, Vol. 4, 20-27.

39. Bani-Hani, E., Al.Khatib F., Khanafer, K., Analysis of Variants within Different Models of Diesel Oil Volatilization Process using various Soil Materials, Special Topics and Reviews in Porous Media, 2015, Vol. 6, (3), 1-6.

40. Dalibor. P., Muhammad, A., Shahaboddin, S., **Bani-Hani, E**., Davood, K., Sensorless Estimation of Wind Speed by Soft Computing Methodologies: A Comparative Study, Informatica, 2015, Vol. 26, (3), 1-13.

	41. Al-Malah, K., H.A. Mousa, and **Bani Hani. E**., Effect of Electrolytes on Formulation and Stability of Water/di-Ethyl Oxalate/Tween Micro-Emulsions, Journal of dispersion science and technology, 2011, Vol. 32, (5), 749-754.
Paper Presentations at Professional Conferences:	1. **Ehab Bani Hani,** Project Based Learning (PBL) approach as a tool for skilling, Reskilling, and Upskilling in engineering programs. Holistic Approach towards Teaching & Learning: Pedagogical Explorations. May 2024. Kuwait. 2. **Ehab Bani Hani** and Isam Zabalawi. April, 2024. Adapting Project Based Learning (PBL) Approach as Educational Tool for Engineering Programs. 6th MENA Higher education forum, MENA-HELF. Dubai, UAE. **3. Ehab Bani Hani**, Mamdouh Assad, Mohammad alshabi. April, 2021. Experimental study on drag characteristics of a horizontal axis double rotor wind turbine. Proceedings Volume 11722, Energy Harvesting and Storage: Materials, Devices, and Applications XI; 117220R (2021) https://doi.org/10.1117/12.2586072. Event: SPIE Defense + Commercial Sensing, 2021, Online Only 4. Bani-Hani, E., Alkhateeb, F., and alshalabi, A., 2016, Team formation challenges in project-based learning (PBL) multidisciplinary team work. First project-based learning symposium: preparing students for workplace. Kuwait. 5. Sedaghat, A., Bani-Hani, E., Shehata, H., Alqudah, S., salim, M., Khanafer. K., 2016, The application of project-based learning (PBL) in fluid and electrical drive systems. First project-based learning symposium: preparing students for workplace. Kuwait. 6. Ahmad Sedaghat, Mohamed Gaith, Khalil Khanafer, Ehab BaniHani, 2016, '' Rated Wind Speed Reality or Myth for Optimization in Design of Wind Turbines'', Eleventh International Conference on Ecological Vehicles and Renewable Energies (EVER). Monaco. 7. Al-Malah, K., Mousa, H., and Bani-Hani, E., 2011, "Effect of Electrolytes on Formulation and Stability of Water/di-Ethyl Oxalate/Tween Microemulsions", The 20th International Congress of Chemical and Process Engineering, August 25 – 29, 2012, Prague – Czech Republic. 8. Attending and participating in seminars and conferences, the second project-based learning symposium (PBL) March/2017, and the second Kuwait international conference in health and safety (Feb/2017)
College Service including committee Membership:	- Event coordinator: College of Engineering graduation project exhibition - Member in departmental committees: Students Appeal and Complaint Committee - Member in PBL committee - Member in CT Committee Member in Accreditation Committee

National Service:	- High school orientation for AU marketing - Participate in English play group open day
College Committees:	NA