Fahad G. Al-Amri

POSITION: Professor

Personal Data

Nationality | Saudi

Date of Birth | 11/07/1973

Department | Mechanical and Energy Engineering

Official UoD Email | fgalamri@iau.edu.sa

Office Phone No. | +966504955412

Language Proficiency

Language	Read	Write	Speak
Arabic	/	/	/
English	/	/	/

Academic Qualifications (Beginning with the most recent)

Date	Academic Degree	Place of Issue	Address
2004 -2008	PhD, Mechanical Engineering	KSA	King Fahad University of Petroleum and Minerals, Dhahran
1996 -2000	MSc, Mechanical Engineering	KSA	King Saud University, Riyadh
1990 -1995	BSc,Mechanical Engineering	KSA	King Saud University, Riyadh

PhD, Master or Fellowship Research Title: (Academic Honors or Distinctions)

PhD	Effect of Surface Radiation on Internal Flows With Non-Isothermal Boundry Conditions.
Master	Unsteady Ground Effect on Finite Wing With Dihedral Angle.

Professional Record: (Beginning with the most recent)

Job Rank	Place and Address of Work		Date
Professor	College of Engineering at IAU. Dammam, Eastern Province, KSA.	2022	To date
Associate Professor	College of Engineering at IAU. Dammam, Eastern Province, KSA.	2017	2022
Assistant Professor	College of Engineering at IAU. Dammam, Eastern Province, KSA.	2015	2017
Assistant Professor	College of Technology at Dammam Dammam, Eastern Province, KSA.	2008	2015
Dean, Secretary of the Technical Education officials of the Arab Gulf Countries.	College of Technology, Dammam, KSA	2009	2013
Lecturer	College of Technology at Dammam, TVTV	2000	2008
Mechanical Engineer	Ministry of Interior, Riyadh	1995	2000

Scientific Achievements

Published Refereed Scientific Researches and Scientific Conferences
(In Chronological Order Beginning with the Most Recent)

#	Name of Investigator(s)	Research Title	Publisher and Date of Publication
1	Sajid Ali, **Fahad Al-Amri**, Farooq Saeed	Numerical and Experimental Performance Evaluation of a Photovoltaic Thermal Integrated	Energies MDPI (2022)

		Membrane Desalination System	
2	**Fahad Al-Amri,** Farooq Saeed, Muhammad Abdul Mujeebu	Novel dual-function racking structure for passive cooling of solar PV panels–thermal performance analysis	Renewable Energy - Pergamon (2022)
3	**Fahad Ghallab Al-Amri,** Taher Maatallah, Richu Zachariah, Ahmed T Okasha, Abdullah Khalid Alghamdi	Novel trimmed heat extraction system for high-concentration photovoltaic in hot climate zones	International Journal of Energy Research (2022)
4	Gaeet AlFalah, Taher S Maatallah, **Fahad Ghallab Al-Amri**	Performance analysis of a single cell-ultra-high concentration photovoltaic thermal module based on pin-fins cooling microchannel	International Journal of Energy Research (2022)
5	Gaeet AlFalah, Taher S Maatallah, Ahmed T Okasha, **Fahad Ghallab Al-Amri**	Design and optimization study of a densely packed ultrahigh concentration photovoltaic thermal array for desalination usability	International Journal of Energy Research (2022)
	Fahad Al-Amri, Taher S	Innovative technique for achieving uniform	

6	Maatallah, Omar F Al-Amri, Sajid Ali, Sadaqat Ali, Ijlal Shahrukh Ateeq, Richu Zachariah, Tarek S Kayed	temperatures across solar panels using heat pipes and liquid immersion cooling in the harsh climate in the Kingdom of Saudi Arabia	Alexandria Engineering Journal (2022)
7	Ahmed T Okasha, **Fahad Ghallab Al-Amri,** Taher Maatallah, Nagmeldeen AM Hassanain, Abdullah Khalid Alghamdi, Richu Zachariah	Numerical Study of Single-Layer and Stacked Minichannel-Based Heat Sinks Using Different Truncating Ratios for Cooling High Concentration Photovoltaic Systems	Sustainability (2022)
8	Fahad Al-Amri	Optimum heat spreader size for producing maximum net power from high-concentration photovoltaic systems	IET Renewable Power Generation (2021)
9	**Al-Amri,F.G**	Optimum heat spreader size for producing maximum net power from high-concentration photovoltaic systems	IET Renewable Power Generation (2021).
10	Gaeet AlFalah, Taher S. Maatallah, Ahmed	Design and optimization study of a densely packed ultrahigh concentration	International Journal of Energy Research(2021)

	T. Okasha, **Fahad Ghallab Al-Amri**	photovoltaic thermal array for desalination usability	
11	Gaeet AlFalah, Taher S. Maatallah and **Fahad Ghallab Al-Amri**	Performance analysis of a single cell-Ultra-High Concentration Photovoltaic Thermal module based on pin-fins cooling microchannel	International Journal of Energy Research(2022)
12	**Al-Amri,F.G**.and Abdelmagid, T.I.M	Analytical Model for the Prediction of Solar Cell Temperature for a High-Concentration Photovoltaic System.	Case Studies in Thermal Engineering (2022)
13	Suganya S, Muthtamilselvan M, **Al-Amri F**, Abdalla B, Doh DH.	Filtration of radiating and reacting SWCNT–MWCNT/water hybrid flow with the significance of Darcy–Forchheimer porous medium.	Arabian Journal for Science and Engineering.(2020)
14	Du R, Gokulavani P, Muthtamilselvan M, **Al-Amri F**, Abdalla B.	Influence of the Lorentz force on the ventilation cavity having a centrally placed heated baffle filled with the Cu−Al_2O_3−H_2O hybrid nanofluid.	International Communications in Heat and Mass Transfer. (2020)

15	AlFalah G, Maatallah TS, Alzahrani M, **Al-Amri FG.**	Optimization and feasibility analysis of a microscale pin-fins heat sink of an ultrahigh concentrating photovoltaic system.	International Journal of Energy Research. (2020)
16	Suganya,S.,M. Muthtamilselvan, **Fahad Al-Amri,** and Bahaaeldin Abdalla.	An exact solution for unsteady free convection flow of chemically reacting $Al_2O_3-SiO_2$ /water hybrid nanofluid."	Journal of Mechanical Engineering Science (2020):
17	Saleem, Muhammad, and **Fahad G. Al-Amri.**	Multi-attribute analysis of micro-defect detection techniques suitable for automated production line of solar wafers and cells."	IET Renewable Power Generation (2020).
18	Al Zohbi G, **Al-Amri, Fahad.**	Current Situation of Renewable Energy in Saudi Arabia: Opportunities and Challenges.	Journal of Sustainable Development. (2020)
19	**Al-Amri, Fahad**, and M. Muthtamilselvan.	"Stagnation point flow of nanofluid containing micro-organisms."	Case Studies in Thermal Engineering (2020)
20	**Al-Amri, F.G**	. Analytical Solution for Fully Developed Flows of Nanofluids in Mixed-Convection Zone Within Vertical Channels.	Arab J Sci Eng (2019).

21	Maatallah, Taher, Richu Zachariah, and **Fahad Gallab Al-Amri.**	"Exergo-economic analysis of a serpentine flow type water based photovoltaic thermal system with phase change material (PVT-PCM/water)."	Solar Energy (2019)
22	**Al-Amri F**, Hassanain N, Al-Amri N, Alzohbi G.	An experimental study of solar panel performance using heat pipe and thermoelectric generator.	International Journal of Renewable Energy Research. (2019)
23	Harby K, **Al-Amri F**.	An investigation on energy savings of a split air-conditioning using different commercial cooling pad thicknesses and climatic conditions.	Energy (2019)
24	**Fahad Al-Amri,** Atia E. Khalifa, Ahmad Al-Zoubi, Muhammad Abid, Ebtehal Younis, Tapas Kumar Mallick,	A comprehensive review of air gap membrane distillation process.	Desalination and Water Treatment, (2018)
25	**F. Al-Amri,**	Analytical Solution for Fully Developed Flows of Nanofluids in Mixed-Convection Zone Within Vertical Channels.	Arabian Journal for Science and Engineering, (2018).
26	**F. Al-Amri,**	The Effect of Cooling Medium on the Temperature of High-Concentrating Multi-Junction Solar Cells using Non-uniform Incident Light.	Qassim University Journal of Engineering& Computer Sciences, (2017)

27	**F. Al-Amri**,	Non-uniform Incident Illumination Effect on the Thermal Performance of Low Concentrating Multi-Junction Solar Cells.	Journal of Engineering and Applied Sciences, Published by Majmaah University.(2016)
28	**F. Al-Amri,**	Effect of surface radiation on fully developed forced convection between two parallel plates.	Journal of Heat and Mass Transfer, (2015
29	**F. Al-Amri** and T.K. Mallick,	Effect of nonuniform incident illumination on the thermal performance of a concentrating triple junction solar cell.	International journal of Photoenergy, (2014),
30	**F.Al-Amri** and T.K. Mallick,	Alleviating operating temperature of concentration solar cell by air active cooling and surface radiation.	Applied Thermal Engineering, (2013).
31	**F. Al-Amri** and T.K. Mallick,	Alleviating operating temperature of high concentration solar cell by active cooling, World Renew. Energy	Forum, ASES, Denver, USA (2012)

32	**Al-Amri, F.**	Analytical Solution for Fully Developed Combined Mixed Convection and Surface Radiation between Two Vertical Parallel Plates.	Canadian Journal on Mechanical Sciences & Engineering (2012).
33	**Al-Amri, F**., and El-Sharaawi, G.,	Mixed convection with surface radiation between two asymmetrically heated vertical parallel plates, international	journal of thermal sciences . (2012)
34	**Al-Amri, F**., and El-Sharaawi, G.,	Combined forced convection and surface radiation between two parallel plates.	Int. J. of Numerical Methods for Heat and Fluid Flow, 2010

Scientific Research Papers Presented to Refereed Specialized Scientific Conferences

#	Name of Investigator(s)	Research Title	Conference and Publication Date
1	**F. Al-Amri,**	Fully Developed Mixed Convection Flow of a Nanofluid in a Vertical Channel.	Applied Nanotechnology & Nanoscience International Conference, Barcelona, Spain Nov. (2016).

2	Al-Amr**, F. Al-Amri**	Effects of Interactive Teaching Styles on Students' Achievements.	International Academic Business Conference in Orlando/ (2016).
3	**F. Al-Amri,**	Non-uniform incident illumination effect on the thermal performance of low concentrating multi-junction solar cell.	World Renewable Energy Conference XIII, London, UK, (2014).
4	**F. Al-Amri,**	Non-uniform incident illumination effect on the thermal performance of high concentrating multi-junction solar cell.	Energy Material Nanotechnology Conference, Beijing, China, (2014).
5	**Al-Amri, F**., and El-Sharaawi, G.,	Combined surface radiation-forced convection heat transfer of couette-poiseuille flow between one moving and one stationary parallel plates.	The twelfth UK National Heat Transfer Conference, Leeds, UK (2011).
6	**F. Al-Amri** and T.K. Mallick,	Surface Emissivity Effect on the Operating Temperature of Concentration Triple Junction Solar Cell.	CONFERENCE, ASES, Baltimore, Maryland, USA Solar (2013).
			Second International Conference on Energy

7	**Al-Amri, F**., and El-Sharaawi, G.,	Forced convection in concentric annuli with asymmetric heating and surface radiation.	Conversion and Conservation, (2010), Tunisia
8	**Al-Amri,F**., and El-Sharaawi, G.	Combined forced convection and surface radiation in concentric annuli.	ASME-ATI-UIT 2010 CONFERENCE, Thermal and Environmental Issues in Energy Systems

Participation in scientific conferences and symposia

#	Extent to share	Conference name, place and date
1	Jury Member for Poster Competition	"Open Engineering Day", Organized by College of Engineering and Saudi Council of Engineers, College of Engineering, Imam Abdulrahman Bin Faisal university, Saudi Arabia, 19th November 2019.
2	Attendance	"Changes in ABET Assessment Criteria", Organized by Quality and Assessment Committee, under the supervision of "Dr. Farooq Saeed", College of Engineering, Imam Abdulrahman Bin Faisal university, Saudi Arabia, 5th November 2019.
3	Organizer & Participant	"2nd Solar and Wind Energy Symposium and Exhibition" on Renewable Energy Training – A National Need, hosted by the Department of Mechanical and Energy Engineering, College of Engineering, Imam Abdulrahman Bin Faisal University, Saudi Arabia, 12–13 March 2019.

4	Attendance	“Students scientific posters section of the Faculty of Engineering from all departments” College of Engineering, Imam Abdulrahman Bin Faisal University, Saudi Arabia, 11th December 2018.
5	Attendance	"Effective Use of the Bank's Platform for Community Responsibility." Organized by "Deanship of Community Service and Sustainable Development”, College of Engineering, Imam Abdulrahman Bin Faisal University, Saudi Arabia, 27th November 2018.
6	Organizer & Participant	“Renewable Energy Education - A National Commitment", 1st Solar and Wind Energy Symposium & Exhibition", Organized by Department of Mechanical and Energy Engineering, College of Engineering, Imam Abdulrahman Bin Faisal University, Saudi Arabia, 23rd – 24th April 2018.
7	Attendance	“Safety awareness”, Organized by Quality and Safety Committee, College of Engineering, Imam Abdulrahman Bin Faisal university, Saudi Arabia, 06 November 2017.
8	Attendance	“E-learning: blackboard keys and success stories”, Organized by Deanship of E-learning and distance learning under supervision of “Dr. Abdulkarim Aljabali”, College of Engineering, Imam Abdulrahman Bin Faisal university, Saudi Arabia, 2nd May 2017.
9	Attendance	“KPI’s and Benchmarking”, Organized by Deanship of Quality and academic accreditation, College of Engineering, Imam Abdulrahman Bin Faisal university, Saudi Arabia, 04th April 2017.

10	Attendance	"Risk Management Planning in higher education", Organized by Deanship of Quality and academic accreditation, College of Engineering, Imam Abdulrahman Bin Faisal university, Saudi Arabia, 21st March 2017
11	Attendance	Strategic Plan development for College of Engineering, Imam Abdulrahman Bin Faisal university, 2018.
12	Invited speaker	Energy Material Nanotechnology Conference, Beijing, China, 2014
13	Invited speaker	World Renewable Energy Conference XIII, London, UK, 2014
14	Attendance	"Community service bank system", Organized by Deanship of Community Service, College of Engineering, Imam Abdulrahman Bin Faisal University, Saudi Arabia, 19th January 2017.
15	Attendance	Management of high-tech Institutions & the Irish training system Course, Waterford Institution of Technology, Ireland 5/8/1430H
16	Attendance	"COMSOL Multiphysics 5.2", College of Engineering, University of Dammam, Saudi Arabia, 26th April 2016.
17	Attendance	"Student Engagement & Interactive Teaching", Organized by Deanship of Academic Development, University of Dammam, Saudi Arabia, 22nd November 2016.
18	Attendance	"The pursuit of Excellence in mentoring in higher education", Organized by Deanship of Academic Development, College of Engineering, University of Dammam, Saudi Arabia, 08th March 2016
19	Attendance	Training program in applying internal quality system in Vocational Training Institutes, Red Keir College, Scotland, (16/6/1428 to 13/8/1428H)

20	Attendance	International Visitor leadership Program on "Community College and Vocational Education", U S Development of State Bureau of Educational and Cultural Affairs,USA (Jan.31st – Feb.18th 2011)
21	Attendance	The Secrets of the Finnish Success-Leadership Excellence in Education, HAAGA-HELIA Uni. of Applied Sciences and Education, Finland. (Oct.18th – Oct.29th 2010)
22	Attendance	Self-Assessment Training Programme at Stevenson College Edinburgh, Scotland (14 November 2011-25 November 2011)
23	Attendance	Training program in Strategic Planning in TVET Institutions, International Training Center, Turin, Italy (Sep. 10 th-Sep. 21 st)
24	Attendance	Leadership and Management Workshop, British Council, Dammam on 18-19 Feb. 2012
25	Attendance	Training program in Strategic Planning in TVET Institutions,
26	Attendance	Leadership and Management Programme, Dudley College, England (Jan. 6 th-Jan. 8 th 2013)
27	Attendance	World Water Day, University of Dammam, March 18th, 2015.

Completed research projects (underline the name of the applicant for promotion)

#	Research Title	Name of Investigator(s)	Project # and Budjet
1	Development and implementation of a novel active cooled-PV system Driving Air Gap Membrane Desalination (AGMD)", Project number IF-2020-024-Eng, Sponsor: Ministry of Education	**Fahad G. Al-Amri (PI)**	IF-2020-024-Eng, SAR 1,200,000
2	System for peak performance gain from high concentrating photovoltaic	**Fahad G. Al-Amri (PI)**	K. A. CARE, OT(a)_IAU_PC, SR 3.7 Million

3	Development and testing of PV module smart cleaning robot capable of harnessing reject heat using shape memory alloy	Nasir, Hariri, **F. Al-Amri (CO-PI)**	K. A. CARE, OT(b)_IAU_PC, SR 1.9 Million
4	Demonstration of Li-ion Batteries in High-Temperature Conditions in Saudi Arabia	**Fahad G. Al-Amri (Co-PI)**	Project number TLC-0318-GR01-RE, Sponsor: KACARE, SAR 5,000,000
5	Modeling and Experimental Testing of Membrane Distillation Process for Water Desalination	**Fahad G. Al-Amri**	DSR-IAU, 2016-241-Eng, SR 0.1 Million
6	Study of alternative refrigerant's characteristics and their validity for the employment and use in Kingdom of Saudi Arabia	**Fahad G. Al-Amri**	Project# 1-3-39 funded by SASO
7	Innovative Technique for Achieving Uniform Temperatures across Solar Panels Using Heat Pipes and Liquid Immersion Cooling in the Harsh Climate in the Kingdom of Saudi Arabia	**Fahad G. Al-Amri**	DSR-IAU, 2020-055-Eng, SR 67000

Ongoing Research

#	Research Title	Name of Investigator(s)
1	Performance analysis of a single cell-Ultra-High Concentration Photovoltaic Thermal (UHCPV/T) module Based on pin-fins cooling microchannel	**Fahad G. Al-Amri and Taher Maatallah**
2	Design and optimization study of a densely packed Ultra-High Concentration Photovoltaic Thermal (HCPV/T) array for desalination usability	**Fahad G. Al-Amri and Taher Maatallah**
3	Performance analysis of a trimmed minichannel for cooling a densely packed High Concentration Photovoltaic Thermal system	**Fahad G. Al-Amri and Taher Maatallah**
4	Innovative Design and Development of System for peak performance gain from high concentrating photovoltaic	**Fahad G. Al-Amri (PI)** Collaboration project with **Exeter University, UK and BSQ Solar, Spain.**

PATENTS

1) Al-amri, Fahad G. "THERMOELECTRIC-BASED AIR CONDITIONING SYSTEM." Patent No.: 9,863,672 B2, Date of Patent: Jan. 9 2018.
2) Al-amri, Fahad G. "METHOD FOR ASSEMBLING A PHOTOVOLTAIC PANEL COOLING SYSTEM." U.S. Patent Application 17/809,719, filed October 13, 2022.
3) Al-amri, Fahad G. "High concentrating solar device with passive cooling." U.S. Patent 11,552,593 B2, issued Jan. 10, 2023.
4) Al-amri, Fahad G. "High concentrating solar device with passive cooling." U.S. Patent US 2022/0140783 A1, issued May 5, 2022.
5) Al-amri, Fahad G. "Apparatus for solar-assisted water distillation using waste heat of air conditioners." U.S. Patent 10,926,223, issued February 23, 2021.
6) Al-amri, Fahad G. "Enhanced performance thermoelectric generator." U.S. Patent 11,480,350 B2, issued Oct. 25, 2022.
7) Al-amri, Fahad Ghallab, and Muhammad Umar Siddiqui. "Viscous drag reduction apparatus for vehicles." U.S. Patent 10,351,180, issued July 16, 2019.
8) Al-amri, Fahad Ghallab. "Highconcentrating photovoltaic system." U.S. Patent Application 17/835,555, filed June 08, 2022.
9) Al-amri, Fahad Ghallab. "Passive cooling method for high concentrating photovoltaic system." U.S. Patent 11,575,347 B1, Issued Feb 07, 2023.
10) Al-amri, Fahad Ghallab. "System and methods for recycling heat and water in a steam press machine." U.S. Patent Application 17/741,912, filed May 11, 2022.

Membership of Scientific and Professional Societies and Organizations

- Member of the Saudi Council of Engineers.
- Member of American Solar Energy Society.
- Member of American Society of Mechanical Engineers.
- Included in **Who's Who in the World 2016** (33rd Edition)
- ***International Reviewer*** for the **Journal of Heat Transfer, ASME.**
- ***International Reviewer*** for the **Applied Thermal Engineering.**
- ***International Reviewer*** for the **Case Studies in Thermal Engineering.**
- ***International Reviewer*** for the **IET Renewable Power Generation**.

- ***Member Review Board*** for Deanship of Scientific Research Project Proposal Review Committee for Hail University, Hail, KSA, 2018.
- ***Member Review Board*** for Deanship of Scientific Research Project Proposal Review Committee for Imam Abdulrahman Bin Faisal University, KSA, 2020.
- ***Member Review Board*** for Deanship of Scientific Research Project Proposal Review Committee for Imam Muhammed Bin Saud University, KSA, 2020.

Teaching Activities

Undergraduate (BSC)

#	Course/Rotation Title	No./Code	Extent of Contribution (no. of lectures/Tutorials. Or labs, Clinics)
1	Statics	ENG-232	Main Instructor
2	Introduction to Engineering	ENRG-251	Main Instructor
3	Thermodynamics	ENRG-308	Main Instructor
4	Fluid Mechanics	ENRG-321	Main Instructor
5	Heat and Mass Transfer	ENRG-313	Main Instructor
6	Professional Practice and Ethics	HUMN-501	Main Instructor
7	Directed Research	ENRG-565	Main Instructor
8	Senior Design Project I	ENRG-503	Main Instructor
9	Senior Design Project II	ENRG-509	Main Instructor

Brief Description of Undergraduate Courses Taught: (Course Title – Code: Description)

Fluid Mechanics (ENG-321)

A study of fluid properties and their significance; fluid statics, conservation equations of fluid dynamics, use of differential and finite control volume analysis with continuity, momentum, and energy equations, Bernoulli and Euler equations, vorticity, potential flow theory, lift and drag, compressible fluid flow, turbomachinery, laminar and turbulent boundary layers; open–channel uniform and non-uniform flow; flow through pipes; branching of pipes and pipe networks; dimensional analysis and similitude. Laboratory exercises in flow measurement, open channel flow, pipe friction, physical modeling, and data collection.

Heat and Mass Transfer (ENRG-313)

Principles of heat transfer, Steady state and transient conduction in different co-ordinates, Extended surfaces, Convective heat transfer, Analysis and empirical relations for forced and

natural convection, Various forced convection problems involving flow across different shops, Radiation heat transfer, radiation exchange between black and gray surfaces, Heat transfer applications (Heat Exchangers) and fundamentals of mass transfer, Numerical methods in heat transfer with computer applications, Laboratory.

Thermodynamics (ENRG 308)

This course covers major thermodynamics principles that are useful to engineering applications. The student will learn thermodynamics basic concepts and definitions; properties of pure substances; system and control volume; working fluid, processes and cycles; work, heat and energy; ideal gases, state equation. Pure substance and phase changes; thermal equilibrium. First law of thermodynamics, internal energy and enthalpy. Applications of first law of thermodynamics for closed and open systems; second law of thermodynamics; Carnot cycle, entropy; reversible and irreversible systems. Applications such as: vapor power systems, gas power systems, fuel and combustion, refrigeration, heat pumps, etc. that will be applied to modern engineering systems.

Statics (ENG 232)

This course enable the students to learn the tools necessary to have a deeper understanding of the principles of applied mechanics and the modeling of force systems in engineering statics. The course topics include: Analysis of forces on engineering structures in equilibrium. Properties of forces, moments, couples, and resultants. Equilibrium conditions, friction, Section properties (centroids, area moments of inertia).

Introduction to Engineering (ENRG 251)

This course is designed to allow students to explore engineering through case studies, and problem-solving using computers. Students will learn about the various aspects of the engineering profession and acquire both technical skills and non-technical skills. The course topics include: Engineering profession, computer applications and programming related to engineering. Broad overview of the different fields of engineering, including professional societies and their student chapters, professional licensing and registration, professional codes of ethics, introduction to engineering design, and problem solving techniques. Students learn design, teamwork, written and oral communication skills through participation in a conceptual design project.

Professional Practice and Ethics (HUMN-501)

This course examines ethical frameworks and moral issues related to the profession. Topics include: Examination of the non-technical issues dealt with by design professional, including: professional ethics, marketing and business development, professional engagement, personnel and project management, risk management, professional liability insurance, and dispute resolution.

Directed Research (ENRG-565)

This course is for active research projects that could be taken as a one-time Elective Special Topic. It is only open to students having a GPA of 3 or above and consent of the instructor is mandatory. Faculty conducting the course must submit a formal well written program of research work and deliverables and grading policy in semester prior to enrollment for approval from department.

Senior Design Project I (ENRG-503)

This course is an integral part of the final project program. The course emphasizes the identification and development of practical and technical ideas and concepts which are to be researched, analyzed, programmed, and documented in an effective and efficient professional report. The research should include pertinent analysis and solutions and issues in an integrated form. The student is responsible for the independent development of the research under the direction of a faculty advisor with expertise in the areas of investigation. Individual research in a field of special interest under the supervision of a faculty member as a requirement for the B.Sc. degree, culminating in a written report/thesis. The central goal of which is a substantive paper or written report containing significant analysis and interpretation of a previously approved topic. The Graduation Project is divided between two semesters. Methodology is developed and pre-data are collected in the first semester. Experiment is run, data is analyzed, and conclusions are sought in the second semester.

Senior Design Project II (ENRG-509)

This course provides individual research in a field of special interest under the supervision of a faculty member as a requirement for the B.Sc. degree, culminating in a written report/thesis. The central goal of which is a substantive paper or written report containing significant analysis and interpretation of a previously approved topic. The Graduation Project is divided between two semesters. Methodology is developed and pre-data are collected in the first semester. Experiment is run, data is analyzed, and conclusions are sought in the second semester.

BSc STUDENT SUPERVISION

1	Design a novel heat extraction system for High Concentration Photovoltaic (HCPV) in Dammam and Riyadh	2021	BSc

2	Design Heat Sink in Operating Solar Panel below Critical Temperature	2020	BSc
3	Cooling Technique for PV system	2019	BSc
4	Modeling and Experimental Testing of Membrane Distillation Process for Water Desalination	2018	BSc

Administrative Responsibilities, Committee and Community Service **(Beginning with the most recent)**

Administrative Responsibilities

#	From To	Position and Organization
1	2016 to date	Vice Dean for Higher Studies and Scientific Research, College of Engineering, Imam Abdulrahman Bin Faisal University.
2	Apr. 2015 – Oct. 2016	Chairman of Basic Engineering Department, College of Engineering, Imam Abdulrahman Bin Faisal University.
3	2016 to date	Chairman of Mechanical and Energy Engineering Department, College of Engineering, Imam Abdulrahman Bin Faisal University.
4	2010 – 2014	Dean, College of Technology at Dammam, TVTC
5	2009 – 2010	Chairman of Mechanical Technology Department, College of Technology at Dammam, TVTC
6	1996 – 2001	Supervisor, Ministry of Interior, Riyadh
7	2018-11-10 to date	Standing Committee to Attract Faculty Members at the University
8	2020-04-03 to date	Standing Committee for Scientific Research and Publishing
9	2020-05-11 to date	Member in Directing Committee for Faculty and Staff Standard
10	2020-09-08 to date	Member in Advisory Board for Basic and Applied Scientifc Research Center (BASRC)
11	2020-10-26 to date	Graduate Studies Committee
12	2021-02-04 to date	Supervisory and Administrative Committee for Graduate Programs at College of Engineering
13	2021-02-22 to date	The Standing Committee for Contracting with Saudi Faculty Members, and others, and Extending their Services

Committee Membership

#	From	To	Position	Organization
1	2018-11-10	date	Standing Committee to Attract Faculty Members at the University	Imam Abdulrahman Bin Faisal University
2	2020-04-03	date	Standing Committee for Scientific Research and Publishing	Imam Abdulrahman Bin Faisal University
3	2020-05-11	date	Member in Directing Committee for Faculty and Staff Standard	Imam Abdulrahman Bin Faisal University
4	2020-09-08	date	Member in Advisory Board for Basic and Applied Scientifc Research Center (BASRC)	Imam Abdulrahman Bin Faisal University
5	2020-10-26	date	Graduate Studies Committee	Imam Abdulrahman Bin Faisal University
6	2021-02-04	date	Supervisory and Administrative Committee for Graduate Programs at College of Engineering	Imam Abdulrahman Bin Faisal University
7	2021-02-22	date	The Standing Committee for Contracting with Saudi Faculty Members, and others, and Extending their Services	Imam Abdulrahman Bin Faisal University

Community Service

#	Date	Activity
1	2017	Establishment of the Department of Mechanical and Energy Engineering, College of Engineering, IAU.
2	2018	Establishment of the Bacholer of Science in Energy Engineering Program for the first in the Kingdom of Saudi Arabia to address the emerging needs of the Kingdom in the Renewable Energy field in harmony with its Vision 2030.
3	2020	Establishment of FABLAB in College of Engineering, IAU.

4	2017-2018	Establishing and organizing the Solar and Wind Energy Symposium and Exhibition which provide opportunity to the industry to voice its roadmap for the future of renewable energy sector workforce development and to the students to present their projects and promote themselves. Also, it provides an ideal opportunity to collaborate, share experiences and discuss the latest developments in the aspects related to Solar and Wind power generation.
5	2010 – 2014	Created a special one-day event for employment and technology under the patronage of HRH Prince of Eastern Province where most of the reputable companies in the country participated every year. As a result, Dammam College of Technology obtained the first place in student employment rates among 40 technical colleges in Saudi Arabia. In addition, this day gave an opportunity to students to present their technical products in front of representatives of the private sector and media; some of these are the solar car, the LED screen, and the safe electric extension.
6	2010 – 2014	Created a leader club which provide selected students with leadership skills, and gave them the chance to practice these skills in real events inside and outside the college of Technology such as in the employment and technology day.
7	2010 – 2014	Created training programs for disabled people. From one of these programs, 20 deaf people obtained the Cambridge international certificate of information technology, as the first deaf people to get this certificate in Saudi Arabia.
8	2010 – 2011	Restored all the buildings of College of Technology at Dammam in a record time with high quality.

Personal Key Competencies and Skills: (Computer, Information technology, technical, etc.)

1	Competencies and Skills different software such as FORTRAN and Comsol
2	Computer Aided Design (CAD), Soids Work, Microsoft Excel and MATLAB

Last Update

...../...../2021