

Curriculum Vitae
Dr. Deeb Abu Fara
Chemical Engineering Department,
University of Jordan



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Education

- Ph.D** In Chemical Engineering , McGill University. Montreal, Canada, 1988.
- M.Eng** In Chemical Engineering, McGill University. Montreal, Canada, 1983.
- B.Sc** In Chemical Engineering, Alexandria University, Egypt, 1977.

Work Experience

- Present Deputy Dean for Administrative Affairs, School of Engineering
Associate Professor, Chemical Engineering Department,
University of Jordan.
- 2010 – 2012 Associate Professor, Chemical Engineering Department,
King Faisal University
- 2007 – 2010 Associate Professor, Chemical Engineering Department,
University of Jordan.
- 2003 – 2007 Associate Professor, Chemical Engineering Department,
University Bahrain, Bahrain. (Leave of absence from University of
Jordan)

- 1988 – 2003 Associate Professor, Chemical Engineering Department,
University of Jordan, Jordan.
- Summer 2002 Visiting Researcher at the Process Engineering Department,
University of Kaiserslautern, Germany.
- Summer 98 Visiting Researcher at the Polymer Processing and Research Center,
(PPRC) at Queen' s University of Belfast, UK.
- Summer 95 Visiting Researcher at the Polymers Department, Ulm University,
Germany.
- Summer 95 Visit to Buss Company, Basel, Switzerland. (one week)
- Summer 94 Visiting researcher at HIMONT Research Center, Ferrara, Italy.
- Summer 93 & 92 Visiting Professor at the Department of Chemical Engineering,
McGill University, Montreal, Canada.

Principal Courses Taught at University

1. Polymer Engineering
2. Advanced Polymer Processing
3. Process Dynamics and Control
4. Advanced process control and Simulation
5. Plant Design
6. Process Design
7. Process Optimization
8. Engineering Economy and Management
9. Principles of Safety
10. Process Instrumentation and Instrumental Analysis
11. Transport Phenomena
12. Strength of Materials and Equipment Design
13. Petrochemicals
14. Physical chemistry
15. Engineering thermodynamics
16. Local Chemical Industries

Research Areas of Interest

Polymer Engineering and processing

Polymers for medical and pharmaceutical applications:

Controlled drug release

Immobilization of antibodies in polymer films and beads

Biodegradable polymers

Environmental impact of plastics industry and plastics applications

Plastic waste management

Recycling of plastics

Process dynamics and Control

Neural network control systems
Process Modeling and Simulation
Modernization of old polymer processing machines by computer
interfacing and modern control soft-wares

Supervision of Projects

A) Master Projects:

1. Response surface methodology optimization of factors affecting the characteristics of polymeric films used in enteric coating in some pharmaceutical solid dosage forms (2018).
2. The Impact of Magnesium Silicate on Compression Properties of Different Pharmaceutical excipient (2016)
3. Characterization of the Compression Properties of Binary Excipient Mixture of Chitosan and Xanthan Gum (2015).
4. Application of percolation theory on controlled drug release systems (2002)
5. Immobilization of Antibodies in Film Forming Polymers (1999)
6. Dynamic Modeling of Packed Bed Glycerol-Water Distillation Column (1997)
7. Drug Release from Some Hydrophilic Polymer Matrices (1996).
8. Modeling Absorption of CO₂ into Ammoniated Brine Solutions (1992).
9. Computer Simulation of Adaptive control for Thermoplastics Injection Molding Process (1992).

B) Design Projects

1. Production of Ethylene Vinyl Acetate (EVA)
2. Production of Acetone
3. Production of Isopropyle Alcohol
4. Production of Polyethylene
5. Production of Citric Acid
6. Recycling of Plastics
7. Production of PA & EG from Recycled PET
8. Solid Waste Management-Plastic Waste as Case Study
9. Production of Agricultural Plastic Films and Irrigation Pipes

C) Practical Projects

1. Pressure Control
2. pH Control
3. Control Computer Interfacing of Thermal Conductivity Apparatus for Molten Polymers
4. Thermal Conductivity of Thermoplastics
5. The use of Polymer Resins for Water Treatment
6. Production of Energy from Waste Plastics
7. Swelling of polymer gels

8. Hydration of cross-linked alginate films

Consultancy Experience

1. Scientific Consultant at The Jordanian Pharmaceutical Manufacturing Co., Naor. Jordan. Involved in many projects.
2. Design of the Control System for Ethoxylation Processes, Nur Chemicals and Eng. Industries Co., Amman 11190, Jordan. (2002).
3. Pre-Feasibility study for manufacturing acrylic sheets in Jordan, in cooperation with Abu-Ghazaleh Consulting (AGCON) and submitted to the Industrial Development Bank (IDB) in Jordan (1998).
4. Study of the Sulpho-chemicals and Polymerization Industries in Jordan. Submitted to the Industrial Development Bank of Jordan (1996).
5. Equipment and material selection for Arab Company for Cable Polymers, Saudi Arabia. Visit to Buss. Basel. Switzerland (1995).
6. Feasibility study and design of the process for production of agricultural plastic containers for the Agricultural Containers Company, Jordan.
7. Feasibility study for the manufacture of soap from olive oil in southern Jordan.

Research & Publications

1. Understanding the significance of Kawakita model parameters through the indie force-displacement curve, submitted to *Pharmaceutics J.*
2. Investigating the industrial potential of naturally occurring calcium carbonate in pharmaceutical applications: a case study on binder effect on optimizing calcium carbonate tableting and compression properties, submitted to *Powder Technology.*
3. Direct matrix made from xanthan gum and low molecular weight chitosan designed to improve compressibility in controlled release delivery, submitted to *Pharmaceutics J.*
4. A comparison of industrial lactose obtained by roller compaction with spray-dried lactose and α -lactose monohydrate using compression analysis techniques. Accepted for publication, *J. of Excipients and Food Chemicals*, vol. 10 (2) 2019
5. Modification of α -lactose monohydrate as a direct compression excipient using roller compaction, *Drug Dev. Ind. Pharmacy*, 44, (2018) 2038-2047.
6. Controlled Drug Release from EVA Polymer System, submitted to *Carbohydrate Polymers*
7. Abu-Jdayil, B., D. Abu-Fara, Modification of the Rheological Behavior of Sodium Alginate by Chitosan and Multivalent Electrolytes, *Ital. J. Food Sci.*, vol. 25 - 2013

8. D. Abu Al-Nadi, D. Abu Fara, I. Rawabdeh, "Control of Rotational Molding Process using Adaptive Fuzzy Control", *Advances in Polymer Technology* 24,4 (2005) 266-277.
9. D. Abu Fara, I. Abu Reesh, "Effect of the Type of Input on the Periodic Operation of a Bioreactor with Input Multiplicities", *Mutah Lil-Buhuth wad-Dirasat*, University of Mutah, Jordan, 30, (2003)
10. D. Abu Fara, I. Rawabdeh, D. Abu Al-Nadi, "Neural Control for Cavity Pressure During Filling and Packing Stages of Thermoplastic Injection Molding Process", *J. of Injection Molding Technology*, 5 (2) (2001) 105-109.
11. M. Attarakih, D. Abu Fara, and S. Sayed, " Dynamic Modeling of Packed Bed Glycerol-Water Distillation Column", *Industrial and Engineering Chemistry Research*, 40 (2001) 4857-4865.
12. M. albarghouthi, D. Abu Fara, M. Saleem, T. El-Thaher, K. Matalka, and A. Badwan, "Immobilization of Antibodies on Alginate-Chitosan Beads", *International Journal of Pharmaceutics*, 206, 23 (2000).
13. D. Abu Fara, M. Kearns, and R. Crawford, "System Modelling for the Control of the Rotational Molding Process", *SPE ANTEC Technical Papers*, 45 (1999).
14. S. Al-Mousa, D. Abu Fara, and A. Badwan, "Evaluation of Parameters involved in the Preparation and Release of Drug Loaded in Crosslinked Matrices of Alginate, *Journal of Controlled Release*, 57 (1999) 223-232.
15. S. Btoush, N. Haimour, and D. Abu Fara, "Absorption of CO₂ into Ammonia Aqueous Solutions", *Dirassat Engineering Sciences*, 26, 66 (1999).
16. D. Abu Fara, "Recycling of Plastic Waste in Jordan", *First International Conference "Role of Engineering Towards Better Environment"*, Alexandria, Egypt, (1996).
17. N. Haimour and D. Abu Fara, "Extraction of Olive Oil from Olives Expression Residues", *Engineering and Technology*, 14(9), 72 (1995).
18. N. Abdal-Jalil, Y. Al-Assaf, and D. Abu Fara, "Computer Simulation of Adaptive Control for Thermoplastics Injection Molding Process", *First National Conference on Electrical Engineering*. Mut'a University (1993).
19. D. Abu Fara, M.R. Kamal, and W.I. Patterson, "Comprehensive Strategies for Sequential Closed-Loop Pressure Control Throughout the Injection Molding Cycle", *SPE ANTEC Papers*, 36, 239, (1990).
20. D. Abu Fara. W.I. Patterson, and M.R. Kamal, "Cavity Pressure Control in Injection Molding During Filling, Packing, and Holding", *SPE ANTEC Technical Papers*, 33,221 (1987).
21. M.R. Kamal. W.I. Patterson, N. Conley, and D. Abu Fara, "Dynamics and Control of Pressure in Thermoplastics Injection Molding", *Polym. Eng. Sci.* 27, 1403 (1987).
22. D. Abu Fara, MR. Kamal, and W.I. Patterson, "Evaluation of Simple Dynamic Models and Controllers for Hydraulic and Nozzle Pressure in Injection Molding", *Polym. Eng. Sci.*, 25,714 (1985).
23. MR. Kamal. W.I. Patterson, D. Abu Fara. and A. Haber, "A Study of Injection Molding Dynamics", *Polym. Eng. Sci.* 24,686 (1984).
24. M.R. Kamal. W.I. Patterson, and D. Abu Fara. "Simple Models of Hydraulic and Nozzle Pressures in Injection Molding". *SPE RETEC*, NJ (1983).
25. Haber, W.I. Patterson, M.R. Kamal, and. D. Abu Fara, " A Microprocessor System for Control of Injection Molding". *Mini-Symposium on Polymer Processing*. NRCC, Montreal (1982).

Conferences Attended

1. **The 6th** Global Conference on Renewables and Energy Efficiency for Desert Regions (GCREEDER 2018), April 2018.
2. The 8th Jordan International Chemical Engineering Conference (JIChEC 2017) ,7-9 November, 2017.
3. The Seventh Jordan International Chemical Engineering (JIChE 07) Conference, Nov. 2014
4. Engineering Education, Bahrain,2004
5. Jordanian Chemical Engineering Conference III, Amman, October, 2002.
6. 57 th Annual Technical Conference of Society of Plastics Engineers, NYC, May 2-6, 1999.
7. Second Mediterranean Exhibition of Technological Innovation, Naples, Italy, November 5 - 9, 1996.
8. Jordanian Chemical Engineering Conference II, Amman, September 2-4, 1996.
9. The Fifth International Conference of Chemical Engineering, Cairo, March 23 -25, 1996.
10. German - Egyptian Polymer Seminar, Cairo, September 9 - 10, 1995
11. Fourth Mediterranean School on Science and Technology of Advanced Polymer- Based Materials, Crete, Greece, June 5 - 9, 1995.
12. First Mediterranean Exhibition of Technological Innovation, Naples, Italy, November 5 - 12, 1994.
13. Jordanian Chemical Engineering Conference I, Amman, October 18-20, 1993.
14. 37 th Canadian Chemical Engineering Conference, Montreal, May 18-22. 1987.
15. 44 th Annual Technical Conference of Society of Plastics Engineers, Boston, April 28-May 1, 1986.
16. Polymer Processing Society, Second International Annual Meeting, Montreal, April 1-4. 1986.
17. 41st Annual Technical Conference of Society of Plastics Engineers, Chicago, May 1983.
18. Society of Plastics Engineers Regional Technical Conference (RETEC), Montreal, September 30`h - October 15` 1982.
19. 2nd World Congress of Chemical Engineering, Montreal, October 4-9, 1981.
20. 38 th Annual Technical Conference of Society of Plastics Engineers, N.Y. May 5-8, 1980.

Administrative Duties:

1. Dean Deputy, School of Engineering, University of Jordan, Present.
2. Member of the consulting committee for engineering education, Jordan Engineers Association, Amman, Jordan

3. ABET Accreditation Committee, Chemical Engineering Dept, University of Jordan.
4. ABET Accreditation Committee, Chemical Engineering Dept, University of Bahrain.
5. Academic Committee, Chemical Engineering Dept., University of Bahrain.
6. Labs Maintenance Committee, Chemical Engineering Dept, University of Bahrain.
7. Research Committee in the Faculty of Engineering and Technology, University of Jordan.
8. Graduate Studies and Research in the Department of Chemical Engineering, University of Jordan.
9. Faculty of Engineering Graduates Committee.
10. Representative of the Chemical Engineering Department in the Faculty Council for two years.
11. Representative of the Faculty of Engineering in the University Council for the year 93/94.
12. Several Committees on the Specification of the Plastics Products, Ministry of Industry, Jordan.

KFU - Committees

University Level

- 1- Scientific Chairs Committee
- 2- Cultural Exchange Committee (اللجنة الدائمة للتبادل والتعاون المعرفي)
- 3- Community Service Committee

College of Engineering Level

- 1- Academic and Industrial Relations
- 2- Industrial Training

KFU – Funded Projects

- 1- The Effect of Emulsified fuel combustion on the formation of Poly Aromatic Hydrocarbons. Project No. (120032).
- 2- Effect of Processing Parameters on the Functional Properties of Spray Dried Camel Milk Powder. Project No. (130257).

Professional Affiliations

1. American Institute of Chemical Engineers
2. Society of Plastics Engineers in North America (SPE).
3. Jordanian Engineers Association.
4. Mediterranean Network on Science and Technology of Advanced Polymer - Based Materials.

Honors and Awards

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| 2002 | DAAD Scholarship at University of Kaiserslautern, Germany |
| 1995 | DAAD Scholarship at Ulm University, Germany |
| 1986 | Best Technical Paper award from the Injection Molding Division of the Society of Plastics Engineers. |
| 1983 | Best Technical Paper award from the Injection Molding Division of the Society of Plastics Engineers. |
| 1980 - 1986 | University- of Jordan Scholarship. |

Industrial Training Courses

Process Safety

1. Preventing Human Error, SABIC, KSA, Aug. 30, 2015.
2. Safety Leadership, SABIC, Jubail, KSA, November, 2014
3. Industrial Safety, SABIC, Jubail, KSA, August, 2014
4. Safety in Industrial Plants, SABIC. Jubail, October 27, 2013.
5. Safety in Industrial Plants, SABIC. Jubail, April 28-May 2, 2012.
6. Management of Change (MOC) and Pre-Startup Safety Review (PSSR), SABIC, Jubail, March 24-24, 2012.
7. Industrial Hygiene, SABIC, Riyadh, KSA, March 5-7, 2012
8. Process Safety Analysis, SABIC, Riyadh, KSA, October 1-5, 2011.
9. HAZOP Analysis, Jordanian Engineer Association, August 6, 2011.
10. Industrial Safety Strategies, Bahrain Engineers Association, October, 2010
11. HAZMAT Analysis and Hazardous Chemical Handling, Jordanian Engineer Association, February, 2010.
12. Safety, Health and Environment, Bahrain Engineers Association, May 2009

Oil & Gas

1. Sulfur Recovery in Gas Processing, GASCO, Abu Dhabi, Nov. 19, 2017.
2. Hydrocarbons Production Operations, GASCO, Abu Dhabi, May, 2016

3. Gas Conditioning & Processing – GASCO, 28-2-2016
4. Sulfur Recovery in Gas Processing, GASCO, Abu Dhabi, Sept. 13, 2015.
5. Essential of Petrochemicals, SABIC, Yanbu', KSA, April 20-24, 2014.
6. Natural Gas Production Processes, Morocco, Sept. 15, 2013
7. Gas Turbine in the Gas Production, GASCO, Abu Dhabi, July 8, 2012.

Polymers

1. Polymer Engineering and Processing, KSA, May, 2017
2. Polymer Extrusion Process and Troubleshooting, KSA, August, 2014.
3. Polymers and Polymerization Techniques, SABIC, Riyadh, July 24-28, 2011.
4. Principles of Polymer Science, SABIC, December, 2005
5. Principles of Polymer Science, SABIC, Riyadh, April, 2000.
6. Principles of Polymer Science, SABIC, March, 1998.
7. Polymer Reaction Engineering, SABIC, August, 1993.

Chemical Plants Troubleshooting

1. Troubleshooting and Improvement, GASCO, Abu Dhabi, 2017
2. Troubleshooting of Chemical Plants, SABIC, KSA, Sept. 6, 2015.
3. Process Plant Troubleshooting & Engineering Problem Solving - Sipchem , KSA, Feb 8-12- 2015
4. Troubleshooting of Gas Production Processes, Morocco, Sept. 1st, 2013
5. Troubleshooting of Process Operations, Malaysia, Kuala Lumpur, Fleming Gulf, July 2-4-2013
6. Troubleshooting of Process Operations, KSA, Advanced Petrochemicals, March 2-6-2013
7. Process Troubleshooting Techniques, KSA, Al-Khubar, July 9-13, 2011.
8. Process Plant Start-up and Commissioning , SABIC, Saudi Arabia, October 24-28, 2009.
9. Troubleshooting in Chemical Plants, SABIC, Saudi Arabia, October 10-14, 2009.
10. Process Plant Troubleshooting & Engineering Problem Solving, SABIC, Saudi Arabia, August 15-19, 2009.
11. Troubleshooting in Chemical Plants, SABIC, Saudi Arabia, July 4-8, 2009.
12. Troubleshooting in Chemical Plants, SABIC, Saudi Arabia, June 13-17, 2009.
13. Troubleshooting of Chemical Plants, SABIC, June 14-18, 2008.
14. Process Plant Troubleshooting and Engineering Problem Solving, SABIC, June 2-6,2007.
15. Troubleshooting of Chemical Plants, SABIC, May 5-9, 2007.
16. Troubleshooting of Chemical Plants, SABIC, June 17-21, 2006.

Advanced Process Control:

1. Advanced Process Control Techniques, SWCC, KSA, JEDDAH, Oct. 25, 2015.
2. Advanced Process Control Techniques, SWCC, KSA, JEDDAH, May 17, 2015.
3. Process Control Techniques, Saudi Electrical Company, Dammam, KSA, Sept., 2014.
4. Advanced Industrial Control Systems, Control Loop Tuning and Troubleshooting, Fleming Gulf, Kuala Lumpur, MALAYSIA, June 17-19, 2014.
2. Advanced Process Control Techniques, Advanced for Petrochemicals, KSA, March 25-27, 2014.
3. Advanced Control Techniques for Oil and Gas Industry, Morocco, Sept. 8, 2013.
4. Process Control Techniques, Oman Gas, Oman, Dec. 22-26, 2012
5. Process Control Techniques, Al-Khobar, Saudi Arabia, June 27 – July 1, 2009.
6. Advanced Process Control, SABIC, Saudi Arabia, June 6-10, 2009.
7. Advanced Process Control, SABIC, Saudi Arabia, March 7-11, 2009.
8. Advanced Process Control, SABIC, KSA, June 7-11, 2008.
9. Advanced Process Control, SABIC, KSA, March 1-5, 2008.
10. Process Control Techniques, Al-Khubar, KSA, Nov 3-7, 2007.
11. Advanced Process Control (Operations), SABIC, June 9-13, 2007.
12. Advanced Process Control, SABIC, March 10-14, 2007.
13. Process Control Techniques, SABIC, KSA, July 22-26, 2006.
14. Advanced Process Control, SABIC, June 24-28, 2006.
15. Distillation Control, SABIC, KSA, February, 2006
16. Advanced Control Techniques, SABIC, KSA, July 2004.
17. Advanced Process Control, SABIC, July 3-7, 2004

Basic Control and Instrumentation

1. Instrumentation, Measurements and Control, Advanced, KSA, Feb, 22, 2018
2. Basic Instrumentation and Control, SABIC, Sept 1-5, 2007
3. Instrumentation, Measurements and Control, SABIC, August 4-8, 2007.
4. Basic Instrumentation and Control, SABIC, KSA, September 16-20, 2006
5. Basic Instrumentation and Control, SABIC, KSA, September 9-13, 2006.
6. Basic Instrumentation and Control, SABIC, KSA, July 15-19, 2006.
7. Basic Instrumentation and Control, SABIC, KSA, June 3-7, 2006.
8. Instrumentation and Control – Level I, SABIC, KSA, May, 2006.
9. Instrumentation and Control, SABIC, KSA, September, 2005
10. Basic Instrumentation and Control, SABIC, KSA, Sept., 2004

11. Instrumentation and Process Control Techniques, Dhahran, KSA, Aug, 2004.
12. Instrumentation and Process Control Techniques, 5-days Course, Dahran, Nov., 2000, offered by International Center for Management Development (ICMD), Al-Khobar, Saudi Arabia.
13. Basic Instrumentation and Control, SABIC, KSA, February, 1999.
14. Process Measurements and Control, Qatar General Petroleum Corporation (QGPC), Qatar, November 14-18, 1999.
15. Basic Instrumentation and Control, SABIC, KSA, April, 1997.
16. Instrumentation and Control and Instruments Maintenance, Admantic Limited, for Al-Bayraqa Petroleum Marketing Company, Libya, July 3-22, 1993.
17. Instrumentation and Control, SABIC, KSA, November, 1993.

Maintenance & Maintenance Management

1. Maintenance Strategies, Advanced, KSA, Sept. 1, 2015.
2. Preventive Maintenance and Troubleshooting, SABIC, Sept 1-5, 2012.
3. Effective Maintenance Planning and Scheduling, ICMD, Al-Khubar, KSA, Oct. 29 – Nov. 2, 2011.
4. Maintenance Management, Bahrain Association of Engineers, Bahrain, Nov. 23-26, 2008.
5. Maintenance Management, Jordanian Engineering Association, Jordan, Nov. 16-20, 2008.
6. Effective Maintenance Policy and Procedure Writing, Bahrain Society of Engineers, Training Center, Bahrain, July 27 - 30, 2008
7. Effective Maintenance Policy and Procedure Writing, Bahrain Society of Engineers, Training Center, Bahrain, June 29 – July 2nd, 2008.
8. Effective Maintenance, Planning and Scheduling, SABIC, July 21-25, 2007.
9. Effective Maintenance Scheduling and Planning, SABIC, KSA, February 17-21, 2007.

Valve Engineering

1. Safety Relief Valves, ICMD, Al-Khubar, KSA, Dec. 10-14, 2011.
2. Valves Technology and Safety Relief Valves, ICMD, Al-Khubar, KSA, July 2-6, 2011
3. Valve Design, Operation, Maintenance and Troubleshooting, Global Center, Jordan, March 22 – April 23, 2009.
4. Valve Operation & Maintenance, SABIC, Saudi Arabia, April 11-14, 2009.

Pumps and Compressors

1. Compressor Troubleshooting and Fault Diagnoses, Kuwait Petroleum Corporation, Kuwait, Feb. 19-23, 2018.
2. Compressor Troubleshooting and Fault Diagnoses, ADGAS, Abu Dhabi, Dec. 24-28, 2017.
3. Compressors: Operation & Troubleshooting, GASCO, Abu Dhabi, July 9, 2017
4. Compressors: Operation, Troubleshooting and Maintenance, Advanced Petrochemicals, KSA, Dec. 24-26, 2013.
5. Pumps: Operation, Troubleshooting and Maintenance, Advanced Petrochemicals, KSA, Nov. 18-20, 2013.
6. Centrifugal Pumps and Compressors, Al-Khubar, KSA, Oct 15-19, 2011.
7. Centrifugal Pumps and Compressors, Al-Khubar, KSA, June 18-22, 2011
8. Centrifugal Pumps and Compressors, Al-Khubar, KSA, May 14-19, 2011
9. Centrifugal Pumps and Compressors, Al-Khubar, KSA, Oct 27- 31, 2007.
10. Rotating Equipment Reliability, Troubleshooting, and Root Cause Analysis, for SABIC, Khobar, KSA, February, 24-28, 2007.

Process Scale-Up

1. Practical Approach to Process Scale-Up, April 22-24, 2014, Berlin, Germany.
2. Practical Approach to Process Scale-Up, October 1-3, 2013, Kuala Lumpur, Malaysia.

Basic Chemical Engineering

1. Distillation Operation and Control, Advanced, KSA, July., 2016
2. Advanced Operational Skills, OMIFCO, Sur, Oman, May 17, 2016.
3. Distillation Operation and Design, GASCO, Abu Dhabi, April., 2016
4. Distillation Operation and Design, GASCO, Abu Dhabi, Dec., 2015.
5. Distillation: Operation, Control and Troubleshooting, SABIC, KSA, Aug. 23, 2015.
6. Heat Exchanger: Design, Operation and Troubleshooting, SABIC, KSA, Aug., 16, 2015.
7. Advanced Operational Skills, OMIFCO, Sur, Sultanate of Oman, June 2, 2015.
8. Metallurgy for Nonmetallurgists, ICMD, Al-Khubar, KSA, Oct. 16-20, 2011.

9. Heat Exchangers: Operation, Maintenance, and Troubleshooting, ICMD, Al-Khubar, KSA, June 25-29, 2011.
10. Cooling Towers: Operation and Troubleshooting, ICMD, Al-khubar, KSA, May 21-25, 2011.
11. Basic Heat Transfer & Heat Exchangers, SABIC, Saudi Arabia, December 5-9, 2009.
12. Basic Heat Transfer & Heat Exchangers, SABIC, Saudi Arabia, May 16-20, 2009.
13. Basic Heat Transfer and Heat Exchanger, SABIC, KSA, May 17-21, 2008.
14. Cooling Towers: Operation and Troubleshooting, Al-khubar, KSA, Feb 23-27, 2008.
15. Basic Distillation Operation and Troubleshooting, Al-Khubar, KSA, Sept 8-12, 2007.
16. Elements of Chemical Engineering Systems, SABIC, for August 5-9, 2006.

Hydraulic Systems

1. Hydraulic Systems Design and Troubleshooting, SABIC, KSA, August 12-16, 2006.
2. Hydraulic Systems: Fundamentals, Operation, and Troubleshooting, SABIC, KSA, September, 2005
3. Principles of Hydraulic Systems, Bahrain, March, 2005.
4. Pneumatic Control Systems, Bahrain, Dec., 2004.

Corrosion Engineering

1. Corrosion Monitoring and Control, JEA, Jordan, October, 2008.
2. Corrosion Engineering, SABIC, KSA, September, 2004

Human Resources & Management

1. Modern Management, Al-Khobar, KSA, August, 2009
2. Leading Knowledge Management Learning Strategies, Al-Khobar, KSA, August, 2009.
3. Effective Communications, ICMD, Al-Khobar, KSA, April 25-29, 2009.
4. Train the Trainers, ICMD, Al-Khobar, KSA, November 15-19, 2008.
5. Building High Performance Team and Leadership, Al-Khobar, KSA, July 19-23, 2008.
6. Effective Time Management, ICMD, Al-Khobar, KSA, July 12-16, 2008.
7. Health and Safety, Al-Khobar, KSA, Dec 8-12, 2007.