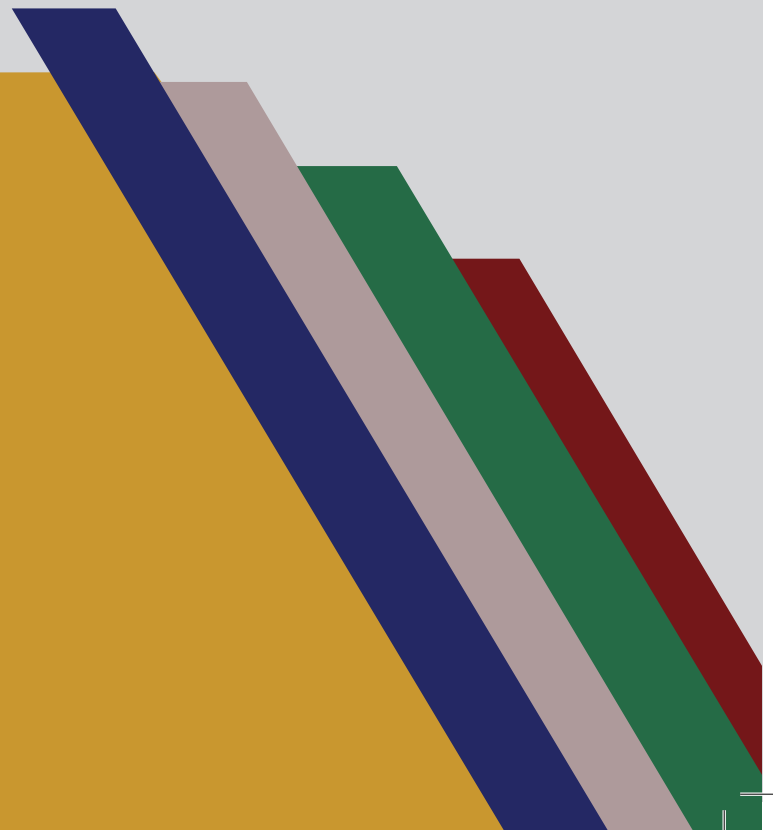


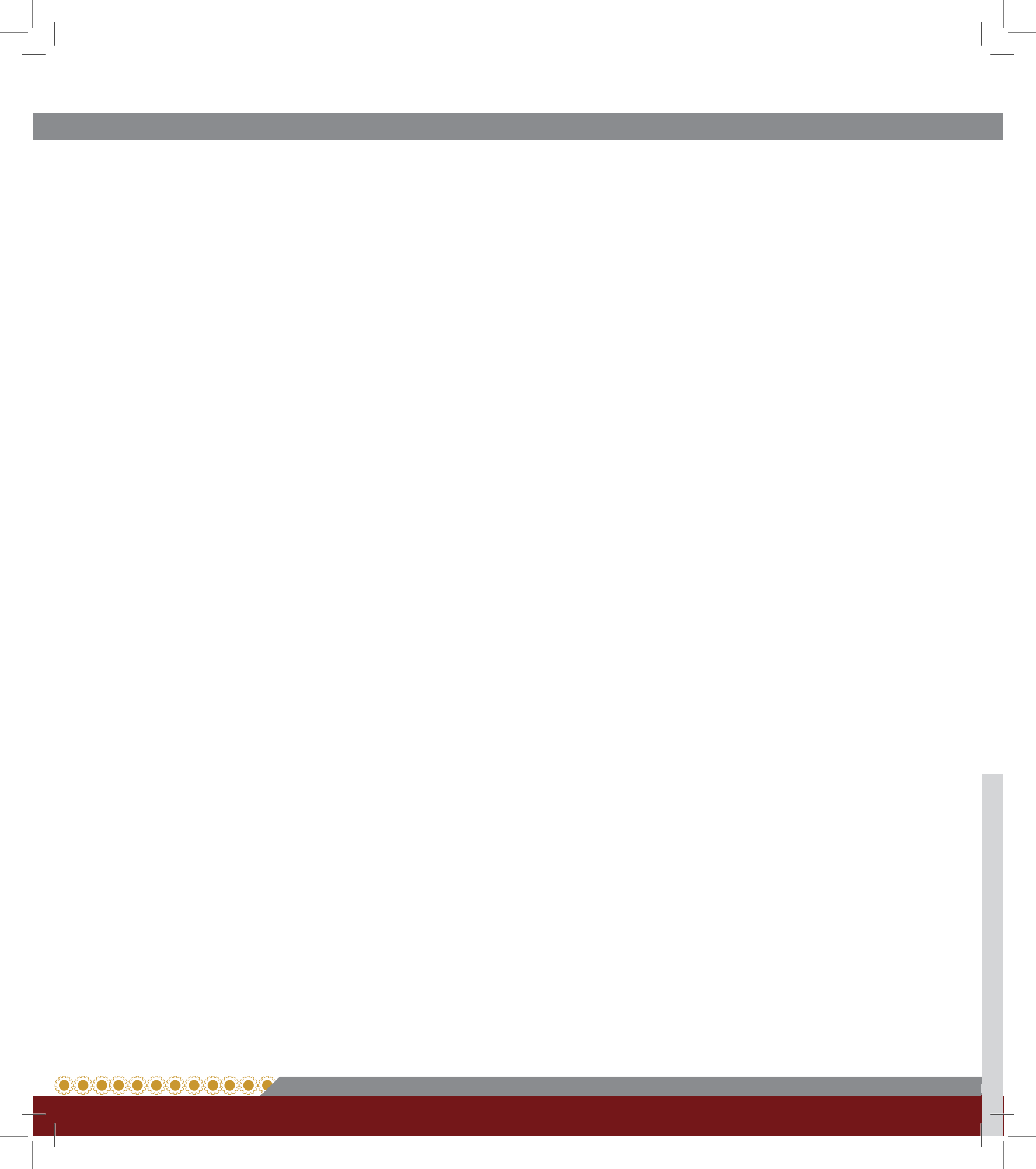


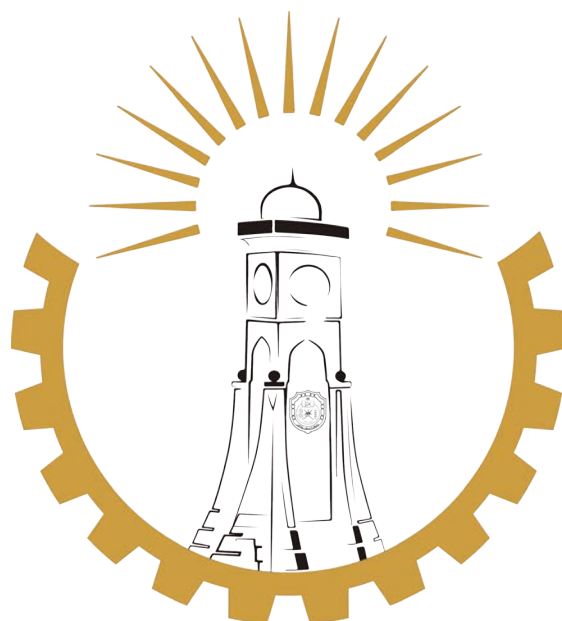
Annual Report

College of Engineering

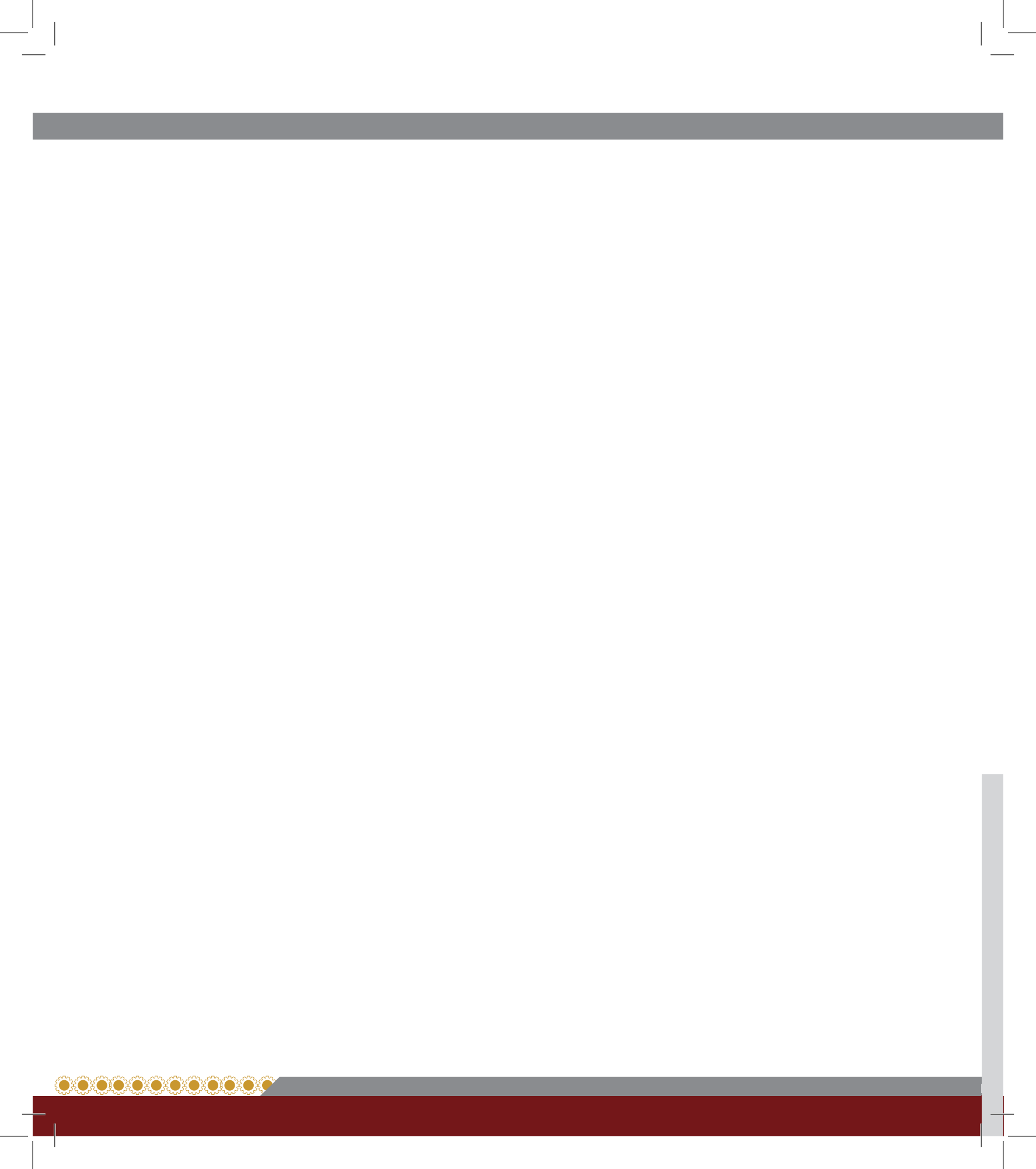
2017







كلية الهندسة
College of Engineering

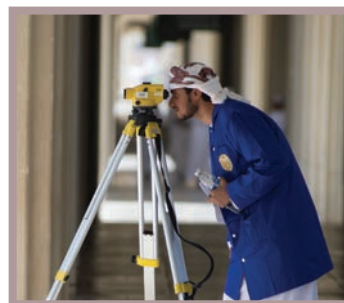


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Sabah Al-Sulaiman

Sherif El-Gamal

Ahmed Ammari

Mojtaba Ghodsi

PUBLICATION AND WEB COMMITTEE

«*FOCUSING ON PUBLICATIONS OF OUR COLLEGE*»

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Eng. Mohsen Ghanma (Department of Civil and Architectural Engineering)

Eng. Mahmood Nasser Al-Tobi (College Computer Engineer, Dean's Office)

Mr. Ibrahim Mattar Al-Saifi (Deputy Director of Administration, Dean's Office)





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Dr. Sherif El-Gamal (Department of Civil and Architectural Engineering)

The logo features a light gray square background. In the top-left corner, there is a dark blue triangle. In the bottom-right corner, there are three overlapping triangles: a green one on top, a maroon one in the middle, and a gold one at the bottom. The text "College of Engineering" is centered in the gray area.

College of Engineering



EXECUTIVE SUMMARY

The College of Engineering at Sultan Qaboos University is among the highly ranked engineering colleges in the Gulf Cooperation Council (GCC) countries. Its four academic departments offer eight ABET accredited undergraduate engineering programs. These are: Architectural, Chemical and Process, Civil, Electrical and Computer, Industrial, Mechanical, Mechatronics, and Petroleum and Natural Gas Engineering. The Mechatronics program is jointly offered by two departments, the Electrical and Computer Engineering and the Mechanical and Industrial Engineering. At the postgraduate level, the College offers ten Masters and six Doctoral programs in various disciplines across the four departments. In addition, the college offers a joint undergraduate program in Agricultural Engineering that is accommodated at the College of Agriculture and Marine Science (CAMS). The University Council has approved in the past few years the establishment of a new specialization on Biomedical Signals and Medical Devices, managed by the Department of Electrical and Computer Engineering.

It is worth noting that since the inception of SQU, the College of Engineering intake has been steadily increasing over the years reaching about 450 in 2017. The number of engineering students graduated in 2017 was 373 and the total number of undergraduate students currently registered in the college is around 2600 students.

The postgraduate students' enrollment has also been on the increase. For instance, the number of postgraduate students registered in 2017 has reached 79 students. However, the total number of master's students graduated in 2017 was 34. In the same year, the college graduated 5 PhD students, from the different programs of the College of Engineering.

The college continues to attract research funding every year. The funding for research and consultancy reached 373,000 OMR in 2017. The research projects for this year include 9 internally funded projects and 9 research/consultancy projects from industry. This is in addition to 2 collaborative SQU-UAEU projects and 3 HM projects. As for scholarly activities in 2017, the faculty of the college published 149 journal papers, 118 conference papers, 2 books, 10 book chapters and 29 technical reports.

On the new faculty side, 4 faculty members joined the college in 2017 after finishing their higher studies. Two from the Department of Mechanical and Industrial Engineering and two from Electrical and Computer Engineering Department.

Iwould like to thank our colleagues, students, SQU administration and associates from public and private sectors for their commitments and supports. With their energy and enthusiasm, the College of Engineering will be able to maintain excellence and remain an inspiration to other units as a benchmark for teamwork success. They did a good job. Congratulations!

Prof. Hadj Bourdoucen
Dean, College of Engineering



- *Our objective is to train students to become innovative and leading engineers in knowledge and Maker Economy.*
- *The college staff and students work in coherence for preparing the next generation of engineers who will conceive innovative ideas and generate novel insights.*
- *We are preparing our students to be the leaders and the employers of tomorrow.*
- *We will finalize new plans addressing the main modern engineering challenges for sustainable solutions.*

EXECUTIVE SUMMARY

The Charter of the Sultan Qaboos University states that one of the University's objectives is "to uphold scientific research as the most effective tool in establishing accurate facts, problem solving and the prediction of social patterns as well as undertaking research in the fields of technology in relation to the Omani environment, in particular, and other environments, in general, in order to enhance the intellectual capabilities and quality of life of mankind as a whole and of Omani society in particular."

The basic mission of our office is to administer postgraduate education and research in the College of Engineering, to enhance the strength and vitality of engineering research by identifying new opportunities, developing collaborations and establishing partnerships between faculty, industry, and government units.

Our faculty members were able to attract research funds from internal grants as well as externally funded research grants, contracts, and consultancy services despite the limitation of financial resources in the last three years caused by the global financial crisis. A total amount of OMR 373,000 was the research fund received by the College. This year, the College of Engineering was awarded three out of the total seven HM Trust Fund strategic research projects funded by SQU with a total fund of around OMR 200,000. The dissemination of findings from research activities is reflected by the number of publications of articles in top ranked refereed international journals (149 articles) and conference proceedings (118) as indicated in the list of publications included in this report.

The number of admitted postgraduate students has steadily increased in the last few years. In 2017, the College of Engineering admitted 142 students in the MSc programs and 8 students in the PhD programs. In 2017 a total of 34 MSc students and a total of 5 PhD students graduated from the College of Engineering. With regard to the expansion of our postgraduate programs; the Master of Science in Architectural Engineering has been approved by the University Council in November 2017 and will be offered in the Fall Semester of 2018. Other Master Programs: MSc in Sustainable Energy is at the final stages of being approved and MSc in Construction Engineering is at the proposal stage. Hopefully, these MSc programs expected to be offered in subsequent years to fulfill the market need of proficient graduates in these disciplines.

I would like to take this opportunity to thank our faculty members who are involved in driving research and postgraduate studies at our College. Thanks to our technical staff who work behind the scene to support our postgraduate students and faculty members to carry out the experimental work in the laboratory and in the field. Our office is supported by the College Research and Postgraduate Studies Committee who are doing excellent job in monitoring and improving the quality of research activities and postgraduate studies at the College. Thanks to the administrative staff at our office who are striving to provide assistance to faculty and students to facilitate their end needs related to research and postgraduate studies.

Dr. Abdullah Al-Saidy

Assistant Dean for Postgraduate Studies and Research, College of Engineering



- *Research leads to innovation and creation of new knowledge.*
- *Our faculty research is directed towards addressing society/industry challenges.*
- *We prepare our students to be independent researchers who are able to tackle current and future challenges.*

EXECUTIVE SUMMARY

College of Engineering has grown rapidly since its start in 1986. The current student population has increased to around 2600 students during the academic year 2018-2017, compared to only 92 students in 1986. Amongst these students, there are about 570 female students. The College positioned itself as a leader in engineering education in Oman by offering eight programs accredited by the Accreditation Board for Engineering and Technology (ABET) which provide a vibrant learning culture and ample leadership opportunities for our students.

The Office of the Assistant Dean for Undergraduate Studies coordinates with the other units in the University (e.g., Deanship of Admission and Registration, Deanship of Students Affairs, Center of Preparatory Studies, Students Counselling Center) to enrich students' academic experience to grow professionally and socially. A large part of our success comes from our top-notch faculty. The role of our faculty is not only to provide teaching and research, but also to assist, advise and guide the students to progress efficiently in their specializations and future career endeavors.

Today's engineering challenges are far more complex than ever. And to meet these challenges, our students are equipped with many attributes that foster and advance their comprehensive skills and knowledge in the area of their specialization with critical analysis of complex information. The College has adopted strategies to best achieve this mission by continuously:

1. Improving undergraduate programs in both teaching and learning methods.
2. Upgrading course contents, books, computers and laboratory facilities to cope with cutting-edge technology.
3. Enhancing students' professional abilities for analytical and imaginative thought.
4. Building strong link with the government and private sectors.

We wish our students all the success in the College of Engineering and a prosperous future.

Dr. Issam Bait Bahdour

Assistant Dean for Undergraduate Studies, College of Engineering



- *«O my Lord! advance me in knowledge.»*
- *"Share Seeds of Knowledge for a Better Future"*
- *Be Yourself Inspire Others.*
- *Today a reader, tomorrow a leader.*

EXECUTIVE SUMMARY

An essential component of the College's mission is to provide students with high quality engineering education. This education is not only limited to conventional class and lab delivery modes. Students are also exposed to an actual professional engineering practice via industrial training and community service. Through industrial training students are able to correlate what they have learnt at the University with what being practiced in the real industry. The office of Assistance Dean for Training and Community Services (ADTCS) is responsible of providing to the College's students through its links with both public and private sectors. Students are usually involved in a range of activities during their training period. These activities include design, analysis, manufacturing, testing, regulatory affairs, etc. At the international level, the College is a full member in The International Association for the Exchange of Students for Technical Experience (IAESTE). This organization provides students' with opportunities to train abroad, and employers with highly skilled, highly motivated trainees for projects. The IAESTE-Oman established in 2001 with a vision of connecting companies, universities and students in Oman to foster cross-border collaboration in R&D and increase the mobility of engineers. With commitment, dedication and hard work, IAESTE-Oman has achieved an impressive growth rate in the number of exchange students catered annually. Having a competitive higher education level and excellent facilities, Omani students proofed that they are highly skilled and capable of competing at the international level, thus exhibiting Oman on the global platform.

The relationship between the College and its alumni continues long after your graduation day. The College is keen to maintain links with its Alumni, and keep them aware of the educational, research and social activities within the College. Moreover, the College, by its nature, always has close ties and continuous interaction with the Industries of Oman and beyond. The office of Assistance Dean for Training and Community Services (ADTCS) maintains its strong relationship with the Alumni by inviting them to participate in activities and conferences organized by The College; exchange information and opinions; shares information related to Alumni's social and professional activities; and provides services to the Alumni (e.g. using the SQU library).

The ADTCS fosters community building within the College and with the Omani community by maintaining the spirit of public service at the College and offering opportunities to participate in community service work, and supporting student-sponsored social action initiatives. The College also strengthen its relationship with the community by organizing activities and events, which support the college in performing its educational and research goals, and in order to serve and develop the Omani community. Moreover, extending all forms of knowledge and scientific awareness to through holding short training courses, workshops, seminars, and other programs.

I would like to take this opportunity to express my sincere gratitude and appreciation to all the organizations and individuals that have supported us by providing high quality training for our students as well as provide regular feedback on our programs and activities. These inputs had a great role in shaping our training programs towards the excellence and maintaining the dynamicity of our curriculum and its delivery.

Dr. Ghazi Al-Rawas

Assistant Dean for Training and Community Service, College of Engineering



- *"Omani students have proved to be highly skilled, competent, and competitive at the international level"*

DEAN'S OFFICE



Prof. Hadj Bourdoucen



Dr. Abdullah Al-Saidy



Dr. Issam Bait Bahadur

Prof. Hadj Bourdoucen

Professor

Dean

Dr. Abdullah Al-Saidy

Associate Professor

Assistant Dean for Postgraduate Studies and Research (ADPSR)

Dr. Issam Bait Bahadur

Assistant Professor

Assistant Dean for Undergraduate Studies (ADUS)



Dr. Ghazi Al-Rawas

Dr. Ghazi Al-Rawas
Assistant Professor

Assistant Dean for Training and Community Service (ADTCS)



Ibrahim Al-Saifi

Ibrahim Mattar Al-Saifi

Assistant Director of Administration and Acting Director



Syed Muneer Uddin

Syed Muneer Uddin

Coordinator, Dean's Office



Shaima Al-Zadjali

Shaima Majid Al-Zadjali

Coordinator, Dean's Office



Hanan Al-Shuaili

Ahmed Al-Kharboushi

Abdullah Al-Ojaily

Moadh Al-Zadjali

Hanan Abdulla Al-Shuaili

Clerk, ADPSR

Ahmed Mahfood Al-Kharboushi

Coordinator, ADPSR

Abdullah Omar Al-Ojaily

Clerk, ADTCS

Moadh Ahmed Al-Zadjali

Clerk, ADTCS





Sophie Tayco

Sophie Tayco Soldevilla

Coordinator, ADUS



Hamed Al-Khanbashi

Hamed Hamood Al-Khanbashi

Clerk, College Administration



Issa Al-Saifi

Issa Mattar Al-Saifi

Material Storekeeper



Ghareeb Al-Mazrouey

Ghareeb Khalfan Al-Mazrouey

Clerk, College Administration



Pyata Rao

Mahmood Al-Tobi

Khalfan Al-Abri

Mohamed Al-Mufarji

Pyata H. Rao

Technical Editor,TJER

Mahmood Nasser Al-Tobi

College Computer Engineer

Khalfan Salem Al-Abri

College Computer Engineer

Mohamed Hussain Al-Mufarji

College Computer Engineer



Issa Al-Fori

Mohammad Al-Sabti

Khalfan Al-Rubkhi

Issa Salem Al-Fori

Clerk, College Administration

Mohammad Said Al-Sabti

Storekeeper, Book Store

Khalfan Masi Al-Rubkhi

College Messenger

Rahma Salim Al-Bulushi

College Computer Engineer

Noura Hamood Al-Abri

Clerk, Dean's Office

Saida Hamed Al-Mashaikhi

Coordinator, ADUS

COLLEGE NEWS



Dr. Ahmed Ammari

Dr. Salman Ahmed

Dr. Emad Summad

New Academic Staff

Dr. Ahmed Chiheb Ammari

Associate Professor

Department of Electrical and Computer Engineering

Dr. Salman Ahmed

Assistant Professor

Department of Mechanical and Industrial Engineering

Dr. Emad Summad

Assistant Professor

Department of Mechanical and Industrial Engineering

Dr. Firdous Kausar

Assistant Professor

Department of Electrical and Computer Engineering





Mrs. Aliya Al-Hashim

Mrs. Hanan Al-Khatiri

Mr. Mohammad Al-Lawati

Mrs. Suad Al-Zakwani

Academic Staff on Scholarships

Mrs. Aliya Al-Hashim

Lecturer

Department of Civil and Architectural Engineering

Mrs. Hanan Al-Khatiri

Lecturer

Department of Civil and Architectural Engineering

Mr. Mohammad Al-Lawati

Lecturer

Department of Mechanical and Industrial Engineering

Mrs. Suad Al-Zakwani

Lecturer

Department of Petroleum and Chemical Engineering

Mr. Said Salim Al-Abri

Lecturer

Department of Electrical and Computer Engineering



COLLEGE COMMITTEES

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Dr. Abdullah Al-Saidy	ADPSR
Dr. Issam Bait Bahadur	ADUS
Dr. Ghazi Al-Rawas	ADTCS
Dr. Ali Al-Nuaimi	HoD, CAE
Dr. Nasser Hosseinzadeh	HoD, ECE
Dr. Mahmood Al-Kindi	HoD, MIE
Prof. Rashid Al-Maamari	HoD, PCE
Prof. Ali Al-Harthy	Member, CAE
Dr. Saleh Al-Saadi	Member, CAE
Dr. Mohammad Bait-Suwailam	Member, ECE
Prof. Tasneem Pervez	Member, MIE
Dr. Amur Al-Yahmedi	Member, MIE
Dr. Mohammad Al-Abri	Member, PCE
Mr. Ibrahim Al-Saifi	Deputy DoA
Syed Muneer uddin	Secretary

Space Allocation Committee	Prof. Hadj Bourdoucen Dr. Ali Al-Nuaimi Dr. Nasser Hosseinzadeh Dr. Mahmood Al-Kindi Prof. Rashid Al-Maamari Mr. Ibrahim Al-Saifi	Dean (Chair) HoD, CAE HoD, ECE HoD, MIE HoD, PCE Deputy DoA
Executive Committee	Prof. Hadj Bourdoucen Dr. Abdullah Al-Saidy Dr. Issam Bait Bahadur Dr. Ghazi Al-Rawas Dr. Ali Al-Nuaimi Dr. Nasser Hosseinzadeh Dr. Mahmood Al-Kindi Prof. Rashid Al-Maamari Mr. Ibrahim Al-Saifi	Dean (Chair) ADPSR ADUS ADTCS HoD, CAE HoD, ECE HoD, MIE HoD, PCE Deputy DoA
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Information and Communication Technology Committee	Dr. Farooq Al-Jahwari Dr. Mahmood Abd El-Gelil Dr. Fahad Bait-Shiginah Dr. Adel Al-Ajmi Mr. Ibrahim Al-Saifi Eng. Mahmood Al-Tobi	MIE (Chair) CAE ECE PCE Deputy DoA Computer Engineer
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	Dr. Omar Houache Dr. M. Abdullah Al-Mamun Dr. Lazhar Khriji Dr. Sayyad Zahid Qamar Mr. Juma Al-Ruzaiqi Mr. Sulaiman Al-Kalbani Mr. Mohammad Al-Hadhrami Mr. Nasser Al-Mandhari Mr. Ibrahim Al-Saifi	PCE (Chair) CAE ECE MIE CAE ECE MIE PCE Deputy DoA
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	Dr. Naima Benkari	CAE
	Dr. Joseph Jervase	ECE
	Dr. Zia Nadir	ECE
	Dr. Hassan Al-Lawati	ECE
	Dr. Faical Mnif	MCE
	Dr. Mohammad Khadem	MIE
	Dr. Abdullah Al-Janabi	MIE
	Dr. Hamoud Al-Hadrami	PCE
	Dr. Jamil Naser	PCE
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	Dr. Farooq Al-Jahwari	MIE
	Dr. Ashraf Saleem	MCTE
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	Dr. Adel Al-Ajmi	PCE
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	Dr. Issa Al-Harthy	CAE
	Dr. Medhat Awadalla	ECE
	Dr. Abdullah Al-Janabi	MIE
	Dr. Ala'a Al-Muhtaseb	PCE
	Mr. Ibrahim Al-Saifi	Deputy DoA
	Mr. Mohamed Al-Mufarji	Computer Engineer
	Mr. Ahmed Al-Karboshi	Coordinator
	Mr. Hamed Al-Khanbashi	Coordinator
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	Dr. Issam Bait Bahadur	ADUS (Co-Chair)
	Dr. Hossam Hassan	CAE
	Dr. Abdullah Al-Shabibi	MIE
	Dr. Jamil Naser	PCE
	Mr. Salem Al-Hinai	ECE

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	Dr. Ghazi Al-Rawas	ADTCS
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	Dr. Nabeel Al-Rawahi	MIE
	Dr. Ali Al-Nuaimi	HoD, CAE
	Dr. Nasser Hosseinzadeh	HoD, ECE
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	Prof. Rashid Al-Maamari	HoD, PCE
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	Dr. Faical Mnif	ECE
	Dr. Mohammad Shafiq	ECE
	Dr. Ashraf Saleem	ECE
	Dr. Ahmed Al-Maashari	ECE
	Dr. Lazher Khriji	ECE
	Dr. Amur Al-Yahmedi	MIE
	Dr. Nasra Al-Maskari	MIE
	Dr. Mojtaba Ghodsi	MIE
	Dr. Issam Bait Bahadur	ADUS
	Dr. Ahmed Sana	CAE
	Dr. Zahid Qamar	MIE



College Instructional Development Committee (CIDC)	Dr. Joseph Jervase Dr. Sherif El-Gamal Dr. Dawood Al-Abri Dr. Nabeel Al-Rawahi Dr. Jamil Naser	ECE (Chair) CAE ECE MIE PCE
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Training Committee for Technical Staff	Dr. Ghazi Al-Rawas Mr. Ibrahim Al-Saifi Eng. Juma Al-Ruzaiqi Eng. Saleh Al-Yazidi Eng. Mohammad Al-Hadhrami Eng. Faisal Al-Khatiri Eng. Nasser Al-Mandhary	ADTCS (Chair) Deputy DoA CAE ECE Workshop MIE PCE
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Media Committee	Dr. Issa Al-Harthy Dr. Nabeel Al-Rawahi Dr. Abdul-Aziz Al-Hashmi Dr. Khalid Al-Shamsi Dr. Amir Abdulghani Eng. Mahmood Al-Tobi Mr. Issa Al-Fori	CAE (Chair) MIE PCE CAE ECE Computer Engineer Dean's Office

College Industrial Advisory board

Prof. Hadj Bourdoucen	Dean (Chair)
Prof. Ali Al-Harthy	CAE
Dr. Abdullah Al-Saidy	ADPSR
Dr. Ghazi Al-Rawas	ADTCS
Dr. Ali Al-Nuaimi	HoD, CAE
Dr. Nasser Hosseinzadeh	HoD, ECE
Dr. Mahmood Al-Kindi	HoD, MIE
Prof. Rashid Al-Maamari	HoD, PCE
Hon. Shaikh Prof. AlKhattab Al-Hinai	Member of State Council
Eng. Zahran Al-Oufi	Vice-Chair, CEIAB, General Manager, FALCON Oilfield Services
Eng. Zaher Al-Abri	General Manager, Mazoon Electricity Company
Mr. Harib Al-Kitani	CEO, Oman LNG
Dr. Saif Abdullah Al-Hiddabi	Assistant Secretary General for Research and Program, The Research Council
Eng. Salim Al-Kamyani	Member of State Council and Managing Director, Parsons International & Co
Eng. Said Al-Masoudi	CEO, Sohar Aluminium
Eng. Yousuf Ali Al-Harthy	CEO, Oman Technology Fund
Eng. Said Al-Mandhari	CEO, Oman Broadband



UNIVERSITY COMMITTEES

Academic Promotions Committee	Prof. Ali Salem Al-Harthi (CAE)
Quality Assurance Committee	Dr. Zahid Qamar (MIE)
Library Committee	Dr. Luminda Hewawasam (CAE)
PDO/SQU Liaison Committee	Dr. Abdullah Al-Saidy (ADPSR) Prof. Rashid Al-Maamari (HoD, PCE)
Student Grievances Committee	Dr. Issam Bait Bahadur (ADUS)
University Curriculum and Academic Policies Committee	Dr. Joseph Jervase (ECE)
Safety and Security Committee	Dr. Omar Houache (PCE)
Technical Committee Earthquake Monitoring Centre	Dr. Abdullah Al-Saidy (ADPSR)
Board of Postgraduate Studies	Dr. Abdullah Al-Saidy (ADPSR)
Board of Research	Dr. Abdullah Al-Saidy (ADPSR)
University Ranking Committee	Dr. Joseph Jervase (ECE)
Centre of Excellence in Teaching and Learning	Dr. Nabeel Al-Rawahi (MIE) Dr. Mohammad Al-Shahri (CAE)



SUMMARY OF STUDENTS' ENROLLMENT

The College of Engineering has grown rapidly since its start in 1986 and currently the student population has increased to around 3114 students during the year 2017, compared to only 92 students in 1986.

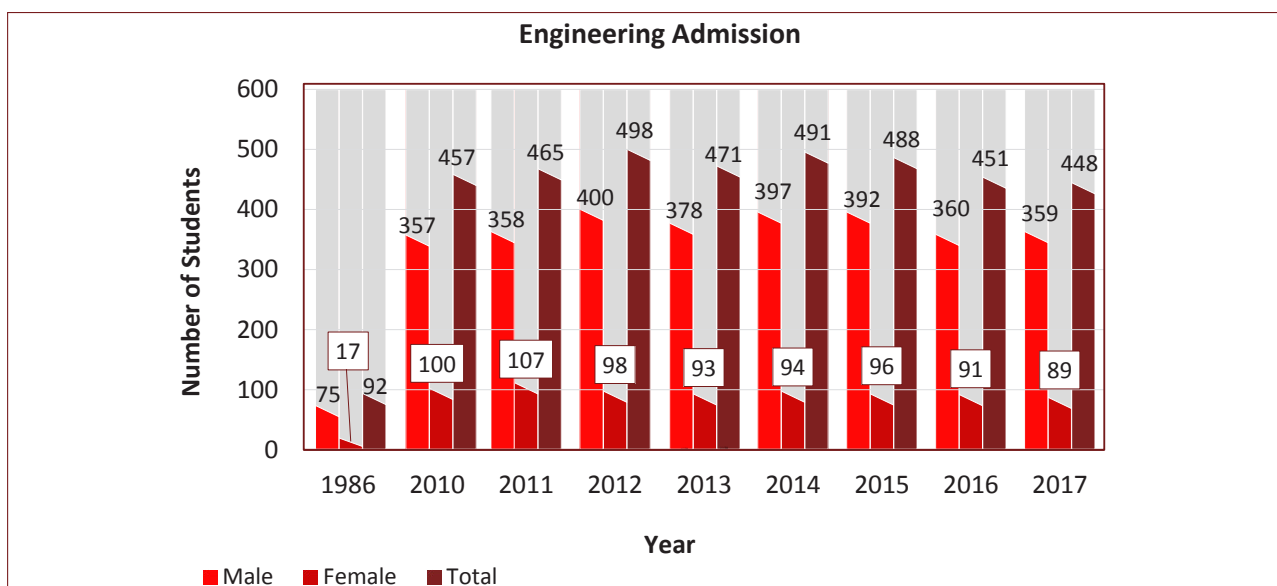


Figure A1: Annual College Admission

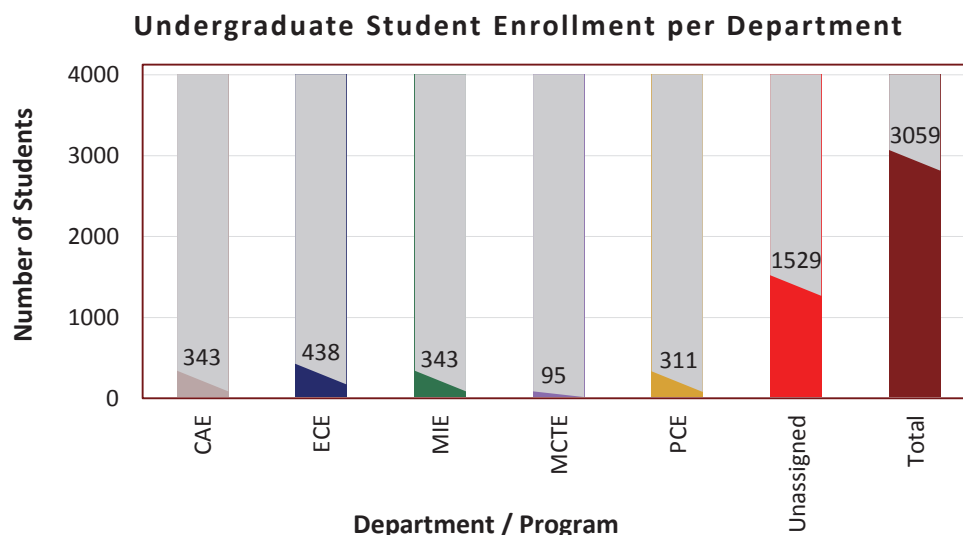


Figure A2: Enrollment in the Departments and Programs in Year 2017

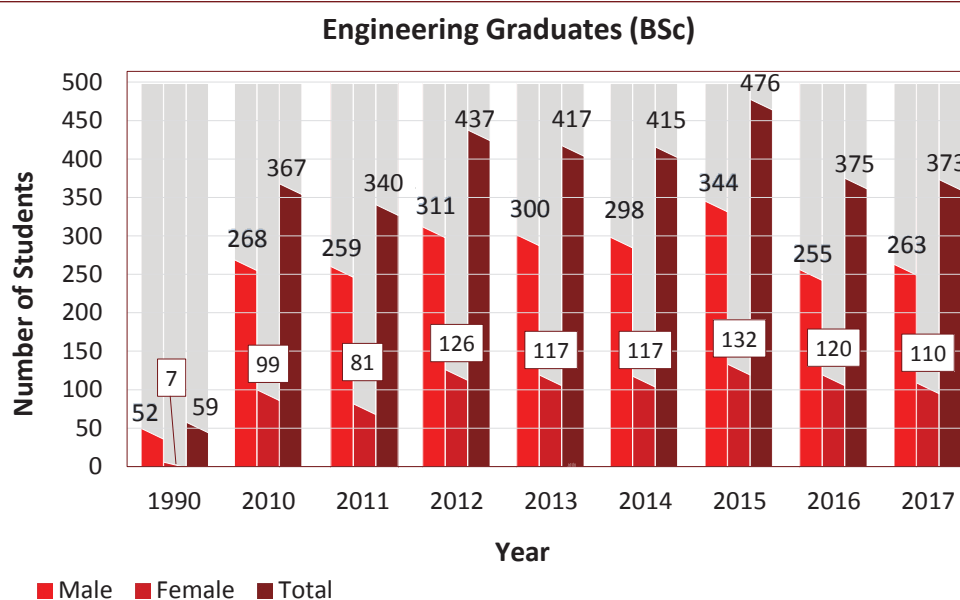


Figure A3: College's Graduates over the Past Eight Years

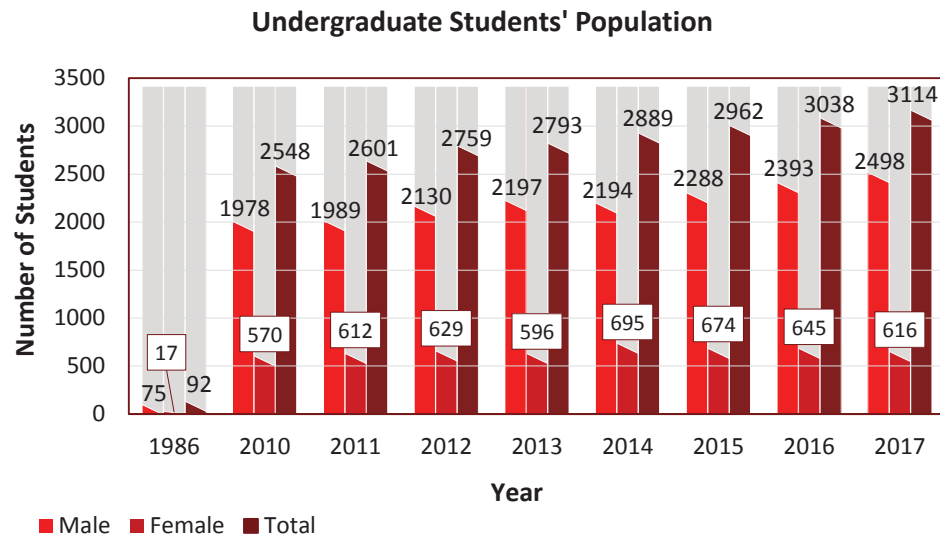


Figure A4: Undergraduate Student's Population



SUMMARY OF INDUSTRIAL STUDENTS' TRAINING

Every year, the College of Engineering provides an industrial student training for all students in their fourth year either locally in Oman or abroad. The period of the training varies from 6 to 8 weeks. Local trainings are monitored by Department advisors who make regular visits to their students. During summer 2017, several International exchanges with a total number of 16 countries within IAESTE and 2 countries outside IAESTE were made.

Table A1: Stastics of Industrial Training, Summer 2017

Training		CAE	ECE	MIE	PCE	MCTE	Total College
Local		94	97	89	76	26	382
Abroad	IAESTE	12	7	9	11	3	42
	Other	0	0	4	2	0	6
Sub Total		106	104	102	89	29	430

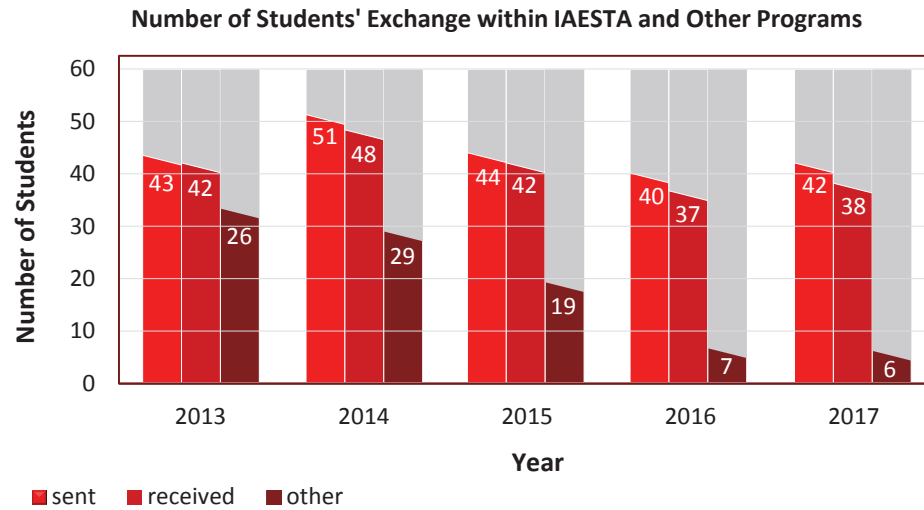


Figure A5: Students' Exchange within IAESTA and Other Programs over the past 5 years





Civil and Architectural Engineering



EXECUTIVE SUMMARY

The Department of Civil and Architectural Engineering offers two distinct undergraduate programs in Civil Engineering and Architectural Engineering. The total enrollment in the two programs at the end of fall 2017 was 343 students. There are 73 students graduated from the Civil Engineering Program and 16 graduated from the Architectural Engineering Program at the graduation ceremony in 2017.

In spring 2017, the Department offered 46 courses, 9 with two sections and 3 had three sections. In fall 2017, 39 courses were offered with 11 having two sections and 2 with three sections.

At postgraduate level, the Department offers four different programs leading to the degrees of M.Sc. in Civil Engineering, M.Sc. in Civil Engineering (Water Resources), M.Sc. in Environmental Engineering, and M.Sc. in Geomatics Engineering. In 2017, a new M.Sc. in Architectural Engineering has been added to the existing four M.Sc. programs. In 2017, 13 and 4 students were admitted to the Civil Engineering and Environmental Engineering programs, respectively.

The department offered 5 postgraduate courses in spring 2017, while 6 courses were offered in fall 2017. The department also has a Ph.D. program in Civil Engineering.

In 2017, the Department secured an HM grant with a budget of 67,000 OMR, six external projects with a budget of 73,000 OMR, and two internal research grants with a budget of 13,400 OMR.

The faculty publications included 31 refereed journal articles, 4 book chapters, 23 international conferences, and 15 technical reports.

Dr. Ali Al-Nuaimi
HoD, Department of Civil and Architectural Engineering



- *CAE is the pioneer in Civil and Architectural Engineering in Oman*
- *This year, a new MSc in Architectural Engineering has been added to the existing PG programs*
- *Excellence in knowledge, skills, innovation and community service are our life style*



SUMMARY

Table B1: Summary

	2015	2016	2017
Faculty	31	32	31
Support staff	14	14	14
Total	45	46	45
On-study leave	3	3	2
Undergraduate Program			
Enrollment (Y2-5)	363	358	343
Courses offered	120	115	114
Graduates	106	81	89
Graduate Program			
New Enrollment	25	27	17
Courses offered	11	11	11
Thesis completed	4	5	8
Research			
New grants and contracts	5	9	9
Publications			
Refereed journals	31	24	31
Conference proceedings	24	18	23

DEPARTMENTAL PROFILE

Civil and Architectural Engineering



Dr. Ali Al-Nuaimi



Prof. Amer Al-Rawas



Prof. Khalifa Al-Jabri

Dr. Ali Al-Nuaimi

Associate Professor and Head of Department

Research Interests: Structural Design and Analysis

Prof. Amer Al-Rawas

Professor and Deputy Vice-Chancellor for Academic Affairs and Community Service

Research Interests: Calcined Pozzolanic Materials, Use of By-Pass Waste Materials and Oil-Contaminated Soils

Prof. Khalifa Al-Jabri

Professor

Research Interests: Structures, Structural Dynamics, Fire Engineering, Construction Materials



Prof. Awni Shaaban

Prof. Awni Shaaban

Professor

Research Interests: Environmental Design, Sustainable Architecture, Architecture in Hot-Arid Regions



Prof. Ali Al-Harthy

Prof. Ali Al-Harthy

Professor

Research Interests: Structural Mechanics, Reliability and Optimization, Concrete



Dr. Abdul Wahid Hago

Dr. Abdul Wahid Hago

Associate Professor

Research Interests: Pozzolanic Materials, Concrete Properties, Shear Walls, Computer Aided Design



Dr. Yahia Mohamedzein

Dr. Yahia Mohamedzein

Associate Professor

Research Interests: Soil-Structure Interaction, Earthquake Engineering and Soil Dynamics, Finite Element Analysis





Dr. Salim Al-Oraimi



Dr. Hossam Hassan



Dr. Mohammad Al-Aghbari



Dr. Ahmed Sana

Dr. Salim Al-Oraimi

Associate Professor

Research Interests: Fibre Reinforced Concrete, Fracture Mechanics, High Strength Concrete, Durability

Dr. Hossam Hassan

Associate Professor

Research Interests: Pavement Materials, Mixtures Evaluation and Design, Recycling of Waste and By-Product Materials, Environmental Effect on Pavement Performance, Maintenance and Rehabilitation of Pavements

Dr. Mohammad Al-Aghbari

Associate Professor

Research Interests: Seepage Problems in Soil and Under Dams, Bearing Capacity of Foundations with Structural Skirts

Dr. Ahmed Sana

Associate Professor

Research Interests: Wave Boundary Layers, Sediment Transport, Hydroinformatics, Water Resources Management



Dr. Abdullah Al-Saidy

Dr. Ranjith Perera

Dr. Mahad Bawaain

Dr. Issa Al-Harthy

Dr. Abdullah Al-Saidy

Associate Professor, Assistant Dean for Postgraduate Studies and Research

Research Interests: Rehabilitation of Structures, Behaviour of RC, PC and Composite Structures, Application of Advanced Fibre Composites in Civil Engineering Structures

Dr. Ranjith Perera

Associate Professor

Research Interests: Eco-Sensitive Architecture and Construction, Urban Planning and Housing Towards Low-Carbon Cities, Results Based Evaluation of Development Projects, Community-Based Urban Environmental Management.

Dr. Mahad Bawaain

Associate Professor

Research Interests: Environmental Engineering, Water and Wastewater Treatment Technologies, Fluid Mechanics

Dr. Issa Al-Harthy

Assistant Professor

Research Interests: Sound Characterization of Urban Environment, Survey on Community Noise, Human Behaviour in Architectural Facilities



Dr. Khalid Al-Shamsi

Dr. Ghazi Al-Rawas

Dr. Syed Muhammad

Dr. Sherif El-Gamal

Dr. Khalid Al-Shamsi

Assistant Professor

Research Interests: Characterization of Bituminous Materials, Pavement Design and Maintenance

Dr. Ghazi Al-Rawas

Assistant Professor, Assistant Dean for Training and Community Service

Research Interests: Remote Sensing and Geographical Information System (GIS), Hydrology

Dr. Syed Muhammad Bilal Waris Ali

Assistant Professor

Research Interests: Structural Dynamics, Fluid-Structure Interaction, Vibration Analysis, Earthquake Engineering

Dr. Sherif El-Gamal

Assistant Professor

Research Interests: Structural Engineering, Reinforced Concrete Structures, FRP Composite Materials, Structural Health Monitoring



Dr. Mahmood Abd El-Gelil



Dr. Mohamed Al-Mamun



Dr. Luminda Hewawasam



Dr. Mohammad Seddik

Dr. Mahmood Abd El-Gelil

Assistant Professor

Research Interests: Geodesy and Satellite Positioning, Geophysics, Superconducting Gravimeter Data Analysis

Dr. Mohamed Abdullah Al-Mamun

Assistant Professor

Research Interests: Renewable Energy, Wastewater Treatment, Water Quality Control and Reuse, Environmental Microbiology

Dr. Luminda Hewawasam

Assistant Professor

Research Interests: Hydrology, Climate Change, Land Use Change, Flood Analysis

Dr. Mohammad Seddik Meddah

Assistant Professor

Research Interests: Materials and Structure, Sustainable and Durable Concrete Material, Cement and Concrete Technology, Construction Materials, Use of Waste/Recycled and By-Products in Concrete and Fiber-Reinforced Concrete





Dr. Mohammad Al-Shahri



Dr. Naima Benkari



Dr. Saleh Al-Saadi



Dr. Chaham Alalouch

Dr. Mohammad Al-Shahri

Assistant Professor

Research Interests: Engineering Surveying, Photogrammetry, Multi-Sensor Integration and Mapping

Dr. Naima Benkari

Assistant Professor

Research Interests: Contemporary Architecture and Urban Design in Arab and Islamic Countries, Built Heritage, Al Waqf and its Implementation in Regulating the Built Environment during the 19th Century, Architectural Education Systems.

Dr. Saleh Al-Saadi

Assistant Professor and Coordinator of Architectural Engineering Program

Research Interests: Energy Conservation and Management in Buildings, HVAC Systems Design, Total Indoor Environmental Quality in Buildings and its Impact on Occupants, Renewable and Sustainable Energy Applications in Buildings

Dr. Chaham Alalouch

Assistant Professor

Research Interests: Sustainable Healthcare Building Design, Health and Built Environment Design, Space Syntax, Environmental Psychology, Design Evaluation and Stakeholder Engagement in the Design Process



Dr. Mohamed Salah

Dr. Kazi Md Abu Sohel

Dr. Mubarak Al-Alawi

Eng. Aliya Al-Hashim

Dr. Mohamed Salah Eldin Saleh

Assistant Professor

Research Interests: Building Construction Technology, Architectural Design, Architecture and Culture

Dr. Kazi Md Abu Sohel

Assistant Professor

Research Interests: Steel-Concrete Composite Structures, Light-Weight Composite Structures, Dynamics of Structures

Dr. Mubarak Al-Alawi

Assistant Professor

Research Interest: Construction Management

Eng. Aliya Al-Hashim (On study leave)

Lecturer

Research Interest: Architectural Engineering





Eng. Hanan Al-Khatri

Mr. Juma Al-Ruzaiqi

Mr. Suleiman Al-Kindi

Mr. Mohsen Ghanma

Eng. Hanan Al-Khatri (On study leave)

Lecturer

Research Interest: Architectural Engineering

Mr. Juma Al-Ruzaiqi

Engineer, Department Superintendent

Research Interest: Highway

Mr. Suleiman Al-Kindi

Engineer

Research Interest: Geotechnical Engineering

Mr. Mohsen Ghanma

Engineer

Research Interest: Architectural Engineering



Mr. Yaqoub Al-Alawi

Mr. Jamil Al-Yaqoobi

Mr. Salem Al-Ruzaiqi

Mr. Taiseer Al-Riyami

Mr. Yaqoub Al-Alawi

Engineer

Research Interest: Geotechnical Engineering

Mr. Jamil Al-Yaqoobi

Engineer

Research Interest: Civil Engineering

Mr. Salem Al-Ruzaiqi

Engineer

Research Interests: Surveying, Highway

Mr. Taiseer Al-Riyami

Engineer

Research Interest: Civil Engineering



Mrs. Raya Al-Sharji

Mrs. Raya Al-Sharji

Technician

Research Interest: Environmental Engineering



Mr. Nafeer Abu Alhuda

Mr. Nafeer Abu Alhuda

Technician

Research Interest: Hydraulics



Mr. Induka Nilupul

Mr. Induka Nilupul Halwalage

Technician

Research Interest: Structural Engineering



Mr. Abdulrahman Numeiri

Mr. Abdulrahman Numeiri

Engineer

Research Interest: Surveying



Mr. Osama Al Hashemi

Mrs. Wafa Al-Nabhani

Mr. Said Al-Abri

Mr. Osama Al Hashemi

Engineer

Research Interests: Structures, Surveying

Mrs. Wafa Al-Nabhani

Coordinator

Mr. Said Al-Abri

Clerk



DEPARTMENTAL COMMITTEES

Table B2: Departmental Committees

Accreditation Committee (Architectural Engineering Program)	Dr. Ali Al-Nuaimi (Hod) Prof. Awni Shaaban (Coordinator) Dr. Chaham Alalouch (Associate coordinator) Dr. Saleh Al-Saadi Dr. Ranjith Perera Dr. Naima Benkari Dr. Mohammad Salah Dr. Sherif El-Gamal
Accreditation Committee (Civil Engineering Program)	Dr. Ali Al-Nuaimi (Hod) Dr. Ahmed Sana (Coordinator) Dr. Bilal Waris (Associate Coordinator) Dr. Khazi Abusohel Dr. Yahia Zain Dr. Luminda Gunawardhana Dr. Mohamed Al Shahri Dr. Mahmood Abd El-Gelil Dr. Mubarak Al-Alawi

Postgraduate Studies and Research Committee	Prof. Khalifa Al-Jabri Dr. Mahad Baawain (Coordinator) Dr. Khalid Al-Shamsi Dr. Mohammad Meddah
Civil and Architectural Engineering Industrial Advisory Board	Dr. Ali Al-Nuaimi (Hod) Dr. AbdulaWahid Hago (Coordinator) Prof. Awni Shaaban Dr. Ahmed Sana Dr. Saleh Al-Saadi
Student-Staff Liaison Committee	Dr. Ali Al-Nuaimi (Hod) Dr. Mohamed Al-Shahri (Coordinator) Dr. Hossam Hassan Dr. Saleh Al-Saadi Two students from each cohort
Undergraduate Curriculum Committee	Dr. Ali Al-Nuaimi (Hod) Dr. Yahiya Mohamedzein (Coordinator) Dr. Sherif El-Gamal Dr. Abdullah Al-Mamun Dr. Naima Benkari Dr. Luminda Gunawardhana Dr. Chaham Al-Alouch Dr. Mohammad Meddah
Staff-Recruitment Committee	Dr. Ali Al-Nuaimi (Hod) Dr. Abdul Wahid Hago (Coordinator) Prof. Khalifa Al-Jabri Dr. Saleh Al-Saadi Dr. Hossam F. Hassan Dr. Mahad Baawain Dr. Ghazi Al-Rawas
Academic Promotion Committee	Dr. Ali Al-Nuaimi (Hod) Prof. Khalifa Al-Jabri (Coordinator) Prof. Awni Shaaban Dr. Abdul Wahid Hago Dr. Hossam Hassan Dr. Mahad Baawain

Development and Strategic Planning Committee	Dr. Ali Al-Nuaimi (Hod) Prof. Khalifa Al-Jabri (Coordinator) Dr. Abdul Wahid Hago Dr. Mahad Baawain Dr. Ranjith Perera Dr. Khalid Al-Shamsi Dr. Saleh Al-Saadi Dr. Mohamed Al-Shahri
Student Advising Committee	Dr. Ali Al-Nuaimi (Hod) Dr. Sherif El-Gamal (Coordinator) Dr. Chaham Al-Alouch Dr. Naima Benkari Dr. Abdul Wahid Hago Dr. Yahia Zain Dr. Luminda Gunawardhana Dr. Hossam Hassan Dr. Mohamed Abdullah Al-Maamun
AREN Applications (Portfolio Evaluation)	Prof. Awni Shaaban (Coordinator) Dr. Ranjith Perera Dr. Naima Benkari
AREN Design Studio Courses Review	Dr. Ranjith Perera (Coordinator) Dr. Naima Benkari Dr. Chaham Alalouch Dr. Mohammad Salah
AREN FYPs review	Prof. Awni Shaaban (Coordinator) Dr. Saleh Al-Saadi (MEP) Dr. Sherif El-Gamal (Structure) Dr. Chaham Alalouch (Architecture) Dr. Mohammad Salah (Building Construction)
Seminars and Publicity	Dr. Sherif El-Gamal (Coordinator) Dr. Luminda Gunawardhana
Social Activities	Dr. Issa Al-Harathi Mr. Said Al-Abri
IWAN	Dr. Mohammad Salah (Coordinator) Eng. Mohsin Ghanma
CIVL Final Research Projects	Dr. Mubarak Al-Alawi

Textbooks	Dr. Abdullah Al-Mamun
Industrial Training Reports	Dr. Mubarak Al-Alawi (coordinator) Eng. Juma Al-Ruzaiqi Eng. Suliman Al-Kindi
Timetabling	Dr. Mohammad Al-Shahri
Department Secretary	Dr. Hossam Hassan
CAE Society Advisor	Dr. Issa Al-Harthy
AREN Meeting Secretary	Dr. Mohammad Salah
Alumni and Employers' Survey (AREN)	Dr. Mohammad Salah (Coordinator) Eng. Mohsin Ghanma
AREN Facilities	Eng. Mohsin Ghanma
Industrial Training Reports	Dr. Mubarak Al-Alawi (Coordinator) Eng. Juma Al-Ruzaiqi Eng. Suliman Al-Kindi
Information and Communication Technology	Dr. Mahmood Abd El-Gelil
Program Accreditation Consultant	Prof. Ali Al-Harthy Dr. Abdul Wahid Hago Dr. Hossam Hassan
1st International conference on Unmanned Aircraft System Oman (UAS-Oman 2019)	Prof. Khalifa Al-Jabri Dr. Chaham Al-Alouch
1st International conference on Civil and Architectural Engineering, 2018 (NCCAE2018)	Dr. Ali Al-Nuaimi (Chair) Dr. Issa Al-Harthy (Co-Chair) Prof. Khalifa Al-Jabri Dr. Naima Benkai Dr. Ahmed Sana Dr. Mubarak Al-Alawi Dr. Hossam Hassan Dr. Mahad Baawain Dr. Ghazi Al-Rawas Dr. Chaham Alalouch Dr. Syed Muhammad Bilal Waris Dr. Mohamed Al-Aghbari Mr. Said Al-Abri Mr. Ibrahim Al-Saifi





UNDERGRADUATE STUDIES

Courses

Table B3: Courses Offered in Spring 2017

Code	Title	Instructor(s)
AREN2111	Architectural Design I	Dr. Naima Benkari
AREN2313	Architectural Graphics	Dr. Chaham Al Alouch
AREN2411	History of Architecture I	Dr. Lama Perera
AREN3113	Architectural Design III	Dr. Chaham Al Alouch
AREN3313	Working Drawing	Dr. Mohamed Hassanien
AREN3412	History of Architecture II	Dr. Naima Benkari
AREN3812	Architectural Acoustics	Dr. Maatouk Khoukhi
AREN3814	Climate Responsive Design	Prof. Awni Shaaban
AREN3816	Building Mechanical Systems	Dr. Saleh Al Saadi
AREN4115	Graduation Project I	Dr. Mohamed Hassanien Prof. Awni Shaaban
AREN4818	Building Electrical Systems	Dr. Maatouk Khoukhi

Code	Title	Instructor(s)
AREN5403	Omani Architecture	Dr. Naima Benkari
AREN5802	Modern Building Construction Systems	Dr. Mohamed Hassanien
AREN5805	Energy in Building	Dr. Saleh Al Saadi
CIVL2401	Practice and Ethics	Dr. Lama Perera
CIVL2401	Practice and Ethics	Dr. Issa Al-Harthy
CIVL3036	Structures I	Dr. Sherif El Gamal
CIVL3036	Structures I	Dr. Salim Al-Araimi
CIVL3036	Structures I	Dr. Abdullah Al-Saidi
CIVL3046	Drawing II	Dr. Hossam Hassan
CIVL3046	Drawing II	Dr. Abdelwahed Mohamed
CIVL3046	Drawing II	Dr. Mahmood Abd El-Gelil
CIVL3066	Engineering Hydrology	Dr. Luminda Hewawasam
CIVL3066	Engineering Hydrology	Dr. Luminda Hewawasam
CIVL3076	Transportation Engineering	Dr. Khalid Al-Shamsi
CIVL3076	Transportation Engineering	Dr. Khalid Al-Shamsi
CIVL3086	Mechanics of Materials	Prof. Khalifa Al-Jabri
CIVL3086	Mechanics of Materials	Prof. Ali Al-Harthy
CIVL3096	Construction Materials	Dr. Mohammad Meddah
CIVL3106	Geotechnical Engineering I	Dr. Mohamed Al-Aghbari
CIVL3216	Basic Mechanics	Dr. Issa Al-Harthy
CIVL3216	Basic Mechanics	Dr. Kazi Abu Sohel
CIVL4006	Probability & Statistics	Dr. Yahia Zein
CIVL4006	Probability & Statistics	Dr. Mohamed Al-Shahri
CIVL4016	Structures II	Dr. Sherif El Gamal
CIVL4016	Structures II	Dr. Salim Al-Araimi
CIVL4046	Fluid Mechanics	Dr. Luminda Hewawasam
CIVL4206	Concrete Design	Dr. Ali Al-Nuaimi
CIVL4216	Steelwork Design	Dr. Syed Waris Ali
CIVL4216	Steelwork Design	Dr. Syed Waris Ali
CIVL5076	Coastal Engineering	Dr. Ahmed Sana
CIVL5111	GPS & Civil Engineering Applications	Dr. Mahmood Abd El-Gelil
CIVL5133	Soil Improvement	Dr. Mohamed Al-Aghbari



Code	Title	Instructor(s)
CIVL5154	Membrane Technology	Dr. Abdullah Al Mamun
CIVL5160	GIS in Water Resources	Dr. Ghazi Al-Rawas
CIVL5186	Water & Waste Management	Dr. Mahad Baawain
CIVL5204	Engineering Economic	Dr. Lama Perera
CIVL5204	Engineering Economic	Dr. Kazi Abu Soheli
CIVL5326	Environmental Engineering 2	Dr. Abdullah Al Mamun
CIVL5462	Concrete Technology	Dr. Mohammad Meddah
CIVL5600	Introduction to Photogrammetry	Dr. Mohamed Al-Shahri
CIVL5678	Administration of Contracts	Dr. Ali Al-Nuaimi
CIVL5994	Research Project II	Dr. Mohamed Al-Shahri
CIVL5996	Project II	Dr. Abdelwahed Mohamed
CIVL5996	Project II	Dr. Hossam Hassan
CIVL5996	Project II	Dr. Ahmed Sana

Table B4: Courses Offered in Fall 2017

Code	Title	Instructor (s)
AREN2312	Architectural Drawing	Prof. Awni Shaaban
AREN3112	Architectural Design II	Dr. Naima Benkari
AREN3211	Architectural Design Theory	Dr. Naima Benkari
AREN3312	Introduction to CAAD	Dr. Chaham Al-Alouch
AREN3811	Building Construction Methods	Dr. Mohamed Hassanien
AREN3815	Sustainable Design in Hot Climates	Prof. Awni Shaaban
AREN4114	Architectural Design IV	Dr. Lama Perera
AREN4305	Interior Design	Dr. Chaham Al Alouch
AREN4813	Building Illumination	Dr. Issa Al-Harthy
AREN4817	Sanitary and Plumbing Design	Dr. Saleh Al Saadi
AREN5116	Graduation Project II	Dr. Saleh Al Saadi Dr. Sherif El Gamal Dr. Mohamed Hassanien
AREN5819	Specifications and Quantities	Dr. Mohamed Hassanien
CIVL2401	Professional Practice and Ethics	Dr. Lama Perera
CIVL3002	Drawing I	Dr. Issa Al-Harthy
CIVL3002	Drawing I	Dr. Mohammad Meddah

Code	Title	Instructor (s)
CIVL3036	Structures I	Dr. Kazi Abu Soheli
CIVL3056	Surveying	Dr. Ghazi Al-Rawas
CIVL3056	Surveying	Dr. Mahmood Abd El-Gelil
CIVL3056	Surveying	Dr. Mahmood Abd El-Gelil
CIVL3086	Mechanics of Materials	Prof. Khalifa Al-Jabri
CIVL3086	Mechanics of Materials	Dr. Abdullah Al-Saidi
CIVL3096	Construction Materials	Dr. Salim Al-Araimi
CIVL3096	Construction Materials	Dr. Salim Al-Araimi
CIVL3216	Basic Mechanics	Dr. Abdelwahed Mohamed
CIVL4036	Highway Engineering	Dr. Khalid Al-Shamsi
CIVL4036	Highway Engineering	Dr. Khalid Al-Shamsi
CIVL4136	Environmental Engineering I	Dr. Mahad Baawain
CIVL4136	Environmental Engineering I	Dr. Abdullah Al Mamun
CIVL4146	Hydraulics	Dr. Luminda Hewawasam
CIVL4146	Hydraulics	Dr. Luminda Hewawasam
CIVL4206	Concrete Design	Dr. Sherif El Gamal
CIVL4206	Concrete Design	Dr. Ali Al-Nuaimi
CIVL4216	Steelwork Design	Dr. Sayed Waris Ali
CIVL4216	Steelwork Design	Prof. Khalifa Al-Jabri
CIVL4226	Foundation Engineering	Dr. Yahia Zein
CIVL4226	Foundation Engineering	Dr. Yahia Zein
CIVL5146	Numerical Methods	Dr. Mohamed Al-Shahri
CIVL5146	Numerical Methods	Dr. Mohamed Al-Shahri
CIVL5156	Cost Estimating	Dr. Ali Al-Nuaimi
CIVL5226	Airport Design	Dr. Hossam Hassan
CIVL5236	Prestressed Concrete	Prof. Ali Al-Harthi
CIVL5336	Construction Management	Dr. Mubarak Al-Alawi
CIVL5336	Construction Management	Dr. Mubarak Al-Alawi
CIVL5462	Concrete Technology	Dr. Mohammad Meddah
CIVL5993	Research Project I	Dr. Mohamed Al-Shahri
CIVL5995	Project I	Dr. Abdelwahed Mohamed
CIVL5995	Project I	Dr. Hossam Hassan
CIVL5995	Project I	Dr. Ahmed Sana





POSTGRADUATE STUDIES

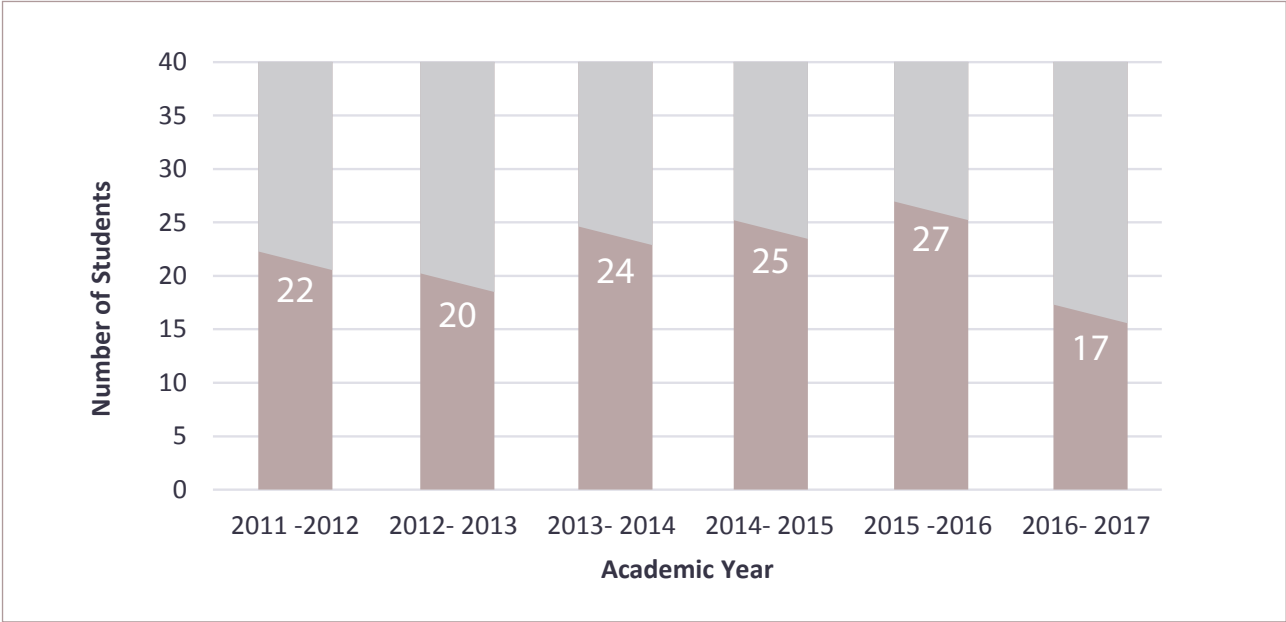


Figure B1: Postgraduate Students’ Enrollment for the Past Six Years

Courses

Table B5: Postgraduate Courses Offered in Year 2017

Semester	Code	Title	Instructor(s)
Spring 2017	CIVL6110	Advanced Concrete	Dr. Ali Al-Nuaimi
	CIVL6150	Finite Element Method	Dr. Sayid Waris Ali
	CIVL6725	Physical-Chemical Tr	Dr. Abdullah Al Mamun
	CIVL6780	Cont. Trans. Process.	Dr. Mahad Baawain
	CIVL6935	Surface Hydrology	Dr. Ahmed Sana
Fall 2017	CIVL6120	Bridge Structures	Dr. Sayid Waris Ali
	CIVL6170	Structural Dynamics	Dr. Kazi Abu Sohel
	CIVL6380	Geo-environmental	Dr. Yahia Zein
	CIVL6715	Chem. of Water	Dr. Abdullah Al Mamun
	CIVL6760	Solid Waste Manageme	Dr. Mahad Baawain
	CIVL6785	Mun. Dist. Col. Syst	Dr. Ahmed Sana

Postgraduate Students' Projects

Table B6: Students' Projects in Year 2017

No	Name	Project Title
1	Uhoud Salim Mohammad AL Rawahi	Comparison of Seismic and Wind Actions on Buildings in Oman
2	Afeef Ahmed Suhail Baqi	Simultaneous Electricity Production and Metal Recovery from Landfill Leachate using Microbial Fuel Cell
3	Muhanad Khalid Hilal Al Nabhani	Effects of Shear Wall Location and Shape on Required Column Reinforcement and Lateral Displacement of RC Tall Buildings
4	Mahmood Mohammad Bani Uraba	Analyzing the Climate Change-Induced Variations in Intensity-Duration-Frequency Curves in Tawi Atair, Oman
5	Abdulraheim AL Hashmi	Laboratory Characterization of Expansive Soil from Adam
6	Fatima AL Hakamani	Causes, Effects and Remedies of Buildings' Construction Wastes in Oman
7	Zahran AL Busaidi	Sustainable Risk Based Analysis towards Remediation of a Fractured Aquifer impacted by Crude Oil Spill
8	Jamal AL Falahi	Experimental Study of the Effect of Scour in Laterally-Loaded Pile Groups





RESEARCH

Grants and Contracts

Table B7: New Grants, Contracts and Consultancies by Faculty Members in Year 2017

Research Title	Principal Investigator	Budget (OMR)	Funded by
Characterizing and Modelling of Groundwater Level Increase in Muscat Airport Area	Dr. Mahad Baawain	32,350	Oman Airport
Cooling Load Calculation of A Social Centre Building in Muscat: Phase 1	Dr. Saleh Al-Saadi	3,500	Helmholtz Center Postdam,GFZ
Cooling Load Calculation of A Social Centre Building in Muscat: Phase 2	Dr. Saleh Al-Saadi	2,600	Helmholtz Center Postdam,GFZ
Durability of GFRP Bars after Being Subjected to Harsh Laboratory Environment	Dr. Sherif El-Gamal	1,350	Pultron Composites Middle East
Characterization and Dispersion Modeling of Iron Ore Particles Phase 2	Dr. Mahad Baawain	32,700	Vale

Research Title	Principal Investigator	Budget (OMR)	Funded by
Inspection of HDPE manholes Concerning Court Case No. 454/T/2017	Prof. Ali Al-Harthy	500	Azri Architect
Microbial Electrochemical System for Desalination through Sewage Treatment with Simultaneous Recovery of Chemical Resources	Dr. Abdullah Al-Mamun	67,000	HM
Strengthening of Stone Masonry Structures using Textile Bonded with Sarooj Mortar	Dr. Abdullah AL-Saidy	7,500	IG
Behavior of Concrete Columns Reinforced with FRP Reinforcement	Dr. Sherif EL Gamal	5,900	IG

Publications

Refereed Journal Papers

1. Abdul-Wahab, S., Al-Rawas, G., Ali, S. and Al-Dhamri, H. 2017. Atmospheric Dispersion Modeling of CO₂ Emissions from a Cement Plant's Sources. *Clean Technologies and Environmental Policy*, 19(6):1621-1638.
2. Abdul-Wahab, S., Al-Rawas, G., Charabi, Y., Al-Wardy, M. and Fadlallah, S. 2017. A Study to Investigate the Key Sources of Odors in Al-Multaqa Village, Sultanate of Oman. *Environmental Forensics*, 18(1):15-35.
3. Abu-Jrai, A., Jamil, F., Al-Muhtaseb, A., Baawain, M.S., Al-Haj, L., Al-Hinai, M., Al-Abri, M. and Rafiq, S. 2017. Valorization of Waste Date Pits Biomass for Biodiesel Production in Presence of Green Carbon Catalyst. *Energy Conversion and Management*, 135:236-243.
4. Al-Jabri, K.S., Hago, A.W., Baawain, M.S. and Sthapit, G. 2017. Properties of Soil-Cement Blocks Manufactured using Produced Water from Oil Fields: A Preliminary Investigation. *International Journal of GEOMATE*, 13(35):66-72.
5. Al-Jebouri M.F., Saleh M.S., Raman S.N., Rahmat R.A. and Shaaban A.K. 2017. Toward a National Sustainable Building Assessment System in Oman: Assessment Categories and Their Performance Indicators. *Sustainable Cities and Society*, 31:122-135.
6. Al-Jebouri M.F., Shaaban A.K., Raman S.N. and Rahmat R.A. 2017. Framework of Environmental Rating System for Home Buildings in Oman. *Journal of Architectural Engineering*, 23(2):1-9.
7. Alkamali, N., Alhadharami, N. and Alalouch, C. 2017. Muscat City Expansion and Accessibility to the Historical Core: Space Syntax Analysis. *Energy Procedia*, 115:480-486.

8. Al-Mamun, A., Baawain, M.S., Al-Muhtaseb, A.H., Egger, F. and Ng, H.Y. 2017. Optimization of a Baffled-Reactor Microbial Fuel Cell Using Autotrophic Denitrifying Bio-Cathode for Removing Nitrogen and Recovering Electrical Energy. *Biochemical Engineering Journal*, 120:93-102.
9. Al-Mamun, A., Baawain, M.S., Dhar, B. and Kim, I.S. 2017. Improved Recovery of Bioenergy and Freshwater in an Osmotic Microbial Fuel Cell Using Micro-Diffuser Assisted Marine Aerobic Biofilm on Cathode. *Biochemical Engineering Journal*, 128:235-242.
10. Al-Muhtaseb, A., Jamil, F., Myint, M., Baawain, M.S., Al-Abri, M., Dung, T., Kumar, G., Mohammad N.M. and Ahmad, M. 2017. Cleaner Fuel Production from Waste Phoenix Dactylifera L. kernel Oil in the Presence of a Bimetallic Catalyst: Optimization and Kinetics Study. *Energy Conversion and Management*, 146:195-204.
11. Al-Saidy, A.H., Hago A., El-Gamal S.E. and Dawood M. 2017. Strengthening of Historical Stone Masonry Buildings in Oman using Textile Reinforced Mortars. *The Journal of Engineering Research*, 14(1):23-38.
12. Al-Shamsi, K., Hossam, H. and Louay N.M. 2017. Effect of Low VMA in Hot Mix Asphalt on Load-Related Cracking Resistance. *Construction and Building Materials*, 149:386-394.
13. Baawain, M.S., Al-Mamun, A., Omidvarborna, H. and Al-Amri, W. 2017. Ultimate Composition Analysis of Municipal Solid Waste in Muscat. *Journal of Cleaner Production*, 148:355-362.
14. Baawain, M.S., Al-Mamun, A., Omidvarborna, H. and Al-Jabri, A. 2017. Assessment of Hydrogen Sulfide Emission from a Sewage Treatment Plant Using AERMOD. *Environmental Monitoring and Assessment*, 189(6):263-274.
15. Benkari, N. 2017. The Defensive Vernacular Settlements in Oman, a Contextual Study. *International Journal of Heritage Architecture*, 1(2):175-184.
16. Benkari, N. 2017. Urban Development in Oman: An Overview. *Sustainable Development and Planning IX*, 226:143-156.
17. Benkari, N., Fazil, I. and Husain, A. 2017. Design and Performance Comparison of Two Patterns of Wind-catcher for a Semi-enclosed Courtyard. *International Journal of Mechanical Engineering and Robotics Research*, 6(5):369-400.
18. Charabi, Y., Abdul-Wahab, S.A., Choudri, B.S., Al-Rawas, G., Al-Wardy, M. and Fadlallah, S. 2017. Assessment of Monsoon Season Impact on the Dispersion of Pollutants Emitted from Vehicles. *Journal of Environmental Management and Tourism*, 5(21):1045-1064.
19. Cheriyan, A.J., Shaik, F., Baawain, M.S. and Sarkar, J.P. 2017. A Study on the Removal of Contaminants from Secondary Treated Municipal Wastewater by Solar Photocatalysis. *Environmental Engineering and Management Journal*, 16(7):1451-1456.

20. Choudri, B.S., Baawain, M.S. and Ahmed, M. 2017. Bioenergy from Biofuel Residues and Wastes. *Water Environment Research*, 89(10):1441-1460.
21. Choudri, B.S., Baawain, M.S. and Ahmed, M. 2017. Effects of Pollution on Freshwater Organisms. *Water Environment Research*, 89(10):1676-1703.
22. Choudri, B.S., Baawain, M.S. and Ahmed, M. 2017. Radioactive Wastes. *Water Environment Research*, 89(10):1487-1502.
23. Choudri, B.S., Baawain, M.S. and Ahmed, M. 2017. Textiles Waste Management. *Water Environment Research*, 89(10):1424-1440.
24. El-Hassan, H., El-Maaddawy, T., Al-Sallamin, A. and Al-Saidy, A. 2017. Performance Evaluation and Microstructural Characterization of GFRP Bars in Seawater-Contaminated Concrete. *Construction and Building Materials Journal*, 147:66-78.
25. Gunawardhana, L.N. and Kazama, S. 2017. The Potential Role of Urban Green Areas for Controlling Ground Surface and Subsurface Warming. *Urban Water*, 14:34-44.
26. Gunawardhana, L.N., Al-Rawas, G.A. and Kazama, S. 2017. An Alternative Method for Predicting Relative Humidity for Climate Change Studies. *Meteorological Applications*, 24:551-559.
27. Jamil, F., Al-Muhateb, A.H., Al-Haj, L. Al-Hinai, M.A. and Baawain, M.S. 2017. Phoenix Dactylifera Kernel Oil Used As Potential Source for Synthesizing Jet Fuel and Green Diesel. *Energy Procedia*, 118:35-39.
28. Jamil, F., Saxena, S.K., Al-Muhateb, A.H., Baawain, M.S., Al-Abri, M., Viswanadham, N., Kumar, G. and Abu-Jrai, A.M. 2017. Valorization of Waste "Date Seeds" Bio-Glycerol for Synthesizing Oxidative Green Fuel Additive. *Journal of Cleaner Production*, 165:1090-1096.
29. Meddah, M.S., Al-Jabri, K., Hago, A.W. and Al-Hinai, A.S. 2017. Effect of Granular Fraction Combinations on Pervious Concrete Performance. *Materials Today: Proceedings 2017*, 4(9):9700-9704.
30. Rahman, M.S., Al-Mamun, A. and Al-Amri, I.S. 2017. Characteristics of Pores as Measured by Porosimetry and Microscopy Considering Spaghetti as a Model System. *International Journal of Food Engineering*, 13(8):20160366.
31. Sana, A., 2017. Teaching Fundamental Concepts of Coastal Engineering Using Excel Spreadsheet, *Computer Applications in Engineering Education*, Wiley Inc., 25(2):304-310.



Conference Proceedings

1. Alalouch, C., Al-Hajri, S., Naser, A. and Al Hinai, A. 2017. The Role of the Spatial Configuration in Land Use Distribution in Muscat. *Proceedings of International Conference for Sustainable Design of the Built Environment (SDBE)*, London, 19-22 December, 2017.
2. Al-Jabri, K.S., Hassan, H.F. and Nasir, S. 2017. Recycling of Secondary Products to Create New Industries and the Sustainability of Natural Resources: Ferrochrome and Copper Slag Perspective. *Proceedings of 5th Fujaira International Industrial Rocks and Mining Forum*, UAE, 5 May, 2017.
3. Al-Maktoumi, A., Zekri, S., El-Rawy, M., Abdalla, O., Al-Wardy, M., Al-Rawas, G. and Charabi, Y. 2017. Impacts of Climate Change on Coastal Aquifers in Northern Oman. *Proceedings of the 12th Gulf Water Conference: Water in the GCC Towards Integrated Strategies*, Manamah, Bahrain, 28-30 March, 2017.
4. Nasir, S. and Al-Jabri, K.S. 2017. In-Country Value "ICV" Strategy in the Mining Sector of Oman. *Proceedings of the 5th Fujairah International Industrial Rocks and Mining Forum*, Fujairah, UAE, 18-20 April, 2017.
5. Al-Mamun, A. and Baawain, M.S. 2017. Prospects of Dissimilar Electron Donors on the Electrochemical Performance of a Double-Chambered Microbial Fuel Cell. *Proceedings of the ISMET 6 meeting*, Lisbon, Portugal, 3-6 October, 2017.
6. Al-Mamun, A. 2017. Optimization of Bio-Cathode Based Microbial Fuel Cell Suitable for Practical Application of Wastewater Treatment and Electricity Generation. *Proceedings of the ISMET 6 meeting*, Lisbon, Portugal, 3-6 October, 2017.
7. Al-Nuaimi A. 2017. Basic Wind Speed Map for Oman. *Proceedings of the 4th International Conference on Advanced Steel Structures*, Singapore, 9-10 November, 2017.
8. Al-Rawahi, Z. and Waris M.B. 2017. Use of Recycled Tires in Non-Structural Concrete. *Proceedings of Advances in Sustainable Construction Materials & Civil Engineering Systems (ASCMCES-17)*, Sharjah, UAE, 18-20 April, 2017.
9. Al-Saadi, S., Ramaswamy, M., Al-Rashdi, H., Al-Mamari, M. and Al-Abri, M. 2017. Energy Management Strategies for a Governmental Building in Oman. *Proceedings of the 4th International Conference on Power and Energy Systems Engineering, CPESE 2017*, Berlin, Germany, 25-29 September, 2017.
10. Al-Saadi, S. and Al-Jabri, K.S. 2017. Energy-Efficient Envelope Design for Residential Buildings: A Case Study in Oman. *Proceedings of the 2017 Smart City Symposium*, Prague (SCSP2017), 25-26 May, 2017.
11. Al-Saadi, S., Al-Hajri, J. and Sayari, M.A. 2017. Energy-Efficient Retrofitting Strategies for Residential Buildings in Hot Climate of Oman. *Proceedings of the 9th International Conference on Applied Energy, ICAE2017*, Cardiff, UK, 21-24 August, 2017.

12. Al-Saidy, A.H., El-Gamal S.E., Al-Jabri, K.S. and Waris, B. 2017. Behavior of Corroded RC Beams without Stirrups Repaired with CFRP Sheets. *Proceedings of the Ninth International Structural Engineering and Construction Conference (ISEC-9)*, Resilient Structures and Sustainable Construction, Valencia, Spain, 24-29 July, 2017.
13. Al-Saidy, A.H., Hago, A.W. and El-Gamal S.E. 2017. Textile Reinforced Mortars for Strengthening of Historical Stone Buildings in Oman. *Proceedings of the 3rd International Conference on Preservation, Maintenance and Rehabilitation of Historical Buildings and Structures (REHAB 2017)*, Braga, Portugal, 14-16 June, 2017.
14. Chitrakar, P. Sana, A. and Baawain, M.S. 2017. Hydrodynamic Modeling of Sea of Oman. *Proceedings of the 37th IAHR World Congress*, Kuala Lumpur, Malaysia, 13-18 August, 2017.
15. El-Gamal S.E., Al-Nuaimi A., Al-Saidy A. and Al-Shanfari K. 2017. Flexural Behavior of Reinforced Concrete Beams Strengthened with Carbon Fiber Reinforced Polymer Sheets Using Different Bonding Techniques. *Proceedings of the 8th International Conference on Structural Engineering and Construction Management (ICSECM2017)*, Kandy, Srilanka, 7-9 December, 2017.
16. El-Hussain, I., Omira, R., Al-Bulushi, K., Deif, A., Al-Habsi, Z., Al-Rawas, G., Mohamad, A., Al-Jabri, K.S. and Baptista, M.N. 2017. Tsunami Hazard Assessment Along Diba-Oman and Diba-Al-Emirates Coasts. *Proceedings of the International Conference on Advances in Sustainable Construction Materials & Civil Engineering Systems (ASCMCES-17)*, University of Sharjah, UAE, 18-20 April, 2017.
17. Jamil, F., Al-Muhtaseb, A., Al-Haj, L., Al-Hinai, M. and Baawain, M.S. 2017. Phoenix Dactylifera Kernel Oil Used as Potential Source for Synthesizing Jet Fuel and Green Diesel. *Proceedings of the 2nd International Conference on Advances on Clean Energy Research, ICACER*, Berlin, Germany, 7-9 April, 2017.
18. Khudhayer, W.A., Shaaban, A.K. and Abdul Sukor, N.S. 2017. Trees as Environmental Modifier to Improve Street Canyon for Pedestrian Activities in Muscat. *AIP Conference Proceedings 1892*, 060001, 2017.
19. Shaaban, A.K., Khudhayer, W.A. and Abdul Sukor, N.S. 2017. Total Shading System Approach at Sultan Qaboos University Eco-House project. *AIP Conference Proceedings 1892*, 160011, 2017.
20. Sohel, K.M., Al-Jabri, K.S. and Liew, J.Y. 2017. Lightweight Steel-Concrete-Steel Sandwich Composite Plate Subjected to Impact Load: Experimental and Numerical Study. *Proceedings of the 20th International Conference on Composite Structures (ICCS20)*, 4-7 September, 2017.
21. Sohel, K.M., Al-Jabri, K.S., Liew, J.Y. and Zhang, M.H. 2017. Fatigue Performance of Ultra-Lightweight Cement Composite and High Strength Lightweight Concrete. *Proceedings of the 1st International Conference on Cement & Concrete Technology: Concrete for the Modern Age, Developments in Materials and Processes*, Military Technological College - Sultanate of Oman, 20-22 November, 2017.

22. Waris M.B., Al-Jabri K.S. and Al-Saidy A. 2017. Application of Taguchi Method to Develop non-Structural Concrete with Recycled Rubber. *Proceedings of the International Conference on Advances in Sustainable Construction Materials & Civil engineering Systems (ASCMCES-17)*, Sharjah, UAE, 18-20 April, 2017.
23. Waris M.B., Saeed H., Al-Jabri K.S. and El-Hussain I. 2017. Comparison of Oman Seismic Code for Buildings with International Counterparts. *Proceedings of 16th World Conference on Earthquake Engineering, 16WCEE*, Santiago, Chile, 9-13 January, 2017.

Book Chapters

1. Al-Mamun, A. 2017. Pesticide Degradations, Residues and Environmental Concerns. In: Khan, M.S. and Rahman, M.S. (Eds). *Pesticide Residue in Foods: Sources, Management, and Control*, Springer, New York, pp. 87-102.
2. Amer, M., Sotoca, A., Naselli, F., Mohareb, N. and Alalouch, C., Edit. 2017. Alternative & Renewable Energy Quest in Architecture & Urbanism. *Elsevier, Energy Procedia*, Volume 115, ISSN 1876-6102.
3. Carughi, U. et al. 2017. Time Frames: Conservation Policies for Twentieth-Century Architectural Heritage, *Routledge*. Dr Naima Benkari contributed with the Chapter about Oman.
4. Zhai, Z., Al-Saadi, S.N., El Mankibi, M. and Slowinski R. 2017. Breathing and Living Walls” Chapter: 3 in Advanced Energy Efficient Building Envelope Systems, *Publisher: American Society of Mechanical Engineers*, Editors: M. Krarti, pp. 75-130.

Technical Reports

1. Al-Jabri, K.S., Hago, A.W. and Baawain. M. 2017. *Development of a New Soil-Cement Block Using Produced Water from PDO Oil Fields: Literature Review*. Third Progress Report Submitted to Petroleum Development Oman (PDO), Project No. CR/ENG/CIVL/14/09, Department of Civil and Architectural Engineering, Sultan Qaboos University, Oman.
2. Al-Mamun, A. and Baawain, M.S. 2017. *Waste to Watts: Green and Sustainable Electricity generation from Wastewater Using Bacteria in Microbial Fuel Cell*. Part 2 Report. Submitted to: SQU Internal grant, Sultanate of Oman.
3. Al-Rawas, G., Charabi, Y. and Al-Wardy, M. 2017. *The Second National Communication and Biennial Update Report for the Sultanate of Oman*. Third progress report submitted to United Nations Environment Programme, The Regional Office for West Asia (UNEP-ROWA).

4. Al-Saadi, S., Al-Hajri, J. and Al-Hadhrami, S. 2017. *Cooling Load Calculations of a Social Center Building in Muscat: Phase-I*. Submitted to: Helmholtz Centre Potsdam, GFZ, Germany.
5. Al-Saadi, S., Al-Hajri, J. and Al-Hadhrami, S. 2017. *Cooling Load Calculations of a Social Center Building in Muscat: Phase-II*. Submitted to: Helmholtz Centre Potsdam, GFZ, Germany.
6. Baawain M.S., Sana, A., Zain, Y., Omidvarborna, H. 2017. *Assessment of Sustainable Remediation Options for Contaminated Soil Stockpiles (Phase 2: Monitoring of Groundwater below Vulnerable Contaminated Sites)*. Final Report. Petroleum Development of Oman Company, Sultanate of Oman.
7. Baawain, M.S., Ahmed, A., Yoon, G., Choudri, B.S. 2017. *Wastewater Treatment and Reuse at Al-Marsa Fisheries Plant at Rusail Industrial Estate*. Final Report. Submitted to: Industrial Innovation Center and Al-Marsa Fisheries Company, Sultanate of Oman.
8. Benkari, N. (2017): *Desk Review for the World Monuments Fund (WMF)*, to include a UNESCO classified site on the WMF list. (Site undisclosed).
9. Benkari, N. 2017. *Desk Review for the UNESCO*, to include a site on the UNESCO list of Human Heritage for 1981 (classified and in progress).
10. El-Gamal, S.E., Al-Jabri K., Al-Saidy A. 2017. Behavior of Concrete Columns Reinforced with FRP Reinforcement. Progress report submitted to the Deanship of Research, Sultan Qaboos University.
11. Hago, A.W., Al Aghbary, M. and Al Alouch, C. 2017. *Technical Report on Commercial Litigation Appeals No. 312/2013, 313/2013 and 412/2013. CR/ENG/CAED/16/03*. Submitted to the Court of Appeals in Muscat, (In Arabic).
12. Hassan, H.F. 2017. *Program Review for BS and Diploma, Civil and Environmental Engineering Department, College of Engineering*, Dhofar University.
13. Kwarteng, A., Al-Rawas, G., Adrian G. Hartley, and Chitrini, M. 2017. *Sustainable Development of Fisheries Sector and Aquaculture in Musandam Governorate, Sultanate of Oman-A GIS-Based Approach*. Final report submitted to Directorate of Aquaculture Development Ministry of Agriculture and Fisheries, CR/DVC/RSGISC/15/01.
14. Shaban, A. 2017. *Instrumentation Installation at SQU Eco-House, Eco-House Competiton-2, Stage-2*. Progress report, submitted to TRC.
15. Shaban, A. 2017. *Research and development at SQU Eco-House, Eco-House Competiton-2, Stage-2*. Progress report, submitted to TRC.



OTHER ACTIVITIES

Seminars/Short Courses

1. Abu Sohel, K.M. 2017. *Design of Tall Buildings and Affordable Housing*. Presented at the Affordable Housing & Tall Buildings Seminar, Sultan Qaboos University, March, 2017.
2. Alalouch, C. 2017. *SpaRe.Life 2017- Green Urban Regeneration International Winter School*. February 2017, Rome, Italy at Sapienza University of Rome.
3. Benkari, N. 2017. *Sustainable Heritage Management in Oman, Seminar presented in the Research Center for Humanity and Nature*. Kyoto – Japan, 2017.
4. Hago A.W., Al Jabri, K., Baawain, M., Al Maradni, B., Al Rahbi, H. and Ambu Saidi, F. 2017. *Strength of Interlocking Compressed Soil Blocks Produced Using Soil and Production Water from Oil Fields in Oman*. Presented at the Affordable Housing & Tall Buildings Seminar, Sultan Qaboos University, March, 2017.
5. Shaban, A. 2017. *Impact of Climatic Environmental Sustainability Issues on the Long Term Development Strategy of Oman*. Linking Oman's Higher Education Institutions with the Public and Private Sectors, Oman Convention Center, May, 2017.
6. Shaban, A. 2017. *Inauguration of SQU-Eco House Satge-2. College of Engineering*. February, 2017.

Conferences/Workshops

1. Al Harthy, Ali, Hassan, H., Pervez, T. Student Outcome and Assessment Workshop. Sultan Qaboos University, 27 November, 2017.
2. Al-Saadi, S. 2017. Energy Efficiency and Renewable Energy Systems for Students at SQU through the Independent Learning Center. 8-10 October, 2017.
3. Al-Shahri, M. Drones Oman Workshop. Muscat, 27-28 February, 2017.
4. Baawain M.S. Municipal Solid Wastes in Oman. International Workshop Waste to Energy organized by Caledonian College of Engineering, Muscat, Oman, April, 2017.
5. Baawain, M.S. Wastewater Management in Oman. World Water Day Workshop: Wastewater Treatment & Application, organized by SQU, Muscat, Oman, March, 2017.

Invited Talk/Guest Speaker

1. Alalouch, C. Energy-Conscious Buildings in Hot Climates: Potential and Challenges. Key Note Speech at Alternative & Renewable Energy Quest in Architecture & Urbanism Conference. Polytechnic University of Catalonia (BarcelonaTECH), Barcelona, Spain, February, 2017.
2. Al-Jabri, K. Energy Efficient Materials & Sustainable Construction. Invited Speaker at the 2nd International Congress on Materials & Structural Stability, Rabat, Morocco, 21-24 November, 2017.
3. Al-Jabri, K. Invited Speaker at the 5th Fujairah International Industrial Rocks and Mining Forum, Fujairah, UAE, 18-20 April, 2017.
4. Al-Rawas, G. Climate Change and Flash Floods in Oman. Invited Speaker at Future Drainage & Stormwater Networks, Riyadh, Saudi Arabia, 18-19 April, 2017.
5. Al-Rawas, G. Environmental Applications of Remote Sensing and GIS. Invited Speaker at Oman Geospatial Forum 2017, Oman Convention Center, Muscat, April 10-11, 2017.
6. Al-Saadi, S. Participation in "Reyooq", a Panel Discussion on Business Opportunities in Energy Sector. Organized by National Business Centre at Oman Oasis Knowledge, 19 September, 2017.
7. Baawain, M.S. Environmental Issues and Concerns in Oman. Invited Speaker at the Seventh National Symposium on Engineering Final Year Projects organized by Nizwa University, Nizwa, Oman, May 2017.
8. Benkari, N. What Do We Have to Learn from the Architecture of the M'zab?. Invited Speaker at the First International Conference about the Architecture of Sahara: Illizi, Algeria, 26 February-5 March, 2017.



Poster Presentations

1. Al Jabri, K., Hago A.W., M., Ambu Saidi, F., Al Rahbi, H. and Al Maradni, B. 2017. Development of Interlocking Soil-Cement Blocks using Produced Water from PDO Oil Fields. Poster presented at the Oman Exhibitions Center, Research Exhibition organized by Sultan Qaboos University, May 2017, Muscat.
2. Shaban, A. 2017. Exhibition, SQU Eco-House Stage-2 Inauguration, 22-23 February, 2017
3. Shaban, A. 2017. Oman Mountain Eco-House. Linking Oman's Higher Education Institutions with the Public and Private Sectors, Oman Convention Center, 7-8 May, 2017.
4. Shaban, A. 2017. SQU Eco-House Exhibition. Linking Oman's Higher Education Institutions with the Public and Private Sectors, Oman Convention Center, 7-8 May, 2017.

Cooperation with Local and Foreign Organizations

1. Al Harthy, A. ABET Inc., Baltimore Maryland, Engineering Program Evaluation, 4-6 October, 2017.
2. Al-Rawas, G. Centre for Development and Environment (CDE) & Institute of Geography, University of Bern, Bern, Switzerland, February, 2017.
3. Al-Rawas, G. 2017. Institute of Meteorology. Free University of Berlin, Berlin, Germany, 4-11 February, 2017.
4. Al-Shamsi K. Ministry of Transport and Communications, 1 January-31 December 2017.
5. Benkari, N. Research Center for Humanity and Nature, Kyoto - Japan, 11-19 July, 2017.
6. El-Gamal, S.E. Pultrun Composites Middle East, Dubai, UAE, 1 July-30 October 2017.
7. Shaban, A. College of Scientific Design, External Examiner, Design-III, 26 December, 2017.
8. Shaban, A. Dhufar University, External reviewer of the following programs: Architectural engineering, Interior design, 20 - 22 December, 2017.
9. Shaban, A. SQU Eco-House and Center for Building Energy Research, Iowa State University. Research Project: Impact of Natural Ventilation on the Performance of Sultan Qaboos University Eco-House.

Articles and Interviews in Public Media

1. Alalouch, C. Interview by Khalid Al-Zadjali. Oman Radio, topic: Linking Oman's Higher Educational Institutes with the Public and Private Sectors. Broadcasted live from 2:30-4:00 pm, 8 May, 2017.
2. Al-Mamun, A. Interview by Gautam Viswnathan. Discussion on Sultanate Better Prepared to Tackle Cyclones Like GONU. Times of Oman: Article, 4, June, 2017.
3. Al-Rawas, G. Interview in the Oman main channel TV program "From Oman" on The 16th Regional International Hydrological Programme (IHP) and the 3rd general meeting of The Arab Network for the Management of Water Resources in the Arid and Semi-Arid Regions GWADI, Oman Public TV, 17 September, 2017.

4. Al-Rawas, G. Interview in the radio program “Good Evening Oman” on Oman Geospatial Forum 2017, Oman Public Radio, 10 April, 2017.
5. Al-Rawas, G. Interview in the Second Edition of “The Engineer”. Oman Society of Engineers (OSE), May, 2017.
6. Al-Rawas, G. Interview in the TV program “Salalah Festival” on IAESTE students’ trip to Oman, Majan channel TV, 19 August, 2017.
7. Al-Rawas, G. Participation in a Video film on Engineering Graduates Ceremony of Sultan Qaboos University, SQU’s in Social Networks (Facebook and Twitter), 5 November, 2017.
8. Al-Saadi, S. Participation in “Sustainable Architecture in Oman”, a serial radio program delivered by Eng. Ali Al-Lawati, organized by Oman Radio, serial title “Energy efficiency and energy Audit in buildings”, 11th September, 2017.
9. Baawain, M.S. Interview about TRC National Research Award. 30 minutes, Oman TV, 11 December, 2017.
10. Benkari, N. Oman’s Forts: A Magnificent Defense Network. Online magazine “Sekka”, 30 November, 2017.
11. Shaban, A. Articles about SQU Eco-House at Local and Regional Newspapers and News Nets, 2017.

Awards

1. Al-Mamun, A. and Baawain, M.S. 2017. Microbial Electrochemical System for Desalination through Sewage Treatment with Simultaneous Recovery of Chemical Resources and Electrical Energy. His Majesty’s Trust Fund Award, Amount 67,000 OR (175,000 USD), May 2017- May 2020.
2. Baawain, M.S., Al-Mamun, A., Omidvarborna, H. and Al-Amri, W. 2017. National Award for the Best Scientific Research Article on Environment and Biological Research Category I, The Research Council, Sultanate of Oman.
3. Shaban, A. 2017. Dean’s Award, College of Engineering, SQU, Certificate of Appreciation, for Outstanding Efforts and Contribution to the College.
4. Students: Al Mazrooey, G., Al Siyabi, A. and Al Abri A., Supervisor: Alalouch, C. 2017. Third Place in The Design Competition at the MIE Department, College of Engineering, Sultan Qaboos University, Oman, 3rd May 2017. Project title: Facility Planning and Improvement for SQU Staff Club.
5. Students: Al-Abri. J.M., Al-Mukheini H.M., Al-Breiki, S.S., Al-Mandhari A.H. and Al-Shehri A.A., Supervisor: El-Gamal, S. 2017. First Price in the Load Efficiency Competition in the 9th Annual wooden Bridge Competition held at the American University in Dubai (AUD), UAE, 25 March 2017 (5000 AED).
6. Students: Al-Balushi, F., Al-Subhi, N., Al-Naaimi, B. and Al-Shammakhi, A., Supervisor: Alalouch, C. 2017. First Place in Envisioning Muscat 2040 competition, 4-5 April 2017, Muscat, Oman. Organized by Muscat Municipality and RIBA.



7. Students: Al-Balushi, H., Al-Seed, A., Al-Habsi, S., Al-Hashmi, R., Al-Saifi, S. and Al-Hadhrami, A. Supervisor: Alalouch, C. 2017. Second Place in the Seventh Engineering Gathering Competition. College of Engineering at Sultan Qaboos University 23-27 April 2017. Project title “Eco-pavilion”.
8. Students: Al-Balushi, H., Al-Seed, A., Al-Habsi, S., Supervisor: Alalouch, C. 2017. First Place in SpaRe.Life 2017- Green Urban Regeneration International Winter School, 6-11 February 2017, Rome, Italy. Organized by Sapienza University of Rome.
9. Students: Al-Hashmi, R., Al-Saifi, S., Al-Hashmi, A. and Al-Isaii, R., Supervisor: Alalouch, C. 2017. Second Place in SpaRe.Life 2017- Green Urban Regeneration International Winter School, 6-11 February 2017, Rome, Italy. Organized by Sapienza University of Rome.
10. Students: Al-Naimi, B., Al-Balushi, F. and Al Subhi, N., Supervisor: Benkari, N. 2017. First Price in the Competition Organized by RIBA and the Municipality of Muscat to Imagine the Identity of Muscat in 2030.
11. Students: Al-Rahbi H.S., Al-Busidi, M.K., Al-Shabibi N.R., Al-Rashdi S.B. and Al-Risi S.A., Supervisor: El-Gamal, S. 2017. First Price in the Target Load Capacity Competition in the 9th Annual Wooden Bridge Competition held at the American University in Dubai (AUD), UAE, 25 March 2017 (3000 AED).
12. Students: Al-Rahbi H.S., Al-Busidi, M.K., Al-Shabibi N.R., Al-Rashdi S.B. and Al-Risi S.A., Supervisor: El-Gamal, S. 2017. Second Price in the Load Efficiency Competition in the 9th Annual wooden Bridge Competition held at the American University in Dubai (AUD), UAE, 25 March 2017 (3000 AED).

Students’ Activities (Workshops, Short Training Courses and Competitions)

The Society of Civil and Architectural Engineering (CAES) is an active society in the College of Engineering at Sultan Qaboos University. CAES enables collaboration, knowledge sharing and skill development across Civil and Architectural Engineering disciplines. The Society serves to enhance students’ self-assurance and passion for their discipline through exhibitions, seminars and competitions. The society organized the following events in 2017.

- Educational Visit to the New Oman Convention and Exhibition Center (January 2017).
- Civil & Architectural Engineering Carnival (February 2017).
- Social visit to the Royal Hospital (March 2017).
- Beyond Exhibition (April 2017).
- The National Wooden Bridge Competition (April 2017).
- The Civil & Architectural Engineering Graduates Celebration (May 2017).
- CAES Closing Ceremony (May 2017).



Electrical and Computer Engineering



EXECUTIVE SUMMARY

The Department of Electrical and Computer Engineering (ECE) is the largest department in the College of Engineering and offers B.Sc, M.Sc, and Ph.D degrees in all streams of Electrical and Computer Engineering disciplines.

The Department provides students with a comprehensive electrical and computer engineering background including four specialized tracks: Computer Systems and Networks (CSN); Communication and Signal Processing (CSP); Electronic Instrumentation and Control (EIC) and Power Systems and Energy (PSE). The Department collaborates with the Department of Mechanical and Industrial Engineering (MIE) in offering a jointly B.Sc degree in Mechatronics Engineering. Furthermore, a new specialization track in the area of Biomedical Engineering is currently under development.

The undergraduate programs offered by the Department of Electrical and Computer Engineering are designed to provide a sound education with solid foundation in basic sciences and electrical engineering. Engineering design concepts are introduced early in the curriculum, with hands-on activities being enriched through required instructional laboratories. The programs impart a broad awareness of social, cultural, and ethical issues together with a good understanding of the role of engineers in the community, leading to an internationally recognized degree. The programs offered by the Department have been developed based on the criteria and recommendations of the Accreditation Board for Engineering and Technology (ABET), based in the USA. As a result, the undergraduate programs are ABET accredited.

The ECE faculty conducts research in various areas including communication systems, computer architectures and networks, control systems, electrical power systems, renewable energy, microgrids, smart grid, electronic instrumentation, network security, wireless communications, high-voltage engineering, power electronics, embedded systems, PLC and industrial automation, SCADA, robotics, signal processing, biomedical signals and devices, etc.

The research laboratories at the ECE Department are available for undergraduate as well as postgraduate students. The graduate programs allow students to deepen their professional knowledge, and enhance their communication and hands-on skills.

Being the recipient of several internal and external research grants and contracts in collaboration with local industries and organizations, the Department is a masthead of excellence in the College of Engineering. During the year, ECE faculty offered many professional short courses and invited talks, organized and delivered several training workshops and seminars.

During this year, the following faculty joined the Department: Dr. Ahmed Chiheb Ammari Associate Professor in the CSN track, Dr. Osman Elgawi Assistant Professor in CSN track, Dr. Firdous Kausar Assistant Professor in CSN track, and Dr Razzaqul Ahsan Assistant Professor in PSE track. Also, Prof. Abdullah Al-Badi went on a Sabbatical leave starting from September 2017.

ECE students along with the Department staff are the backbone of our department's achievements and are also engaged in academic and professional activities. The IEEE Students Society Branch in the Department regularly organizes workshops and activities for the benefit of students and undertakes students' projects which have won the Department acclaim in international student gatherings. Also, the Mechatronics Society which is related to both ECE and MIE departments has similar activities, but related to the mechatronics area.

Dr. Nasser Hosseinzadeh

HoD, Department of Electrical and Computer Engineering, College of Engineering



- *ECE provides broad knowledge of electrical and computer engineering with additional focused expertise in a specific specialization from among computer systems and networks, communication and signal processing, electronic instrumentation and control, and power systems and energy.*
- *ECE program provides learning beset with deep theoretical concepts along with hands-on activities*



SUMMARY

Table C1: Summary

	2016	2017
Faculty	37	37
Support staff	16	17
Total	53	54
On-study leave	2	1
Undergraduate Program		
Enrollment (Y2-5)	446	438
Courses offered	130	143
Graduates	91	84
Graduate Program		
Enrollment	22	15
Courses offered	16	17
Graduates	8	8
Research		
Grants	11	8
Publications		
Refereed journals	25	33
Conference proceedings	20	41

DEPARTMENTAL PROFILE



Dr. Nasser Hosseinzadeh



Prof. Abdullah Al-Badi



Prof. Hadj Bourdoucen

Dr. Nasser Hosseinzadeh

Associate Professor, Head of the Department

Research Interests: Electrical Power Systems, Smart Grid, Microgrids, Power Systems Stability, Engineering Education

Dr. Abdullah Al-Badi

Professor

Research Interests: Renewable Energy Systems, Electrical Machine Drives, Power Electronics, Power Quality, Interference and High Voltage

Dr. Hadj Bourdoucen

Professor, Dean of the College of Engineering

Research Interests: Intelligent Instrumentation, QoS in Cellular Systems, FOSS Deployment, ICT, Integrated Electronics and REs



Prof. Abdulnasir Hossen



Prof. Ibrahim Metwally



Prof. Afaq Ahmad



Dr. Zia Nadir

Dr. Abdulnasir Hossen

Professor, Director of the Communication and Information Research Centre

Research Interests: Digital Signal Processing, Biomedical Signal Processing, Digital Communication, Artificial Intelligence, Neural Networks

Dr. Ibrahim Metwally

Professor

Research Interests: Electromagnetic Fields, Coronas, Transients in Power Systems, Power Quality, Overvoltage Protection, Gas-Insulated Switchgear and Lines, Stray-Current Corrosion

Dr. Afaq Ahmad

Professor

Research Interests: Digital System Design and Test, Fault-Tolerant Computing, System Modelling and Analysis, Coding Theory, Error Detection

Dr. Zia Nadir

Associate Professor, Assistant Head of the Department

Research Interests: Electromagnetic Compatibility, Electronics, RF Communication Systems





Dr. Joseph Jervase

Dr. Joseph Jervase
Associate Professor

Research Interests: Microwave Antennas and Propagation



Dr. Arif Malik

Dr. Arif Malik
Associate Professor

Research Interests: Energy Policy and Planning



Dr. Faical Mnif

Dr. Faical Mnif
Associate Professor

Research Interests: Control Systems, Robotics



Dr. Lazhar Khriji

Dr. Lazhar Khriji
Associate Professor
Research Interests: Signal and Image Processing and Analysis, Nonlinear Filtering, Adaptive Filtering, Image Coding, Artificial Intelligence, Hardware Implementation of DSP Algorithms



Dr. Hassan Yousef



Dr. Muhammed Shafiq



Dr. Hisham Soliman



Dr. Mustafa Mesbah

Dr. Hassan Yousef

Associate Professor

Research Interests: Intelligent and Adaptive Control, Fuzzy Control Applications to Electric Machine Drives and Power Systems, Large-Scale Systems, Nonlinear Control, High Performance Motion Control of Electric Machines

Dr. Muhammed Shafiq

Associate Professor

Research Interests: Tracking of Non-Linear Dynamic Systems, Adaptive Control, Tracking and Control of Robotics

Dr. Hisham Soliman

Associate Professor

Research Interests: Robust Control, Optimization, Large-Scale Systems, Control Application of Power System and Drive

Dr. Mustafa Mesbah

Associate Professor

Research Interests: Signals and Systems, Biomedical Signal Processing





Dr. Tariq Jamil

Dr. Tariq Jamil

Associate Professor

Research Interests: Computer Architecture, Parallel Processing, Digital Systems, Computer Arithmetic, Information Technology



Dr. Mohammad Al-Badi

Dr. Mohammad H. Al-Badi

Associate Professor

Research Interests: Renewable Energy and Distributed Generation, Distribution Systems, Demand-Side Management, Power System Operation and Planning, Power System Economics



Dr. Amer Al-Hinai

Dr. Amer Al-Hinai

Assistant Professor

Research Interests: Power Systems- Control and Operation, Multi-Agent Systems: Application of Control to Power Systems, Optimization Techniques and Applications to Power Systems



Dr. Ahmed Ammari

Dr. Ahmed C. Ammari

Associate Professor

Research Interests: Embedded Systems, Real Time Systems, Inductive Wireless Data and Power Transfer, Hybrid Electric Energy Storage Systems, System level Modeling and Optimization



Dr. Fahad Bait-Shiginah



Dr. Dawood Al-Abri



Dr. Mohammad Bait-Suailam



Dr. Amir Abdulghani

Dr. Fahad Bait-Shiginah

Assistant Professor

Research Interests: Modelling and Simulation, Discrete Event System Specification (DEVS), Cellular Space Modelling, Artificial Intelligence, Database and Software Engineering

Dr. Dawood Al-Abri

Assistant Professor

Research Interests: Communications, Computer Networks

Dr. Mohammad Bait-Suailam

Assistant Professor

Research Interests: Wireless Communication Systems, Applications of Electromagnetics in Antennas and High-Speed Printed Circuit boards

Dr. Amir Abdulghani

Assistant Professor

Research Interests: Wireless and Mobile Communications, Signal Processing, Information Technology





Dr. Ahmed Al-Maashari

Dr. Rashid Al-Abri

Dr. Hassan Al-Lawati

Dr. Nasser Tarhuni

Dr. Ahmed Al-Maashari

Assistant Professor

Research Interests: Computer Networking, Microprocessors, Software Developments

Dr. Rashid Al-Abri

Assistant Professor

Research Interests: Power Electronics and Drives, Power System Quality, Sustainable and Renewable Energy, Power System Stability

Dr. Hassan Al-Lawati

Assistant Professor

Research Interests: Antennas and Propagation, Wireless Communication

Dr. Nasser Tarhuni

Assistant Professor

Research Interests: Wireless Communication, Digital Signal Processing, Optical CDMA, Wireless Sensor Networks, Applications of Signal Processing



Dr. Medhat Hussein



Dr. Mahmood Masoud



Dr. Ashraf Saleem



Dr. Abdelsalam Elhaffar

Dr. Medhat Hussein Awadalla

Assistant Professor

Research Interests: Computer Engineering, Computer Systems, Real-Time Systems, Parallel Processing

Dr. Mahmood Masoud

Assistant Professor

Research Interests: Electrical Machine Drives, Multiphase Machines, Power Electronics Applications, Applications of Renewable Energy Systems on Machines and Power Electronics

Dr. Ashraf Saleem

Assistant Professor

Research Interests: Modeling, Identification and Control of Mechatronics Systems

Dr. Abdelsalam Elhaffar

Assistant Professor

Research Interests: Power Systems Protections



Dr. Razzaqul Ahshan



Dr. Osman Elgawi

Dr. Razzaqul Ahshan

Assistant Professor

Research Interests: Smart Grid, Renewable Energy, Microgrids, Integration of Renewable Generation to Power Systems, Control and Instrumentation

Dr. Osman Elgawi

Assistant Professor

Research Interests: Embedded Systems and Industrial Electronics, Robotics and Automation

Sayyed Dr. Samir Al Busaidi

Assistant Professor

Research Interests: Optical Communication Systems, Telecommunications

Dr. Firdous Kausar

Assistant Professor

Research Interests: Network and Information Security, Wireless Sensor Networks



Eng. Salem Al-Hinai

Eng. Taha Al-Saadi

Eng. Saleh Al-Yazidi

Eng. Salem Al-Hinai

Lecturer

Research Interests: Power Systems and Protection, Control Systems

Eng. Taha Al-Saadi

Demonstrator

Research Interest: Control Systems

Eng. Said Al-Abri

Lecturer (on study leave)

Research Interest: Communication, Control Systems

Eng. Saleh Al-Yazidi

Department Superintendent

Research Interest: Electronics



Eng. Khalaf Al-Ufi

Eng. Khalaf Al-Ufi

Chief Engineer A

Research Interest: Electronics

Mr. Suleiman Al-Kalbani

Lab Supervisor A

Research Interest: High-Voltage

Mr. Mohammad Al-Harrasi

Lab Supervisor B

Research Interest: Electrical Machines

Eng. Saleem Al-Rashdi

Chief Engineer A

Research Interest: Electrical Machines



Eng. Jaber Al-Balushi

Eng. Suleiman Al-Sinani

Mr. Iftaquaruddin Mohammad

Eng. Jaber Al-Balushi

Senior Engineer B

Research Interest: Digital Logic Design

Eng. Suleiman Al-Sinani

Engineer A

Research Interest: Electrical Machines

Mr. Iftaquaruddin Mohammad

Technician

Research Interests: Digital Chips, Information Technology

Eng. Yousef Al-Shuaili

Senior Engineer B

Research Interest: Control Systems



Eng. Abbas Teirab

Eng. Abbas Teirab

Engineer B

Research Interests: Antennas, Communication Systems



Eng. Nabil Hamza

Eng. Nabil Hamza

Lab Supervisor C

Research Interest: Digital Logic Design



Mr. Sami Al-Jaafari

Mr. Sami Al-Jaafari

Technician

Research Interest: Electronics



Eng. Rona Allwyn

Eng. Rona Allwyn

Engineer B

Research Interest: Electrical Machines



Eng. Naeema Al-Gaithi

Mrs. Salwa Al-Bahri

Mr. Said Al-Hajri

Eng. Naeema Al-Gaithi

Engineer B

Research Interest: Electronics

Mrs. Salwa Al-Bahri

Technician C

Research Interest: Electronics

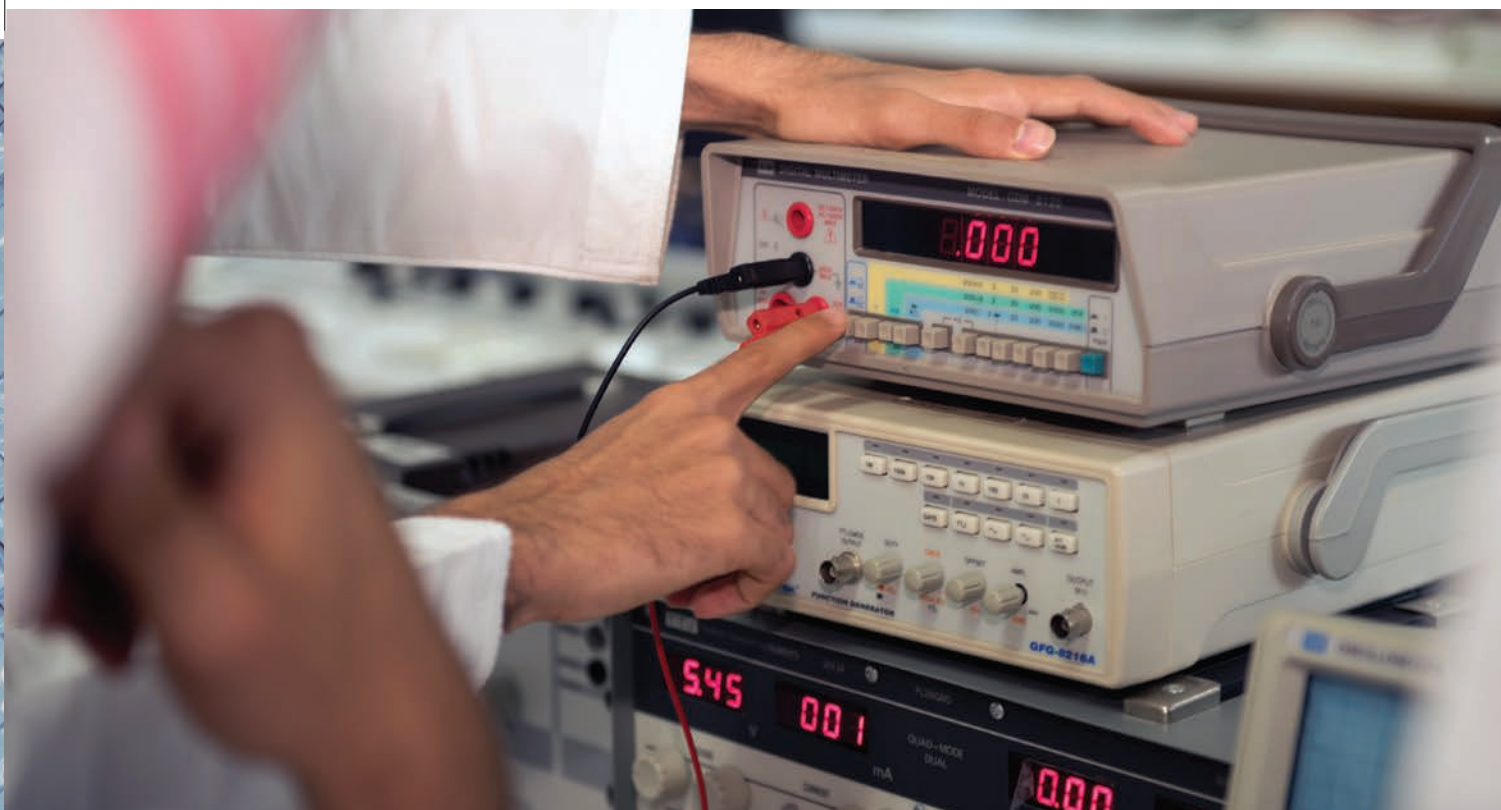
Mr. Said Al-Hajri

IT Officer

Research Interests: Information Technology, Computer Networks

Mrs. Laila Al-Hosni

Administrative Staff



DEPARTMENTAL COMMITTEES

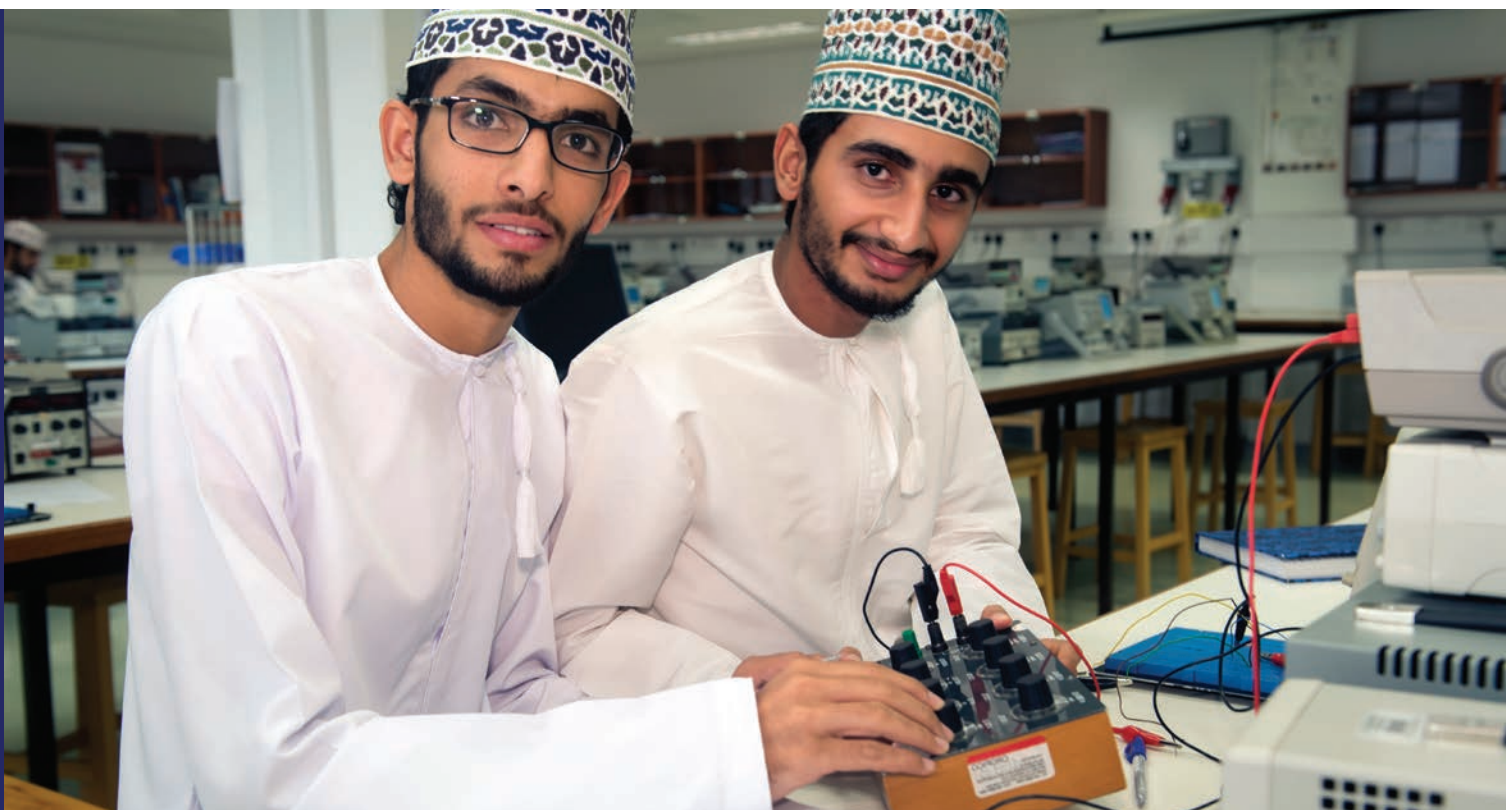
Table C2: Departmental Committees

Accreditation Committee	Dr. Faical Mnif (Chair) Prof. Afaq Ahmed Dr. Naser Tarhuni Dr. Abdulsalam Elhaffar Dr. Ashraf Saleem Dr. Dawood Al Abri Mr. Iftaquaruddin Mohammad (secretary)
Strategic Planning Committee	Dr. Ahmed Al-Maashri (Chair) Dr. Joseph Jervase Dr. Nasser Hosseinzadeh Dr. Mohammad Al-Badi
Student Advising Committee	Prof. Afaq Ahmed (Chair) Dr. Zia Nadir Dr. Mustefa Mesbah Eng. Salem Al-Hinai

Curriculum Review and Student Advisement Committee	Dr. Zia Nadir (Chair) Prof. Abdalnaser Hossen Prof. Afaq Ahmad Prof. Ibrahim Metwally Dr. Hassan Yousef Dr. Joseph Jervase Dr. Faical Mnif Dr. Mustefa Mesbah (Postgraduate) Eng. Salem Al-Hinai
Final-Year Projects	Dr. Hassan Yousef (Chair) Dr. Lazhar Khariji Dr. Medhat Hussein Dr. Abdulsalam Elhaffar Mr. Salem Al-Hinai Mr. Jabir Al Balushi Mr. Nabil Hamza Mr. Said Al-Hajri Mr. Iftiqar Mohammad
Laboratories and Teaching Facilities	Dr. Mahmood Masoud (Chair) Dr. Mustefa Mesbah Dr. Fahad Bait-Shiginah Dr. Razzaqul Ahshan Mr. Said Al-Hajri Mr. Saleh Al-Yazidi (Superintendent) Mr. Khalaf Al-Ufi
Health, Safety and Environment Committee	Dr. Lazhar Khariji (Chair) Mr. Suleiman Al-Kalbani Mr. Sami Al-Jaafari
Human Resources Committee	Dr. Nasser Hosseinzadeh (Chair) Dr. Fahad Bait-Shiginah (D. Chair) Dr. Amer Al-Hinai Sayyid Dr. Samer Al-Busaidi Dr. Faical Mnif



Industrial Advisory Board Committee	Dr. Nasser Hosseinzadeh (Chair) Dr. Fahad Bait-Shiginah Dr. Amer Al-Hinai
Industrial Outreach and Community Relations	Sayyid Dr. Samer Al-Busaidi (Chair) Dr. Amer Al-Hinai Dr. Amir Abdulghani
Community Services and Publicity Committee	Dr. Amir Abdulghani (Chair) Dr. Rashid Al-Abri Dr. Firdous Kausar
Publication and Web Committee	Dr. Tariq Jamil (Chair) Dr. Arif Malik Dr. Ahmed C. Ammari Mr. Said Al-Hajri
Postgraduate Studies and Research Committee	Dr. Mustefa Mesbah (Chair) Dr. Hisham Soleiman Dr. Ahmed Al-Maashri Dr. Lazhar Khariji Dr. Mohammad Al-Badi
Student Societies and Social Activities Committee	Dr. Naser Tarhuni (Chair) Dr. Mohammad Bait-Suwailam Dr. Medhat Hussein Dr. Firdous Kausar Mr. Taha Al-Saadi
Student Staff Liaison Committee	Dr. Nasser Hosseinzadeh (Chair) Dr. Zia Nadir (Assistant Head) Mr. Salem Al-Hinai Selected students from cohorts
Timetabling Committee	Dr. Hassan Al Lawati (Chair) Dr. Rashid Al-Abri Dr. Dawood Al-Abri Mr. Saleh Al-Yazidi (Superintendent) Mr. Abbas Tirab
Coordinators and IT Support	Mrs. Laila Al-Husni Mrs. Theresa Ragudo (Left in June 2017) Mr. Said Al-Hajri



UNDERGRADUATE STUDIES

Courses

Table C3: Courses Offered in Spring 2017

Code	Title	Instructor(s)
ECCE2016	Circuit Analysis I	Dr. Mahmood Masoud
ECCE2016	Circuit Analysis I	Dr. Razzaqul Ahshan
ECCE2016	Circuit Analysis I	Dr. Khalid Ellithy
ECCE3015	Electrical Engineering Fundamentals	Dr. Mohammad Magdy
ECCE3015	Electrical Engineering Fundamentals	Dr. Hisham Soliman
ECCE3015	Electrical Engineering Fundamentals	Dr. Hisham Soliman
ECCE3016	Circuit Analysis II	Dr. Mohammad Magdy
ECCE3016	Circuit Analysis II	Prof. Ibrahim Metwally
ECCE3016	Circuit Analysis II	Dr. Khalid Ellithy
ECCE3022	Electromagnetics I	Dr. Hassan Al-Lawati
ECCE3022	Electromagnetics I	Dr. Hassan Al-Lawati
ECCE3038	Electrical Measurements and Instrumentation	Mr. Taha Al-Saadi

Code	Title	Instructor(s)
ECCE3142	Signals and Systems	Dr. Amir Mohamed Abdulghani
ECCE3142	Signals and Systems	Dr. Husam Fahmi
ECCE3152	Electronics I	Dr. Zia Nadir
ECCE3152	Electronics I	Dr. Lazhar Khriji
ECCE3206	Digital Logic Design	Dr. Tariq Jamil
ECCE3206	Digital Logic Design	Sayyed Dr. Samir Al Busaidi
ECCE3206	Digital Logic Design	Sayyed Dr. Samir Al Busaidi
ECCE3258	Applied Engineering Programming	Dr. Fahad Bait Shiginah
ECCE3352	Electrical Technology	Dr. Razzaqul Ahshan
ECCE4009	Engineering Design and Professional Skills	Dr. Joseph Jervase
ECCE4009	Engineering Design and Professional Skills	Dr. Mohammad Shafiq
ECCE4022	Electromagnetics II	Dr. Mohammad M. Bait-Suwailam
ECCE4080	Seminar and Field work	Mr. Salim Mohammad Al-Hinai
ECCE4082	Professional skills	Mr. Salim Mohammad Al-Hinai
ECCE4082	Professional skills	Mr. Salim Mohammad Al-Hinai
ECCE4122	Principles of Analog and Digital Communications	Dr. Amir Mohamed Abdulghani
ECCE4122	Principles of Analog and Digital Communications	Dr. Joseph Jervase
ECCE4126	Principles of Digital Communications	Dr. Nasser Tarhuni
ECCE4142	Digital Signal Processing	Dr. Mustefa Mesbah
ECCE4158	Electronics II	Dr. Zia Nadir
ECCE4158	Electronics II	Prof. Hadj Bourdoucen
ECCE4227	Embedded Systems	Dr. Osman Elgawi
ECCE4227	Embedded Systems	Dr. Osman Elgawi
ECCE4227	Embedded Systems	Dr. Husam Fahmi
ECCE4242	Introduction to Computer Networks	Dr. Ahmed Al-Maashri
ECCE4242	Introduction to Computer Networks	Dr. Dawood Al Abri
ECCE4254	Operating Systems	Dr. Medhat Hussein
ECCE4255	Applied Programming and Algorithms for Engineers	Dr. Fahad Bait Shiginah
ECCE4272	Artificial Intelligence	Prof. Abdulnasir Hossen
MCTE4210	Power Electronics & Drives	Dr. Mohammad Magdy
ECCE4312	Power System Analysis I	Dr. Amer Al Hinai

Code	Title	Instructor(s)
ECCE4316	Power System Analysis II	Dr. Nasser Hosseinzadeh
ECCE4358	Electrical Machines	Dr. Mahmood Masoud
ECCE4416	Linear Control Systems	Dr. Mustefa Mesbah
ECCE4416	Linear Control Systems	Dr. Hassan Yousef
ECCE4416	Linear Control Systems	Dr. Faisal Mnif
ECCE4436	Industrial Control System Design	Dr. Muhammed Shafiq
ECCE4455	Sensors and Actuators	Dr. Ashraf Saleem
ECCE4467	Power Electronics and Drives	Dr. Rashid Said Al-Abri
ECCE5004	Engineering Management and Economics I	Dr. Arif Saed Malik
ECCE5004	Engineering Management and Economics I	Dr. Rashid Said Al-Abri
ECCE5099	Project (Part II)	Dr. Hassan Yousef
ECCE5099	Project (Part II)	Dr. Hassan Yousef
ECCE5099	Project (Part II)	Dr. Hassan Yousef
ECCE5124	Wireless Communications	Dr. Nasser Tarhuni
ECCE5143	Advanced Digital Signal Processing	Dr. Lazhar Khriji
ECCE5160	Antenna Modelling	Dr. Mohammad Bait-Suwaitam
ECCE5214	Advanced Logic and Computer Interfacing	Dr. Afaq Ahmad
ECCE5215	Computing Systems for Engineering Applications	Dr. Ahmed Al Maashri
ECCE5223	Advanced Embedded Systems Design	Dr. Husam Fahmi
ECCE5231	Industrial Networks and Operating Systems	Dr. Medhat Hossein
ECCE5232	Computer Architecture and Organization I	Dr. Tariq Jamil
ECCE5282	Computer Network Security	Dr. Dawood Al Abri
ECCE5302	Power System Protection	Dr. Abdelsalam Elhaffar
ECCE5303	Power Distribution System Engineering	Dr. Khalid Ellithy
ECCE5332	High Voltage Engineering	Prof. Ibrahim Metwally
ECCE5422	Selected Topics in Control Systems	Dr. Hisham Soliman
ECCE5445	Control Systems Design	Dr. Faical Mnif
ENGR6911	Engineering Management	Dr. Arif Saed Malik
ENGR1501	Introduction to Engineering	Mr. Taha Al-Saadi

Table C4: Courses Offered in Fall 2017

Code	Title	Instructor(s)
ECCE2001	Electricity Generation from Solar Photovoltaics	Dr. Rashid Al Abri
ECCE2016	Circuit Analysis I	Dr. Arif Malik
ECCE2016	Circuit Analysis I	Dr. Hassan Al-Lawati
ECCE2016	Circuit Analysis I	Dr. Mohammad Magdy
ECCE2016	Circuit Analysis I	Dr. Mohammad Magdy
ECCE3015	Electrical Engineering Fundamentals	Dr. Razzaqul Ahshan
ECCE3015	Electrical Engineering Fundamentals	Dr. Khalid Ellithy
ECCE3016	Circuit Analysis II	Prof. Ibrahim Metwally
ECCE3016	Circuit Analysis II	Dr. Tariq Jamil
ECCE3016	Circuit Analysis II	Dr. Mohammad Magdy
ECCE3016	Circuit Analysis II	Dr. Mohammad Magdy
ECCE3022	Electromagnetics I	Dr. Mohammad M. Bait-Suwailam
ECCE3022	Electromagnetics I	Dr. Hassan Al-Lawati
ECCE3038	Electrical Measurements and Instrumentation	Dr. Ashraf Saleem
ECCE3038	Electrical Measurements and Instrumentation	Dr. Hassan Yousef
ECCE3142	Signals and Systems	Dr. Mustafa Mesbah
ECCE3142	Signals and Systems	Dr. Mustafa Mesbah
ECCE3152	Electronics I	Dr. Zia Nadir
ECCE3152	Electronics I	Dr. Naser Tarhuni
ECCE3206	Digital Logic Design	Dr. Fahad Bait Shiginah
ECCE3206	Digital Logic Design	Dr. Osman Elgawi
ECCE3206	Digital Logic Design	Dr. Afaq Ahmed
ECCE3258	Applied Engineering Programming	Dr. Medhat Hussein
ECCE3258	Applied Engineering Programming	Dr. Medhat Hussein
ECCE3352	Electrical Technology	Dr. Hisham Soliman
ECCE3352	Electrical Technology	Dr. Khalid Ellithy
ECCE4009	Engineering Design	Dr. Mohammad Shafiq
ECCE4009	Engineering Design	Dr. Joseph Jervase
ECCE4022	Electromagnetics II	Dr. Mohammad M. Bait-Suwailam
ECCE4082	Professional Skills	Mr. Salim Mohammad Al-Hinai

Code	Title	Instructor(s)
ECCE4082	Professional Skills	Mr. Salim Mohammad Al-Hinai
ECCE4122	Analog and Digital Communications	Dr. Amir Mohamed Abdulghani
ECCE4142	Digital Signal Processing	Prof. Abdulnasir Yahya Hossen
ECCE4158	Electronics II	Dr. Zia Nadir
ECCE4158	Electronics II	Dr. Ahmed Chiheb Ammari
ECCE4227	Embedded System	Dr. Ahmed Chiheb Ammari
ECCE4227	Embedded System	Dr. Osman Elgawi
ECCE4227	Embedded System	Dr. Ahmed Said Al-Maashri
ECCE4242	Introduction to Computer Networks	Dr. Ahmed Said Al Maashri
ECCE4312	Power System Analysis I	Dr. Abdelsalam Elhaffar
ECCE4312	Power System Analysis I	Dr. Mohammad Al-Badi
ECCE4316	Power System Analysis II	Dr. Amer Al Hinai
ECCE4358	Electrical Machines	Dr. Razzaqul Ahshan
ECCE4358	Electrical Machines	Dr. Mahmood Masoud
ECCE4416	Linear Control Systems	Dr. Hisham Soliman
ECCE4416	Linear Control Systems	Mr. Taha Al-Saadi
ECCE4422	Digital Control Systems	Dr. Hassan Yousef
ECCE4467	Power Electronics and Drives	Dr. Mahmood Masoud
ECCE5004	Engineering Management and Economics I	Dr. Arif Saeed Malik
ECCE5009	Project (Part I)	Dr. Hassan Yousef
ECCE5009	Project (Part I)	Dr. Hassan Yousef
ECCE5009	Project (Part I)	Dr. Hassan Yousef
ECCE5112	Antennas	Dr. Joseph Jervase
ECCE5123	Optical Communications	Sayyed Dr. Samir Al Busaidi
ECCE5142	Image and Video Processing	Dr. Lazhar Khriji
ECCE5213	Fault-Tolerant Computing Systems	Prof. Afaq Ahmad
ECCE5231	Industrial Networks and Operating Systems	Dr. Firdous Kausar
ECCE5242	Advanced Computer Networks	Dr. Dawood Al Abri
ECCE5265	Database Systems	Dr. Firdous Kausar
ECCE5302	Power System Protection	Dr. Abdelsalam Elhaffar
ECCE5312	Power Systems Control and Stability	Dr. Nasser Hosseinzadeh

Code	Title	Instructor(s)
ECCE5332	High Voltage Engineering	Prof. Ibrahim Metwally
ECCE5443	Optimization Techniques in Engineering	Dr. Faical Mnif
ECCE5452	Computer Aided Instrumentations	Prof. Hadj Bourdoucen
ENGR1501	Introduction to Engineering	Mr. Taha Al-Saadi
ENGR2216	Fortran Programming for Engineers	Dr. Tariq Jamil
ENGR2216	Fortran Programming for Engineers	Dr. Medhat Hussein
MCTE3110	Electronics	Dr. Lazhar Khriji
MCTE3210	Electromechanical Systems and Actuators	Dr. Ashraf Saleem
MCTE4155	Instrumentation & Measurements	Dr. Faical Mnif
MCTE4250	Linear Control Systems	Dr. Khalid Ellithy



POSTGRADUATE STUDIES

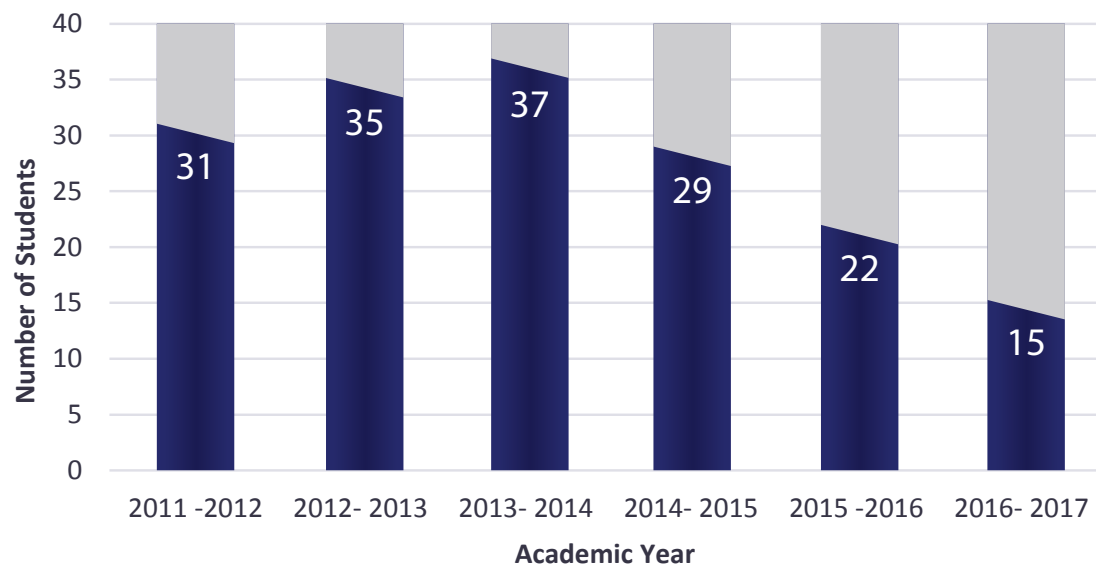


Figure C1: Postgraduate Students' Enrollment for the Past Six Years

Courses

Table C5: Postgraduate Courses Offered in Year 2017

Semester	Code	Title	Instructor(s)
Spring 2017	ECCE6122	Digital Signal Processing	Prof. Abdulnasir Hossen
	ECCE6213	Directed Studies	Dr. Mohammad Bait-Suwailam
	ECCE6284	Reliability & Fault-Tolerant Systems	Prof. Afaq Ahmed
	ECCE6335	Special Topics in Power	Dr. Abdelsalam Elhaffar
	ECCE6423	Optimal Control Systems	Dr. Hassan Yousef
	ENGR6920	Renewable Energy Systems	Prof. Abdullah Al Bad
	ECCE7000	Project	Dr. Ahmed Al-Maashri
	ECCE8001	PhD Thesis	Prof. Afaq Ahmad
Fall 2017	ECCE6124	Digital Transmission	Dr. Naser Tarhuni
	ECCE6244	Network Analysis: Theory and Applications	Dr. Dawood Al Abri
	ECCE6213	Directed Studies	Dr. Mohammad Al Badi
	ECCE6315	Power System Analysis	Dr. Mohammad Al Badi
	ECCE6132	Linear System Theory	Dr. Mohammad Shafiq
	ECCE6430	Advanced Power Electronics	Dr. Rashid Al Abri
	ECCE6261	Advanced Modeling and Simulation	Dr. Fahad Bait Shiginah
	ECCE7000	Project	Dr. Ahmed Al Maashri
	ECCE8001	PhD Thesis	Prof. Afaq Ahmad

Postgraduate Students' Projects

Table C6: SStudents' Projects in Year 2017

No	Name	Project Title
1	MSc: Nusaiba AL Azri	Design and Simulation of Antenna Array for Vehicle Collision Avoidance Radar System
2	MSc: Zahra AL Abri	Deployment of SDN on Cloud Computing for Distance Learning Application
3	MSc: Sara AL Asadi	Identification of Obstructive Sleep Apnea Using Artificial Neural Networks and Wavelet Packet Decomposition for Heart Rate Variability Signal
4	MSc: Asma AL Kindi	Analysis of Malware Propagation Behavior in Social Internet of Things
5	MSc: Asma Boudelliousa	Enhancement of Ultra-Wideband Microwave Imaging Antenna System for Breast Cancer Detection Using Metamaterials
6	MSc: Mayada Shadoul Mohammad	Modeling, Analysis and Control Desing for Microgrid Inverter
7	MSc Rona George Allwyn	Optimization of PV/Battery System for Street Lighting and feasibility Study in Oman
8	PhD: Abdullah Salim Humaid Al Shereiqi	Energy Management System for Hybrid Renewable Power Plant



RESEARCH

Grants and Contracts

Table C7: : New Grants, Contracts and Consultancies by Faculty Members in Year 2017

Research Title	Principal Investigator(s)	Budget (OMR)	Funded by
Optimal Design Configuration of an Organic Ranking Cycle Using Waste Heat and Solar Energy in Hot Arid Areas	Dr. Nasser Al-Azri	4,850	SQU
Study of Electromagnetic radiation pollution in Oman - SQU as a case study.	Dr. Hassan Al Lawati	3,100	SQU
Microgrid Systems for Application in Oman.	Dr. Razzaqul Ahshan	4,400	SQU
Development of a Microgrid Test Setup.	Dr. Razzaqul Ahshan	3,000	SQU
Development of Energy Management System for Dispatchable Renewable Power Generation	Dr. Amer Al-Hinai	64,000	HM Trust Fund
Management of Renewable Energy Sources in Preparation for a Smart Grid in Oman	Dr. Nasser Hosseinzadeh	30.000	BP Oman

Research Title	Principal Investigator(s)	Budget (OMR)	Funded by
Development of Hardware Logic using Verilog HDL	Dr. Ahmed Al Maashri	3,000	Government of Oman
Deployment of a Self-Adjusted Tethered Helium Balloon Antennas Prototype for Omantel's Mobile Sites	Dr. Ahmed Al Maashri	10,000	Omantel
Design and Implementation of Wireless Charging System for Mobile Phones	Dr. Mohammad Bait-Suwailam	5,000	The Research Council, Oman

Publications

Refereed Journal Papers

1. Ahmad A., Al Abri D., Al Busaidi S. S. and Bait-Suwailam M. M., 2017. What Causes to Tune a Condition of Exactly Identical Fault-Masks Behaviors in an LFSR based BIST Methodology. *Oriental journal of computer science and technology – An Int'l Research Journal of Science and Technology*, 10(4):770-717.
2. Ahshan R., Iqbal M. T., Mann G. K. I., Quaicoe John E., 2017. Microgrid Reliability Evaluation Considering the Intermittency Effect of Renewable Energy Sources. *International Journal of Smart Grid and Clean Energy*, 6(4):252-268.
3. Al Badi, M. H., 2017. Electricity Sector in Oman After 10 Years of Reform: Status, Trends, and Future Perspectives. *The Electricity Journal*, 30(7):23-30.
4. Al Badi, M. H., Al Busaidi, A. S., El Saadany, E. F., 2017. Seawater PHES to Facilitate Wind Power Integration in Dry Coastal Areas – Duqm Case Study. *International Journal of Renewable Energy Research*. 7(3):1370-1382.
5. Al-Badi, A., Yousef, H., Al Mahmoodi, T, Al-Shammaki, M., Al-Abri, A. and Al-Hinai, A., 2017. Sizing and Modeling of Photovoltaic Water Pumping System. *International Journal of Sustainable Energy*, 1-13.
6. Al Badi, M. H., Soliman, H. M., Awlad Thani, M., Al-Alawi, A., Al-Ismaili, S., Al-Nabhani A., Baalawi, H., 2017. Optimal Allocation of PV Systems to Minimize Losses in Distribution Networks Using GA and PSO—Masirah Island Case Study. *Journal of Electrical Systems*, 13(4):678-688.
7. Al-Busaidi A., Khriji L., Touati F., Rasid M.F. A., Ben Mnaouer A., 2017. Wavelet-based Encoding Scheme for Controlling Size of Compressed ECG Segments in Telecardiology Systems. *Journal of Medical Systems* 41:161.

8. Al Busaidi S. S., Ahmad A. and Awadalla M., 2017. Design of a Gray Encoder and/or Counter using D-FFs and MUXs. *Oriental journal of computer science and technology – An Int’l Research Journal of Science and Technology*, 10(3):539-548.
9. Awadalla M., Al Maashri A., Pathuri L. and Ahmad A., 2017, Customized Hardware Crypto Engine for Wireless Sensor Networks *Indonesian Journal of Electrical Engineering and Computer Science*, 7(1):263-275.
10. Awadalla, M., El-Far, S., 2017. A new Algorithm for Mining Association Rules Based on Hypothesis Test. *International Journal of Computer Science Issues (IJCSI)*, 14(4):20-28
11. El-Amin I. and Al-Hinai A., 2017. Introduction to Special Issue on Modern Power Systems & Sustainability. *International Journal of Computing and Digital Systems*, 6(6): 311-316
12. Ghommam, J., Chemori, A, Mnif, F., 2017. Adaptive RBFNN finite-time control of normal forms for underactuated mechanical systems. *Nonlinear Dynamics*, 90(1):301-315.
13. Hamza N., Khriji L. and Tourki R., 2017. Interference reduction and Common mode Rejection in ECG signal by removing the Ground Electrode. *Journal of Clinical Engineering, Publisher: Lippincott Williams & Wilkins*. 42(1):21-27.
14. Ghodsi M., Hosseinzadeh N., Özer A., Rajabzadeh Dizaj H., Hojjat Y., Garjasi Varzeghani N., Sheykhosslami M.R., Talebian S., Ghodsi M.H., Al-Yahmedi A., 2017. Development of Gasoline Direct Injector Using Giant Magnetostrictive Materials. *IEEE Transactions On Industry Applications*, 53(1):521-529.
15. Hosseinzadeh N., Al-Shereiqli A., Al-Badi M., and Al-Hinai A., 2017. A Multi-Microgrid with the Inclusion of Renewable Energy in Oman’s Rural Power System. *The Journal of Engineering Research (TJER)*, 15(1):61-72.
16. Kang, Q., Feng, S., Zhou, MC., Ammari, A.C., and Sedraoui, K., 2017. Optimal Load Scheduling of Plug-in Hybrid Electric Vehicles via Weight-Aggregation Multi-objective Evolutionary Algorithms. *IEEE Transactions on Intelligent Transportation Systems*, 18(9):2557–2568.
17. Kazem, H. A, Albadi, M. H., Al-Waeli, A. H., Al-Busaidi, A. H., 2017. Techno-economic feasibility analysis of 1 MW photovoltaic grid connected system in Oman. *Case Studies in Thermal Engineering*, 10:131-141.
18. Malik, A. S., Albadi, M. H., Bani-Araba, A., Al-Ameri, A., Al Shehhi, A., 2017. Smart Grid Scenarios and their Impact on Strategic Plan – A Case Study of Omani Power Sector. *Sustainable Cities and Society*, 37:213-221.
19. Metwally, I.A., Eladawy, M., Feilat, E.A., 2017. Online Condition Monitoring of Surge Arresters Based on Third-Harmonic Analysis of Leakage Current. *IEEE Transactions on Dielectrics and Electrical Insulation*, 24:2274-2281.
20. Metwally, I.A., 2017. Measurement of High Pulsed Currents through Plates by Novel Linear Side-Looking Coils. *IEEE Sensors Journal*, 17:5050-5059.

21. Mnif, F., and Ghommam, J., 2017. Predictor-based control for an inverted pendulum subject to networked time delay. *ISA transactions*, 67:306-316.
22. Nouri, M., Bekrar, A., Jemai, A., Trentesaux, D., Ammari, A.C., and Niar, S., 2017. Two Stage particle swarm optimization to solve the Flexible job shop predictive scheduling problem considering possible machine breakdowns. *Computers & Industrial Engineering* 112:595-606.
23. Pandi V. R., Al-Hinai A., and Feliachi A., 2017. Adaptive coordinated feeder flow control in distribution system with the support of distributed energy resources. *International Journal of Electrical Power & Energy Systems*, Elsevier, 85:190-199
24. Pullayikodi S. K., Tarhuni N., Ahmad A. and Bait Shiginah F., 2017. Computationally Efficient Robust Color Image Watermarking Using Fast Walsh Hadamard Transform. *J. Imaging*, 3(4):46:1-13.
25. Rkhissi-Kammoun, Y., Ghommam, J., Boukhnifer, M., and Mnif, F., 2017. RISE-backstepping-based robust control design for induction motor drives. *COMPEL - The International Journal for Computation and Mathematics in Electrical and Electronic Engineering*, 36(4):906-930
26. Shafiq, M., Shafiq, M. A. and Yousef, H. A., 2017. Stability and Convergence Analysis of Direct Adaptive Inverse Control. *Complexity*, 2017:1-10.
27. Tahir, A., Elhaffar, A., Sudhoff, S., and Pekarek, S., 2017. Performance Evaluation of a Tape-Wound Core Transformer using Meta-Model Based Scaling Laws. *International Journal of Computing and Digital Systems*, 6:339-348.
28. Triki, M., Ammari, A.C., 2017. Extending the Service Lifetime of a Battery-Powered System Supporting Multiple Active Modes. *Journal of Electrical and Electronics Engineering*, 12(3):34-46
29. Yousef, H., Soliman, M. H. and Al-Badi, M. H., 2017. Nonlinear Power System Excitation Control Using Adaptive Wavelet Networks. *Neuro computing*, 230:302-311.
30. Yousef, H. A., Hamdy, M. and Nashed, K., 2017. Adaptive Fuzzy Controller for a Class of Nonlinear Systems with Unknown Backlash-like Hysteresis. *International Journal of Systems Science*, 48: 2522-2533.
31. Yousef, H., Al-Badi, A. H. and Polycarpou, A., 2017. Power Management for Hybrid Distributed Generation Systems. *International Journal of Sustainable Engineering*, 1-10.
32. Saleem A., Al Ratrou S., Wong C. B. 2017. Nonlinear component-based modelling and hardware-in-the-loop simulation of servo-pneumatic systems, *International Journal of Modelling Identification and Control*, 28 (1):40-57
33. Soliman H.M., and El Metwally K., 2017. Robust constrained pole placement for power systems using two dimensional membership fuzzy. *IET Generation, Transmission & Distribution*. 11(16):3966-3973.

Refereed Conference Papers

1. Abdelhedi, R., Ammari, A.C., Lahyani, A., Sari, A., Venet, P., 2017. An Improved Frequency Sharing Strategy Between Battery and Supercapacitors in Electric Vehicles, In: *Proceedings of the ELECTRIMACS*, Toulouse, France, 4-6 July 2017.
2. Acharya S., Al-Hinai A., El-Moursi M., and Al-Badi M. 2017. Coordinated Control for Frequency Regulation in Microgrids using RES, Battery Storage and Demand Response. In: *Proceedings of the IEEE Power and Energy Society General Meeting (PESGM)*, Chicago, IL, 16-20 July 2017.
3. Ahmad A., Al Busaidi S. S., Ruelens D. and Ahmad S. 2017. Optimization of Fault Tree Analysis Model. In: *Proceedings of the Fourth International Conference on Numerical Analysis and Optimization Theory, Algorithms, Applications and Technology*. Oman, p.31, 2-5 January 2017.
4. Al-Abri, R. S., Al Badi, M. H., Al-Badi, A. H. 2017. Analysis of Measurement of Different types of PV Systems in Oman, In: *Proceedings GCC POWER 2017 Conference & Exhibition*. Muscat, Oman 16-18 October 2017.
5. Al-Ajmi, H., Masoud, M. I., 2017. A Case Study for Five Phase Induction Motor Design: Evaluation using Finite Element Analysis. In: *Proceedings of the 9th IEEE GCC conference and exhibition*, Al-Manama, Al-Bahrain, May 2017
6. Al Badi M. H., Soliman H. M., El-Saadany E. F., Awlad Thani M., Al-Alawi A., Al-Ismaili S., Al-Nabhani A., Baalawi H. 2017, Optimal Allocation of PV Systems in Distribution Networks Using PSO, In: *Proceedings of Seventh International Conference on Modeling, Simulation and Applied Optimization ICMSAO17.*, American University of Sharjah, UAE, 4-6 April 2017.
7. Al Badi, M. H., Al Busaidi, A. S., El Saadany, E. F. 2017. Using PHES to Facilitate Wind Power Integration in Isolated Systems – Case Study. In: *Proceedings of the 18th Annual IEEE International Conference on Industrial Technology (IEEE ICIT17)*. Toronto, Canada, 22-25 March 2017.
8. Al Badi, M. H., El-Rayani, Y. M., El-Saadany, E. F., Al-Riyami, H. A. 2017. Effect of Large Solar Power Plant on Locational Marginal Prices in Oman. In: *Proceedings of the 30th annual IEEE Canadian Conference on Electrical and Computer Engineering (IEEE 2017 CCECE)*. Windsor, Ontario, Canada, April 30 - May 3, 2017.
9. Al-Abri D. 2017, Teaching Network security: a holistic approach. In: *Proceedings of 11th International Technology, Education and Development Conference*, Spain, Valencia, 6-8 March, 2017.
10. Al-Kalbani, S., Yousef, H. A. and Al-Abri, R. 2017. Load Frequency Control of a Multi-Area Power System with PV penetration: Fuzzy logic Approach in presence of Time Delay. In: *Proceedings of the 9th IEEE GCC Conference and Exhibition, Manama, Bahrain*, 8-11 May, 2017.

11. Al-Lawati H. M., and Khamas, S. 2017, Low Profile Circularly Polarized Elliptical Dielectric Resonator Antenna, In: *Proceedings of the IEEE GCC Conference*. Bahrain, 2017.
12. Al Maashri A., Pathuri L., Awadalla M., and Ahmad A. 2017. Optimization of a customized hardware accelerator. In: *Proceedings of the Fourth International Conference on Numerical Analysis and Optimization Theory, Algorithms, Applications and Technology*. Oman, p.36, 2-5 January 2017.
13. AL-Mahrooqi, M., AL-Yaqoubi, M., AL-Ghafri, H., AL-Saadi, M., Soliman, H., and Elhaffar, A. 2017. Simulation of Distance Protection for Parallel Transmission Lines. In: *Proceedings of the 9th IEEE-GCC Conference and Exhibition*, Al-Manama, Bahrain, 8-11 May, 2017.
14. Al Shamli, Y., Hosseinzadeh, N., Yousef, N. and Al-Hinai, A. 2017, Design of a Fuzzy logic power system stabilizer for the main interconnected power system of oman. In: *Proceedings of the GCC CIGRE Power Conference*, Muscat 2017.
15. Al Shamli, Y., Albadi, M. H., Al-Battashi, M., Al-Maamari, A. 2017. Spinning Reserve and Regulations Requirements with high penetration of Photovoltaic Systems in MIS. In: *Proceedings of the GCC POWER 2017 Conference & Exhibition*. Muscat, Oman 16-18 October 2017.
16. Al-Washahi M., BaAlawi M., Al-Naamani A., and Al-Hinai A. 2017. Lines capability enhancements for long 33 KV RAEC Network. In: *Proceedings of the GCC Power Conference & Exhibition*, Oman, Muscat, 15-18 October 2017
17. Awadalla, M. 2017, Design of a Smart Traffic Information System. In: *Proceedings of IEEE 2017 International Conference on Intelligent Computing, Instrumentation and Control Technologies (ICICICT)*, India, July 2017
18. Awadalla, M., Ahmad, A., Al-Busaidi, S. and Rabie, M., 2017, Optimization of a Customized Hardware Accelerator", In: *Proceedings of the 4th International Conference on Numerical Analysis and Optimization – Theory, Algorithm, Application and Technology (NAOiii)*, Sultan Qaboos University, Muscat, Oman, January 2 - 5, 2017
19. Awadalla, M., Yousef, H., and Al-Hinai, A. 2017, Optimization Technique for Oil Well Flowing Bottom-Hole Pressure Prediction. In: *Proceedings of the 4th International Conference on Numerical Analysis and Optimization*, SQU, College of Science, Oman, January 2 - 5, 2017.
20. Bourdoucen, H., Al Maashri, A., Al-Kindy, M., Al-Zadjali, M., Qamar, A., and Venter, M. 2017. Development of QoS Monitoring System: Application Demonstrator. In: *Proceedings of Free and Open Source Software Conference (FOSSC-17)*. Muscat, 14-15 February 2017.
21. El-Naily, N., Saad, S. M., Elhaffar, A., Hussein, T., Mohamed, F. A. 2017. Mitigating the impact of Distributed Generator on medium Distribution Network by adaptive protection scheme. In: *Proceedings of the 8th International Renewable Energy Congress (IREC)*, Amman (Dead Sea), Jordan. 21-23 March 2017.

22. Hosseinzadeh, N., Al badi, M., 2017. Design, Implementation and Installation of a Hybrid Renewable Energy System at Sultan Qaboos University. In: *Proceedings of the 5th International Conference on Control, Instrumentation, and Automation (ICCIA)*. Shiraz, Iran, 21-23 November 2017.
23. Hosseinzadeh N., Ahsan R. and Shafiq M., 2017. Design and Implementation of Standalone Wind Energy Conversion System, In: *Proceedings of the GCC Power Conference, GCC-CIGRE*, Muscat, Oman, October 2017.
24. Jamil, T. and Mohammad, I. 2017. Development of an Android-based Student Information System Application. In: *Proceedings of the Future Technologies Conference*, Vancouver, British Columbia (Canada). 29-30 November 2017.
25. Masoud, M. I., AlYahmadi, M., Alsikiti, A., Al-Abri, H., Alsukaili, H. 2017. A Case Study for Five-Phase Induction Motor Design: Part I-Procedure. In: *Proceedings of the 9th IEEE GCC conference and exhibition*, Al-Manama, Al-Bahrain, May 2017
26. Masoud, M. I., AlYahmadi, M., Alsikiti, A., Al-Abri, H., Alsukaili, H. 2017. A Case Study for Five-Phase Induction Motor Design: Part II- Design Assessment and Performance Evaluation. In: *Proceedings of the 9th IEEE GCC conference and exhibition*, Al-Manama, Al-Bahrain, May 2017
27. Masoud, M. I., 2017. Writing a laboratory report for senior electrical engineering courses: Guidelines and recommendations. In: the *Proceedings of the IEEE Global Engineering Education Conference (EDUCON)*, Athens, Greece, 25 – 28 April 2017.
28. Malik, A., Albadi, M., Bani-Araba, A., Al-Jabri, M., Al-Ameri, A., Al-Shehhi, A., 2017. Development of Strategic Plans and Scenarios for the Smart Grid and their Impact - A Case Study of Muscat Interconnected System. In: *Proceedings of the 8th International Renewable Energy Congress (IREC 2017)*. Amman, Jordan, March 21-23, 2017.
29. Mnif, F. 2017, Predictor-based Stabilization for Chained Form systems with Input Time Delay, In: *Proceedings of 14th IEEE, International Conference on Systems, Signals and Devices*, Marrakech, 2017.
30. Myada Shadoul, M., Al Abri, R., Yousef, H. and Masoud, M. 2017. DC- DC Boost Converter Controller Design for PV Applications. In: *Proceedings of the 9th IEEE GCC Conference and Exhibition, Manama, Bahrain*, 8-11 May, 2017.
31. Nouri, M., Bekrar, A., Jemai, A., Trentesaux, D., Ammari, A.C., Niar, S., 2017. A new rescheduling heuristic for flexible job shop problem with machine disruption, In: *Proceedings of the 20th IFAC World Congress*, Toulouse, France, 9-14 July 2017
32. Pullayikodi S. K., Tarhuni N., Ahmad A. and Bait Shiginah F. 2017. OFDM Based Robust Digital Image Watermarking Resistant to Multipath Spatial Shifts. In: *Proceedings of the 9th IEEE-GCC Conference (IEEE#36861)*. Bahrain, pp 1-6, May 2017.

33. Saad, M. S., El-Naily, N., and Elhaffar, A. 2017. Experimental and EMTP Modeling of Numerical Transformer Protection for Enhancing Relay Transient Performance: A Case Study. In: *Proceedings of the 9th IEEE-GCC Conference and Exhibition*, Al-Manama, Bahrain, 8-11 May, 2017.
34. Saad, M. S., El-Naily, N., Wafi, J., Elhaffar, A., and Husseinazadeh, N. 2017. Adaptive Overcurrent Protection to Mitigate High Penetration of Distributed Generation in Weak Distribution Systems. In: *Proceedings of the 9th IEEE-GCC Conference and Exhibition*, Al-Manama, Bahrain, 8-11 May, 2017.
35. Saad, S. M., El Naily, N., Elhaffar, A., El-Arroudi, K., Mohamed, F. M. 2017, Applying adaptive protection scheme to mitigate the impact of distributed generator on existing distribution network. In: *Proceedings of the 8th International Renewable Energy Congress (IREC)*, Amman (Dead Sea), Jordan. 21-23 March 2017.
36. Saleem A., Mesbah M., Al Ratrout S. 2017. Nonlinear hammerstein model identification of amplified piezoelectric actuators (APAs): Experimental considerations. In: *Proceedings of the 4th International Conference on Control, Decision and Information Technologies (CoDIT)*, Barcelona, Spain, 5-7 April, 2017.
37. Shadoul, M., Al Abri, R., Yousef, H., Masoud, M. I., 2017. DC- DC Boost Converter Controller Design for PV Applications. In: the Proceedings of the 9th IEEE GCC conference and exhibition, Al-Manama, Al-Bahrain, May 2017
38. Soliman H.M. , Al Abri R. 2017, Saturated Digital Control for Regional Pole Placement, In: *Proceedings of the 9th IEEE-GCC Conference and Exhibition Manama*, Bahrain, May 2017
39. Soliman H.M., Al-Badi, M., Al Maamari A., Alkasbi A. 2017, Notch-filter design of power system stabilizer with application to Barka station II, In: *Proceedings of the GCC CIGRE GCC POWER 2017*, Muscat, OMAN, 16-18 Oct 2017.
40. Tahir, A., Elhaffar, A., Sudhoff, S., and Pekarek, S. 2017. MEC Based Scaling Laws for a Tape-Wound Transformer with Voltage Regulation and Core Loss included. In: *Proceedings of the 9th IEEE-GCC Conference and Exhibition*, Al-Manama, Bahrain, 8-11 May, 2017.
41. Trigui, A., Ali, M., Ammari, A.C., Savaria, Y., and Sawan, M., 2017. A 14.5 μ W generic Carrier Width demodulator for telemetry-based Medical Devices, In: *Proceedings of the 15th IEEE International New Circuits and Systems Conference (NEWCAS)*, Strasbourg, France, 25-28 June 2017

Books

1. Yousef, H. A. 2017. *Power System Load Frequency Control: Classical and Adaptive Fuzzy Approaches*. CRC Press, ISBN: 9 7814987 45574.

Book Chapters

1. Aboelela, M.A.S., and Soliman H.M. 2017, Towards a Robust Fractional Order PID Stabilizer for Electric Power Systems, *Fractional Order Control and Synchronization of Chaotic Systems*, Ahmad Taher Azar Sundarapandian Vaidyanathan, Adel Ouannas (Eds.): - Springer International Publishing AG ., pp 253-275.
2. Ghommam, J., and Mnif, F. 2017, Robust adaptive maneuvering control of an autonomous surface vessel in the presence of ocean currents and parametric model uncertainty, *Studies in Systems and Control*, Springer, vol. 79, pp.119-134.
3. Ghommam, J., Chemori, A, Mnif, F. 2017, Finite-time stabilization of underactuated mechanical systems in the presence of uncertainties: application to the cart–pole system. The Inverted Pendulum in Control Theory and Robotics: From Theory to new innovations, *Studies in Systems and Control*, IET, Chapter 8, pp 165, 2017.
4. Malik, A.S. 2017. Economics for a Sustainable Planet. In: Chen, W., Suzuki, T. and Lackner M. (Eds.). *Handbook of Climate Change Mitigation and Adaptation*, Springer, pp. 1-28.
5. Soliman H.M., Al-Abri R., and Al-Badi M. 2017, Design of robust digital pole placer for car active suspension with input constraint, *Noise and Vibration Control and System Identification*, INTECH International Publishers,

Technical Reports

1. Al Maashri, A. 2017. *Low-Power Hardware Architecture for Securing Wireless Sensor Networks*. Internal Research Grant Technical Report, Sultan Qaboos University, Sultanate of Oman.
2. Bourdoucen, H. 2017, Al Maashri, A., Saleem, A., and Beit-Suwailam, M. 2017. *Deployment of a Self-Adjusted Tethered Helium Balloon Antennas Prototype for Omantel's Mobile Sites – PHASE 2*. A report submitted to Omantel, Oman.
3. Masoud, M. I. 2017. *Five-phase ac-dc converter suitable for wind energy applications*. Internal Research Grant Technical Report, Sultan Qaboos University, Sultanate of Oman.



OTHER ACTIVITIES

Seminars

- Ahmad, A. 2017. Report Writing Tips and Skills, ECE Department - FYP, Feb. 12, 2017.
- Al-Badi, A.H., Bahdour, I. and Ahmad, A. 2017. Seminar and Panel Discussion - Advising for Students' Success, Academic Advising Seminar for Faculty Members, College of Engineering, Sultan Qaboos University, Sultanate of Oman, 16 March 2017.
- Bourdoucen, H., Bahdour, I. and Ahmad, A. 2017. Seminar and Panel Discussion - Advising for Students' Success, Academic Advising Seminar for Faculty Members, College of Engineering, Sultan Qaboos University, Sultanate of Oman, 9 November 2017.
- Ammari, A.C., Bahdour, I. and Triki, C. 2017. Seminar and Panel Discussion - Advising for Students' Success, Academic Advising Seminar for Students, College of Engineering, Sultan Qaboos University, Sultanate of Oman, 11 December 2017.

Cooperation with Local and Foreign Organizations

- Abdulghani, A. 2016. Collaborated with Al Musanna College of Technology, Ministry of Manpower, in Knowledge and Experience Sharing Related to Latest Engineering Education and Information Technology.
- Al Maashri, A. 2016. Collaborated with Sas Virtual Reality Center, Information Technology Authority (ITA) in Running Workshops, Research, and Student Projects Related to Virtual Reality and Augmented Reality Applications.
- Jamil, T., visited University of Manchester (UK) and University of Heidelberg (Germany) on invitation to visit SpiNNaker and BrainScale labs on October 30, 2017 and November 3, 2017 respectively.
- Metwally, I. and Al-Badi, M. 2016. Collaborated with many leading national electrical power companies in Oman, including Rural Areas, Muscat, Mazoon, Majan and Oman Transmission Electricity Companies in organizing several workshops related to establishing a sustainable and unique projects in the electrical power and energy area.

Short Courses and Workshops

- Dr. Hassan Al-Lawati delivered a lecture on Electromagnetic Spectrum in cooperation with the Command and Staff College on the 21st of December 2017.
- Dr. Joseph Jervase and Dr. Mohammad M. Bait-Suwailam, Fundamentals of VHF/UHF Radio Communication Systems. A short course delivered to Oman Royal Air Force, Sultan Qaboos University, 21 – 25 May, 2017.
- Dr. Mohammad M. Bait-Suwailam delivered a Seminar on Electricity and Electronics to Military Forces in Oman, Sultan Qaboos University, 19 December 2017.
- Dr. Naser Tarhuni delivered the 31st Science and Technology Training Course, Sultan Qaboos University, Center for Community Services & Continuing Education, 17-21 Dec. 2017

Invited Talks

- Dr. Ahmed Al Maashri (Keynote / Invited Speech), QoS Monitoring System for Mobile Networks in Oman, TRC's 4th Annual Research Forum, December 10th, 2017, Sheraton, Ruwi, Oman.
- Dr. Ahmed Al Maashri (Keynote / Invited Speech), Augmented Reality, 7th Technical Forum, February 20th, 2017, SQU, Oman.

- Dr. Ahmed Al Maashri (Keynote / Invited Speech), the Long and Inevitable Road to FOSS Deployment in Oman: Opportunities, Challenges, and Caveats, 3rd Free and Open Source Conference, February 14th, 2017, SQU, Oman.
- Dr. Afaq Ahmad (Keynote / Invited Speech), Challenges for Test and Fault Tolerance Due to Convergence of Electronics, Semiconductor Systems and Computing. *Int'l Conference on Infocom Technologies and Unmanned Systems (ICTUS'2017) - (Trends and Future Directions) IEEE Conference Record Number 42058.* Int'l Academic City of UAE, Dubai. December 18-20, 2017
- Dr. Mohammad Al-Badi, Renewable Energy in Electricity Sector - Status and Future Perspectives, 1st Environmental Symposium on Renewable Energy, December 28, 2017, Ministry of Environment and Claimant Affairs, Muscat, Oman.
- Dr. Mohammad Al-Badi, Electricity Sector in Oman – Status and Furfure Perspectives, 26 September 2017, Joint Workshop between Oman and Korea on Energy Infrastructure Cooperation. Intercontinental Hotel, Muscat, Oman.
- Dr. Mohammad M. Bait-Suwailam, IEEE and its Benefits to Non-Engineering Students, Muscat College, Muscat, February 2017.
- Dr. Naser Tarhuni, 5G Mobile Systems: Seeking more capacity vision and challenges, Emerging Trends in Telecommunication Technologies and Services- Benefits & Scope in Oman, Caledonian College of Engineering, 26th April 2017.
- Dr. Naser Tarhuni, Capacity-Enhancing Technologies for 5G Mobile Systems, Presented to Al-Madar Mobile Company Engineers, Libya, 7th August 2017.
- Dr. Naser Tarhuni, Overview of Optical Communication, Presented to Al-Madar Mobile Company Engineers, Libya, 9th August 2017.

Awards

Staff:

- Prof. Afaq Ahmed, Appreciation, gratitude and Memento from organizers of Int'l Conference on Infocom Technologies and. Unmanned Systems (ICTUS'2017). (Trends and Future Directions). IEEE Conference Record Number 42058, held during December 18-20, 2017 at Amity University Dubai Campus Dubai International Academic City, Dubai, UAE.
- Dr. Ashraf Saleem, Distinguished Teaching Excellence Award, College of Engineering, University Day, Sultan Qaboos University, 2 May 2017.



- Dr. Mahmood I. Masoud, Best paper award. IEEE Global Engineering Education Conference (EDUCON), Athens, Greece. April 2017.
- Dr. Mohammad M. Bait-Suwailam, National Research Award, *Best Paper Award from The Research Council*, Sultanate of Oman, 10 December 2017.
- Dr. Mohammad M. Bait-Suwailam, Certificate of Appreciation from the IEEE for *Outstanding Achievement in Member Recruitment* for the IEEE Oman Section during the 2017 membership years.
- Dr. Mohammad M. Bait-Suwailam, Abdulaziz Al-Balushi, Jaafar Al-Dawood, Mohamed Al-Kindi, and Ammar Al-Mahrami, "Multi-Element Mobile Wireless charging System and Method," *US Patent*, 2016.

Students:

- Supervisor: Dr. Amer Al-Hinai, Students: Ahmed Al-Mayahi, Abdallah Akintola, Enas Elser Khamis, Afrah Al-Shkeili, Malik Al-Wahaibi: **First Place** "The Future of Power" at the Inter-College Environmental Public Speaking Competition (ESO, 2017, Muscat). Title of the project: "Agro-Waste Energy: A Sustainable Future Energy for Oman".
- Supervisor: Dr. Ashraf Saleem, Students: Qasim Al Yafei, Murshid Al Riyami, Zahran Al Nabhani: **First Place** at the Oman Robotics Challenge, April, 2017, Oman.
- Supervisor: Ashraf Saleem, Students: Qasim Al Yafei, Bader Al Sawwafi, Mohammad Al Hinai, Murshid Al Riyami, Zahran Al Nabhani: **Second Place** at the 2nd GCC Robotics Challenge, April, 2017, Qatar.
- Supervisor: Ashraf Saleem, Students: Safa Al Meqbali, Hamdah Al Belushi, Hajar Al Alawi: **Third Place** at the 9th engineering students gathering April 2017, Sultan Qaboos University, Oman. Title of the project: "Automatic Expiry Date Inspection System for food products".

Students' Activities

- 7th Engineering Students Exhibition, (Sultan Qaboos University 23 April 2017)
- Second Mechanical Engineering Alumni Gathering

Coordination of activities with students

- Dr. Mohammad M. Bait-Suwailam served as a focal person, assigned by College of Engineering, to coordinate with Telecommunications Regulatory Authority of Oman (TRA) for providing training to ECE students at SQU on how to conduct RF radiation measurements from mobile telecom towers, 23 November – 18 December, 2017.



Mechanical and Industrial Engineering



EXECUTIVE SUMMARY

The Department of Mechanical and Industrial Engineering was established in 1986 since the opening of the University. The Department offers BSc in Mechanical Engineering and Industrial Engineering. It also offers MSc and PhD in both majors as well. The Department recently celebrated its 28th batch and its Alumni holds contributed in the growth and development of our beloved Oman. The Department has gradually grow in its capabilities in research, teaching, and community service. In 2017 alone, our faculty has won 13 awards distributed among best paper awards with local and international recognitions. The Department successfully attracted grants and various consultancies, which results in improving its research visibilities. There were 46 papers published in refereed journals and 35 papers published in international conferences in 2017.

In addition, our faculty members received various invitations to attend the conferences and symposiums both locally and globally. Indeed, there were 22 invitations to attend and give a speech on several mechanical and industrial engineering aspects. The Department also in 2017 provides 40 seminars, workshops and short courses. These seminars and workshops were attended by different entities such as students, public, and professionals.

Furthermore, the Department is committed to provide its students with a combination of theory and practical experiences. Therefore, many courses are offered, which include laboratory experiments and design projects. These experiments for courses and research are performed in a state-of-the-art laboratories. The Department believes in multidisciplinary teaching and there are several focus groups including Industrial Engineering, Thermo-fluids, Dynamics and Control, Applied Mechanics, and Material and Manufacturing. The department is leading in entrepreneurship and innovation theme and offered relevant courses since 2003 to enhance our students knowledge with entrepreneurial skills.

Finally, the Department has a good relationship with its Alumni and the outside industries. Some of our Alumni serve as our Industrial Advisory Board Members. The Department also receive feedback from the industry to improve its degree plans and to increase its visibility. The Mechanical and Industrial Engineering Department will continue to provide the Omani Community with best graduates, research and community services.

Dr. Mahmood Al-Kindi
HoD, Department of Mechanical and Industrial Engineering, College of Engineering

- *Best engineering graduates with entrepreneurial skills for 21st century's challenges*
- *Outstanding research capabilities and innovations*
- *Excellent community services*



SUMMARY

Table D1: Summary

	2016	2017
Faculty	32	30
Support staff	25	26
Total	57	56
On-study leave	1	1
Undergraduate Program		
Enrollment	345	343
Courses offered	107	56
Graduates	123	192
Graduate Program		
Enrollment	17	32
Courses offered	14	8
Graduates	5	5
Research		
Grants	14	5
Publications		
Refereed Journals	38	46
Conference Proceedings	66	35

DEPARTMENTAL PROFILE



Dr. Mahmood Al-Kindi



Dr. Amur Al-Yahmedi



Prof. Sabah Al-Sulaiman

Dr. Mahmood Al-Kindi

Assistant Professor, , Head of the Department

Research Interests: Risk Analysis, Six Sigma , Decision Making under Uncertainties, and Production Planning

Dr. Amur Al-Yahmedi

Associate Professor, Assistant Head of the Department

Research Interests: Modeling and Simulation, Multibody Dynamics, and Robotics and Automation

Dr. Sabah Ahmed Abdul-Wahab Al-Sulaiman

Professor

Research Interests: Monitoring of Pollutants in the Atmosphere, Outdoor Air Quality, , Modelling of the Dispersion of Air Pollution in the Atmosphere, Neural Network, Renewable Energy



Prof. Tasneem Pervez



Dr. Nabeel Z. Al-Rawahi



Prof. Jamil Abdo



Dr. Khalid AlZebdeh

Dr. Tasneem Pervez

Professor

Research Interests: Computational Modeling, Multiscale Modeling, Composite Materials, Applied Mechanics, Finite Element Analysis, Expandable Tubular and Swelling Elastomers in Oil Well Drilling and Delivery, Engineering Education

Dr. Nabeel Z. Al-Rawahi

Associate Professor

Research Interests: Fluid Mechanics, Computational Fluid Dynamics, Multiphase Flow, Water Desalination

Dr. Jamil Abdo

Professor

Research Interests: Mechanical Design, Tribology, Solid Mechanics and Materials Applications

Dr. Khalid AlZebdeh

Associate Professor

Research Interests: Computational Micromechanics, Nano-Composites, Project Management and Economics





Dr. Sayyad Zahid

Dr. Chefi Triki

Dr. Abdullah Al-Shabibi

Dr. Mohammad Khadem

Dr. Sayyad Zahid Qamar

Associate Professor

Research Interests: Applied Materials and Manufacturing, Engineering Design, Failure Analysis and Reliability

Dr. Chefi Triki

Associate Professor

Research Interests: Stochastic Optimization, Logistics and Supply Chain Management, Resources Optimization

Dr. Abdullah Al-Shabibi

Associate Professor

Research Interests: Applied Mechanics, Finite Element Modeling of Engineering Problems, Modeling of Contact Problems, Thermoelastic Instability

Dr. Mohammad Khadem

Assistant Professor

Research Interests: Lean Manufacturing, Simulation and Optimization, Decision Support System, Integrating between E-manufacturing and FMS, Logistics and Supply Chain, Production Planning and Control, Human Factors, Industrial Safety etc.



Dr. Nasser Al-Azri



Dr. Riadh Zaier



Dr. Majid Al-Maharbi



Dr. Sujan Piya

Dr. Nasser Al-Azri

Assistant Professor

Research Interests: Thermodynamic Modeling and Psychometrics, Process Integration, Engineering Mathematics and Numerical Analysis, Mathematical Optimization

Dr. Riadh Zaier

Assistant Professor

Research Interests: Mechatronics Systems Design and Nonlinear Control, Robotics

Dr. Majid Al-Maharbi

Assistant Professor

Research Interests: Materials Science and Engineering, Corrosion, Severe Plastic Deformation of Metallic Materials, Crystallographic Texture and Microstructure Engineering

Dr. Sujan Piya

Assistant Professor

Research Interests: Production Planning and Control, Supply Chain Management, Operations Management for Make-to-Order System



Dr. Ramanathan

Dr. Nasr Al-Hinai

Dr. Afzal Husain

Dr. Issam Bahadur

Dr. Ramanathan Arunachalam

Assistant Professor

Research Interests: Materials, Manufacturing and Product Design

Dr. Nasr Al-Hinai

Assistant Professor

Research Interests: Operations Research, Production Scheduling Using Heuristic and Metaheuristic Approaches, Production Planning and Control, Product Design and Development

Dr. Afzal Husain

Assistant Professor

Research Interests: Computational Fluid Engineering, Micro-scale Heat Transfer, Electronics Cooling, Enhanced Heat Transfer Techniques and Design Optimization

Dr. Issam Bahadur

Assistant Professor

Research Interests: Micro/Nano-Electro-Mechanical Systems, Biomedical Instrumentation, Industrial Automation, Smart Materials and Vibration



Dr. Mojtaba Ghodsi



Dr. Khurshid Alam



Dr. Edris Masoud Hassan



Dr. Ahm Shamsuzzoha

Dr. Mojtaba Ghodsi

Assistant Professor

Research Interests: Mechatronics, Non-Destructive Evaluation, Smart Materials and Structures, Actuators, Motors and Transducers, Renewable Energy

Dr. Khurshid Alam

Assistant Professor

Research Interests: Orthopaedics, Bone Mechanics, FE Modeling, Material Characterization, Material Modeling, Fracture Mechanics

Dr. Edris Hassan

Assistant Professor

Research Interests: Multi-scale Micromechanical Modeling, Actuation and Piezomagnetic Effective Properties of Composites and Smart Structures, Grid-reinforced Smart Composite Structures, Nanostructured Polymers and Nanocomposites

Dr. Ahm Shamsuzzoha

Assistant Professor

Research Interests: Product Design, Business Networking, Supply Chain Management, Simulation Modelling, Project Management, Production Planning and Control



Dr. Abdullah Al-Janabi

Dr. Musaab Zarog

Dr. Mohammadzaheri

Dr. Salman Ahmed

Dr. Abdullah Al-Janabi

Assistant Professor

Research Interests: Renewable Energy Technologies, Energy and Environment

Dr. Musaab Zarog

Assistant Professor

Research Interests: MEMS, Mechatronics

Dr. Morteza Mohammadzaheri

Assistant Professor

Research Interest: System Dynamics and Control

Dr. Salman Ahmed

Assistant Professor

Research Interests: Heat and Mass Transfer



Dr. Emad Summad

Mohamed Al-Lawati

Faisal Al-Khatiri

Mohammad Al-Hadhrami

Dr. Emad Summad

Assistant Professor

Research Interest: Innovation and Entrepreneurship

Dr. Nasra Al- Maskari

Assistant Professor

Research Interest: Mechanical Engineering Design

Mohamed Al-Lawati

Lecturer

Research Interest: Mechatronics Engineering

Faisal Al-Khatiri

Department Technical Superintendent, Lab Supervisor

Thermodynamics Lab, A/C and Refrigeration Lab

Mohammad Al-Hadhrami

Chief Engineer, Acting Workshop Superintendent

Solid Mechanics, Ergonomics, Manufacturing, Workshops 1 and 2



Saeed Al-Mughairy

Mohammad Al-Hadhrani

Nasser Al-Azizi

Abdullah Al-Omrani

Saeed Al-Mughairy

Senior Engineer

Materials Lab, Al-Hail Desalination Lab

Mohammad Al-Hadhrani

Lab Engineer

Fluid Mechanics Lab

Nasser Al-Azizi

Lab Engineer

Fluid Mechanics Lab

Abdullah Al-Omrani

Lab Engineer

CIM Lab



Mahmood Al-Riyami

Mahmood Al-Riyami

Lab Engineer

Automatic Control Lab

Said Al-Qarni

Engineer A

Thermodynamics Lab

Abdulaziz Al-Harasi

Senior Support Engineer

Workshop

Hadid Subeit Al-Alawi

Chief Engineer B

Workshop



Said Al-Qarni



Abdulaziz Al-Harasi



Hadid Al-Alawi



Ahmed Sayed Faiz

Mohammad Al-Salmi

Mahfoudh Al-Sharji

Yahia Al-Agbari

Ahmed Sayed Faiz
Assistant Mechanic

Workshop

Mohammad Al-Salmi
Support Engineer

Workshop

Mahfoudh Al-Sharji
Technician

Workshop

Yahia Al-Agbari
Technician

Workshop



Marshal Miranda

Hamood Al-Mahrizi

Saleh Al-Malki

Sultan Al-Hammadi

Marshal Miranda

Technician

Workshop

Hamood Al-Mahrizi

Senior Technician A

Workshop

Saleh Al-Malki

Technician

Workshop

Sultan Salim Ali Al-Hammadi

Technician

Workshop





Fawzi Al-Maashri

Basma Al-Farsi

Fawzi Al-Maashri

Technician

Workshop

Basma Al-Farsi

Coordinator

Nour Al-Rasbi

Lab Engineer

Nusiba Al-Kharusi

Lab Engineer

Iman Al-Harhi

Administrative officer



DEPARTMENTAL COMMITTEES

Table D2: Departmental Committees

Department Board	Dr. Mahmood Al-Kindi Dr. Amur Al-Yahmedi Dr. Emad Summad All academic staff Eng. Mohamed Al-Hadhrami Mr. Faisal Al-Khatiri	Chair ME program coordinator Secretary Members Invited Member Invited Member
Department Accreditation Committee (DAC)	Dr. Amur Al-Yahmedi Dr. Ramanathan Arun Dr. Sujan Piya Prof. Tasneem Pervez Dr. Nabeel Al-Rawahi Dr. Mohammed Khadem Dr. Majid Al-Moharbi Dr. Khalid Alzebedeh Dr. Nasr Al-Hinai Dr. Riadh Zaier Dr. Zahid Qamar	Chair ABET ME Coordinator ABET IE Coordinator Advisor Advisor Member Member Member Member Member Member

Department Curriculum and Timetabling Committee	Dr. Mohammad Khadem Dr. Abdullah Al-Janabi Dr. Amur Al-Yahmedi Dr. Edris Hassan Dr. Majid Al-Maharbi	IE Coordinator, Chair ME Coordinator, Thermofluids FGC Dynamics and Control FGC Applied Mechanics FGC Materials and Manufacturing FGC
Final Year Project (FYP) Coordinators	Dr. Farooq Al Jahwari Dr. Afzal Husain Dr. Khalid Alzebedeh	ME FYP I Coordinator ME FYP II Coordinator, Chair IE FYP Coordinator
Department Postgraduate Studies and Research (DPGSR) Committee	Dr. Majid Al-Moharbi Dr. Nasr Al-Hinai Prof. Sabah AlSulaiman Dr. Khurshid Alam	Chair IE PGR Coordinator ME PGR Coordinator Member
Department Publications/ Web Committee	Dr. Mojtaba Ghodsi Dr. Morteza Zaheri Dr. Ahm Shamsuzzoha	Chair ME Coordinator IE Coordinator
Department Recruitment Committee	Dr. Abdullah Al-Shabibi Dr. Mahmood Al-Kindi Dr. Zahid Qamar Dr. Nasr Al-Hinai Dr. Nabeel Al-Rawahi	Chair Member Member Member Member
Department Lab/HSE Committee	Dr. Zahid Qamar Dr. Emad Summad Dr. Khurshid Alam Dr. Musaab Abdalla Dr. Ahm Shamsuzzoha Eng. Mohamed Al-Hadhrani Mr. Faisal Al-Khatri	Chair Member Member Member Member Member Member
Industrial Advisory Board (IAB)	Dr. Mahmood Al-Kindi Dr. Edris Hassan Prof. Tasneem Pervez Dr. Abdullah Al-Shabibi Dr. Nabeel Al-Rawahi Dr. Nasr Al-Hinai Dr. Emad Summad	Chair Coordinator Member Member Member Member Member
Student Societies Advisors	Dr. Chefi Triki Dr. Farooq Al Jahwari	IES Advisor SME Advisor

Student-Staff Liaison Committees (ME and IE)	Dr. Mahmood Al-Kindi Dr. Abdullah Al-Janabi Dr. Mohammed Khadem Dr. Amur Al-Yahmedi 2 Students per cohort per program	Chair ME time table Coordinator IE time table Coordinator Member Members
Social Activities Committee	Dr. Abdullah Al-Janabi Dr. Nasr Al-Hinai	Chair Member
Department Strategic Planning Committee	Dr. Mahmood Al-Kindi Dr. Zahid Qamar Prof. Tasneem Pervez Dr. Nabeel Al-Rawahi Dr. Chefi Triki	Chair Coordinator Member Member Member
Industrial Training and Alumni Committee	Dr. Khurshid Alam Dr. Nasra Al Maskari Dr. Salman Ahmed	Chair Member Member
Textbook and Library Committee	Dr. Edris Hassan Dr. Khalid Alzebdeh	ME Coordinator, Chair IE Coordinator
Seminar Committee	Dr. Mojtaba Ghodsi Dr. Morteza Zaheri Dr. Chefi Triki	Chair Member Member
Academic Advising Committee	Dr. Amur Al-Yahmedi Dr. Khalid AlZebdeh Dr. Abdullah Al-Shabibi Dr. Chefi Triki	Chair Member Member Member
Peer Review of Teaching Managing Committee	Dr. Afzal Husain Dr. Khalid Alzebdeh Dr. Morteza Zaheri	Chair Member Member
Students Disciplinary Committee	Dr. Chefi Triki Dr. Khurshid Alam	Chair Member
Department Outreach Committee	Dr. Mahmood Al-Kindi Prof. Sabah AlSulaiman Dr. Nabeel Al-Rawahi Dr. Emad Summad	Chair Member Member Member



UNDERGRADUATE STUDIES

Courses

Table D3: Courses Offered in Spring 2017

Code	Title	Instructor(s)
MEIE2102	Statics	Dr. Nasra Al Maskari
PNGE2102	Basic Mechanics	Dr. Farooq Al-Jahwari
ENGR2216	Fortran Programming	Prof. Sabah Al-Sulaiman
MEIE2129	Basic Mechanics	Dr. Riadh Zaier
MEIE2181	WorkShop II	Mr. Mohammad Al-Hadrami
MEIE2289	Fundamentals of Innovation and Entrepreneurship	Dr. Emad Summad
MEIE3102	Solid Mechanics	Dr. Abdullah Al-Shabibi
MEIE3107	Drawing and Computer Graphics	Dr. Khurshid Alam
MEIE3109	Product Design	Dr. Arunachalam Ramanathan
MEIE3121	Dynamics	Dr. Musaab Zarog
MEIE3122	Machine Dynamics	Dr. Mojtaba Ghodsi
MEIE3122	Machine Dynamics	Dr. Abdullah Ozer

Code	Title	Instructor(s)
MEIE3142	Thermodynamics II	Dr. Abdullah Al-Janabi
MEIE3142	Thermodynamics II	Dr. Nasser Al-Azri
MEIE3159	Thermofluids	Dr. Nabeel Al-Rawahi
MEIE3161	Materials Science	Dr. Zahid Qamar
MEIE3181	Electromechanical Systems	Dr. Issam Bait Bahadur
MEIE3181	Electromechanical Systems	Dr. Mojtaba Ghodsi
MCTE3230	Properties and Strength of Materials	Dr. Farooq Al-Jahwari
MEIE3271	Methods of Operations Research	Dr. Chefi Triki
MEIE3281	Probability and Statistics for Engineers	Dr. Sujan Piya
MEIE4102	Machine Design I	Dr. Edris Hassan
MEIE4102	Machine Design I	Prof. Tasneem Pervez
MEIE4122	Engineering System and Control	Dr. Morteza Mohammadzaheri
MEIE4141	Fluid Mechanics	Dr. Afzal Husain
MEIE4144	Heat Transfer	Dr. Salman Ahmed
MCTE4150	Modeling and Simulation	Dr. Amur Al-Yahmedi
MEIE4161	Engineering Materials	Dr. Majid Al-Maharbi
MEIE4183	Numerical Methods for Engineers	Prof. Sabah Al-Sulaiman
MEIE4191	ME Seminar	Dr. Farooq Al-Jahwari
MEIE4201	Ergonomics and Safety	Dr. Mohammad Khadem
MEIE4262	Manufacturing Processes	Dr. Edris Hassan
MEIE4272	Simulation Models	Dr. Mohammad Khadem
MEIE4275	Facilities Design and Logistics	Dr. Ibrahim Garbie
MEIE4283	Engineering Ethics	Dr. Khalid AlZebdeh
MEIE4285	Engineering Economics	Dr. Khalid AlZebdeh
MEIE5106	Pressure Vessel & Piping System Design	Prof. Tasneem Pervez
MEIE5121	Modelling and Simulation of Engineering Systems	Dr. Amur Al-Yahmedi
MCTE5142	Robotics	Dr. Riadh Zaier
MEIE5145	Design of Thermal Systems	Dr. Afzal Husain
MEIE5148	Desalination	Dr. Sulaiman Al-Obeidani
MEIE5149	Capstone Design	Dr. Nasra Al Maskari
MEIE5162	Corrosion Engineering	Dr. Majid Al-Maharbi

Code	Title	Instructor(s)
MEIE5224	Six Sigma Methodology	Dr. Mahmood Al-Kindi
MEIE5233	Maintenance and Reliability Engineering	Dr. Ahm Shamsuzzoha
MEIE5262	Industrial System Design	Dr. Ibrahim Garbie
MEIE5273	Product Design and Manufacturing	Dr. Nasr Al-Hinai
MEIE5286	Supply Chain Management	Dr. Ahm Shamsuzzoha
MEIE5287	Project Management	Dr. Nasr Al-Hinai
MEIE5288	Innovation and Entrepreneurship	Dr. Emad Summad
MEIE5295	Seminar	Dr. Farooq Al-Jahwar

Table D4: Courses Offered in Fall 2017

Code	Title	Instructor(s)
MEIE2102	Statics	Dr. Abdullah Al-Shabibi
MEIE2129	Basic Mechanics	Dr. Farooq Al-Jahwari
MEIE2181	WorkShop II	Mr. Mohammad Al-Hadrami
MEIE3102	Solid Mechanics	Prof. Tasneem Pervez
MEIE3107	Drawing and Computer Graphics	Dr. Ramanathan Arunachalam
MEIE3107	Drawing and Computer Graphics	Dr. Khurshid Alam
MEIE3109	Product Design	Dr. Nasra Al Maskari
MEIE3121	Dynamics	Dr. Amur Al-Yahmedi
MEIE3122	Machine Dynamics	Dr. Musaab Zarog
MEIE3141	Thermodynamics I	Dr. Nabeel Al-Rawahi
MEIE3161	Materials Science	Dr. Zahid Qamar
MEIE3181	Electromechanical Systems	Dr. Issam Bahadur
MEIE3269	Mathematics of Linear Programming	Dr. Chefi Triki
MEIE3281	Probability and Statistics for Engineers	Dr. Khalid AlZebdeh
MEIE3284	Industrial Information System Design	Dr. Mohammad Khadem
MEIE3292	Work System Analysis and Design	Dr. Mohammad Khadem
MEIE4101	Computer Aided Machine Design	Dr. Edris Hassan
MEIE4102	Machine Design I	Dr. Edris Hassan
MEIE4122	Engineering System and Control	Dr. Morteza Mohammadzaheri
MEIE4125	Instrumentation and Measurement	Dr. Mojtaba Ghodsi

Code	Title	Instructor(s)
MEIE4141	Fluid Mechanics	Dr. Abdullah Al-Janabi
MEIE4144	Heat Transfer	Dr. Salman Ahmed
MCTE4150	Modeling and Simulation	Dr. Amur Al-Yahmedi
MEIE4161	Engineering Materials	Dr. Majid Al-Maharbi
MEIE4183	Numerical Methods for Engineers	Prof. Sabah Al-Sulaiman
MEIE4191	ME Seminar	Dr. Morteza Mohammadzaheri
MEIE4201	Ergonomics and Safety	Dr. Mohammad Khadem
MEIE4218	Advanced Probability and Statistics	Dr. Mahmood Al-Kindi
MEIE4222	Production Planning and Control	Dr. Nasr Al-Hinai
MEIE4224	Quality Engineering and Six Sigma	Dr. Sujan Piya
MCTE4230	Thermal Sciences	Dr. Salman Ahmed
MEIE4262	Manufacturing Processes	Dr. Zahid Qamar
MEIE4262	Manufacturing Processes	Dr. Edris Masoud Hassan
MEIE4265	Stochastic Optimization	Dr. Chefi Triki
MEIE4285	Engineering Economics	Dr. Ahm Shamsuzzoha
MEIE4298	Seminar I	Dr. Morteza Mohammadzaheri
MEIE5127	Analysis and Design of Control Systems	Dr. Riadh Zaier
MEIE5145	Design of Thermal Systems	Dr. Afzal Husain
MEIE5151	Turbomachinery	Dr. Afzal Husain
MEIE5162	Corrosion Engineering	Dr. Majid Al Maharbi
MEIE5166	Introduction to Nanotechnology	Dr. Arunachalam Ramanathan
MEIE5193	FYP I	Dr. Farooq Al-Jahwari
MEIE5198	Seminar II	Dr. Morteza Mohammadzaheri
MEIE5222	Introduction to Health Care Engineering	Dr. Sujan Piya
MCTE5255	Mechatronics System Design	Dr. Riadh Zaier
MEIE5262	Industrial System Design	Dr. Mohammad Khadem
MEIE5267	Automation and CIM	Dr. Riadh Zaier
MEIE5275	Automated Industrial Systems	Dr. Riadh Zaier
MEIE5287	Project Management	Dr. Nasr Al-Hinai
MEIE5288	Innovation and Entrepreneurship	Dr. Emad Summad
MEIE5291	FYP I	Dr. Khalid AlZebdeh
MEIE5292	FYP II	Dr. Khalid AlZebdeh
MEIE5295	Seminar	Dr. Morteza Mohammadzaheri



POSTGRADUATE STUDIES

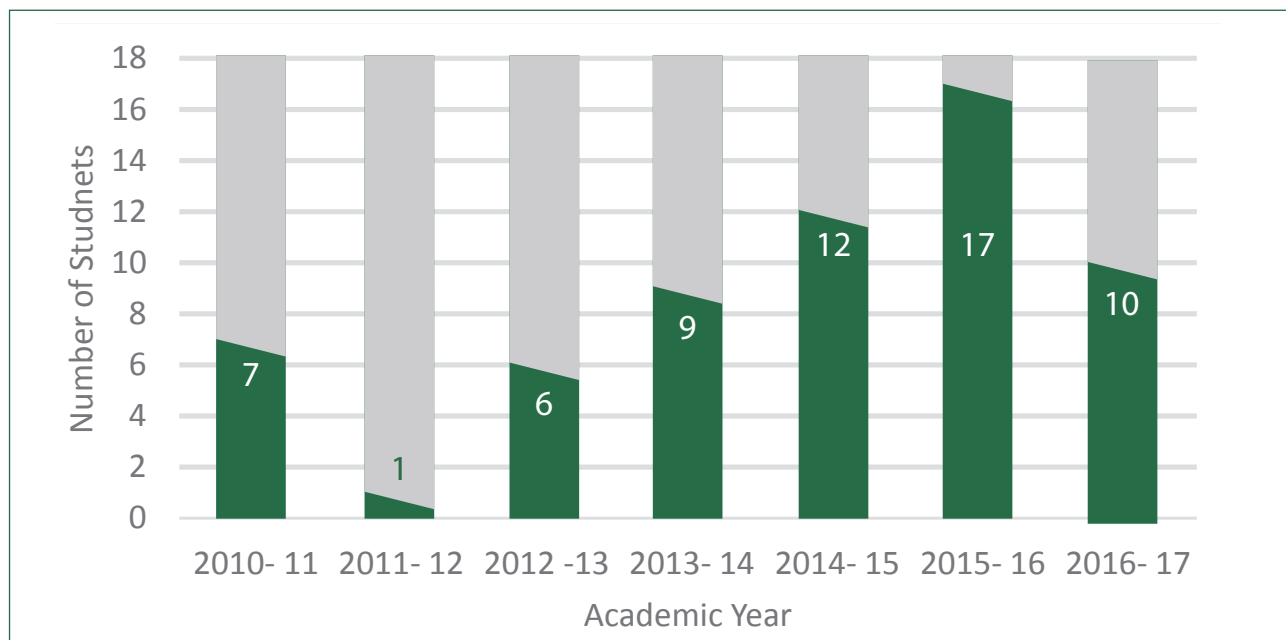


Figure D1: Graduate Students' Enrollment for the Past Seven Years (2010 - 2017).

Courses

Table D5: Postgraduate Courses Offered in Year 2017

Semester	Code	Title	Instructor(s)
Spring 2017	MEIE6014	Desalination and Water Treatment. Technology	Dr. Suleiman Al-Obeidani
	MEIE6112	Design and Analysis of Experiments	Prof. Jamil Abdo
Fall 2017	MEIE6001	Project Engineering and Management	Dr. Nassr Al Hini
	MEIE6004	Advanced Numerical Methods	Prof. Sabah Al-Sulaiman
	MEIE6166	Nanomaterials	Dr. Ramanathan Arunachalam
	MEIE6222	Healthcare Management	Dr. Sujan Piya
	MEIE7001	Master Thesis	Dr. Majid Al Maharbi
	MEIE8001	PhD Thesis	Dr. Majid Al Maharbi

Postgraduate Students' Projects

Table D6: Postgraduate Students' Projects in Year 2017

No	Name	Project Title
1	Omer El Tahir Mohamed El Dirdiry (PhD)	Computational Synthesis of Biomechanical Leg and Simulator Design for Foot-Drop Problem
2	Mahmood M.A. Nassar(PhD)	Development of a new polymer bio composite
3	Hani Al-Rawahi (MS)	Assessment of Pipelines with Single &Multiple Corrosion Defects – Code and Numerical Solution
4	Sarra Abbasher Mahmood (MS)	Optimization Based Prediction of Human Gait
5	Josiah Cherian Chekotu (MS)	Analysis of Product and Tooling Defects in Extrusion
6	Moosa Al-Rashdi (MS)	Study of Utilization the Heat Pump in Water Cooled Chiller: Potential and Challenges
7	Ibrahim Mohammad Said Al-Fori(MS)	Development and Characterization of a Hybrid Aluminum Metal Matrix Composite through Squeeze Casting Process





RESEARCH

Grants and Contracts

Table D7: : New Grants, Contracts and Consultancies by Faculty Members in Year 2017

Research Title	Principal Investigator	Budget (OMR)	Funded By
The Potential of Bio/Petro Polymeric Based Functionally Graded Porous Composites for Structural Applications	Dr. Farooq AlJahwari	5,500	SQU
Minimization of Energy Maintenance Cost for an Educational Facility	Dr. Mahmood Al-Kindi	6,470	SQU
Structural Vibration Control Using Magnetostrictive Actuators	Dr. Mojtaba Ghodsi	7,350	SQU
Development and Characterization of Sustainable Novel Aluminium Metal Matrix Composite for Industrial Applications in the GCC region.	Dr. Ramanathan Arunachalam	15000	SQU-UAEU
Utilization of Electrical Vehicle in Muscat-Oman: Potential and Challenges	Dr. Abdullah AlJAnabi	5300	SQU

Publications

Refereed Journal Papers

1. Abdo, J., Hassan, E., Al-Shabibia, A. and Kwak, J. 2017. Design of a Testing Facility for Investigation of Drill Pipes Fatigue Failure. *The Journal of Engineering Research*, 14(2):1-10.
2. Abdul-Wahab, S.A., En, S.C.F., Jaffeer, H., Elkamel, A., Yetilmezsoy, K. and Ahmadi, L. 2017. Modelling the Dispersion of Benzene Emissions from a Proposed Ethanol Producing Facility in Farewell-Oshawa of Toronto, Canada. *Global Nest Journal*, 19(2):257-268.
3. Abdul-Wahab, S., Al-Rawas, G., Ali, S., Fadlallah, S. and Al-Dhamri, H. 2017. Atmospheric Dispersion Modeling of CO₂ Emissions from a Cement Plant's Sources. *Clean Technologies and Environmental Policy*, 19(6):1621-1638.
4. Abdul-Wahab, S., Al-Rawas, G., Charabi, Y., Al-Wardy, M. and Fadlallah, S. 2017. A Study to Investigate the Key Sources of Odours in Al-Multaqa Village, Sultanate of Oman. *Environmental Forensics*, 18(1):15-35.
5. Alam, K., Muhammad, R., Shamsuzzoha, A., Al-Yahmedi, A. and Ahmed, N. 2017. Quantitative Analysis of Force And Torque in Bone Drilling. *The Journal of Engineering Research*, 14(1):39-48.
6. Al-Janabi, A. and Malayeri, M.R. 2017. Performance of Shot Peened Surfaces Subject to Crystallization Fouling. *International Journal of Thermal Sciences*, 111:379-389.
7. Al-Janabi, A. and Malayeri, M.R. 2017. Turbulence Induced Structures in Exhaust Gas Recirculation Coolers to Enhance Thermal Performance. *International Journal of Thermal Sciences*, 112:118-128.
8. Al Kindi, M., Al-Lawati, M. and Al-Azri, N. 2017. Estimating Drilling Cost and Duration Using Copulas Dependencies Models. *The Journal of Engineering Research*, 14(1):1-9.
9. Al-Maskari, N.S. McAdams, D.A. and Reddy, J.N. 2017. Modeling of a Biological Material Nacre: Waviness Stiffness Model. *Materials Science and Engineering: C*, 70(1):772-776.
10. Badruddin, I.A., Khan, A., Idna Idris, M.Y., Nik-Ghaali, N., Salman, A. N.J. and Al-Rashed, A.A.A.A. 2017. Simplified Finite Element Algorithm to Solve Conjugate Heat and Mass Transfer in Porous Medium. *International Journal of Numerical Methods for Heat & Fluid Flow*, 27(11):2481-2507.
11. Chandrasekaran, M. George, J., Ramanathan, A. and Nabam, T. 2017. Multi-Objective Parametric Optimization for Non-Conventional Machining of Inconel 825 – for an Industrial Application. *Journal of Scientific & Industrial Research*, 76(5):324-319.
12. ElDirdiry O., Zaier R. and Al-Yahmedi A. 2017. Design of Biomechanical Legs with a Passive Toe Joint for Enhanced Human-like Walking. *The Journal of Engineering Research*, 14(2):166-181.

13. Fessehaye, M., Abdul-Wahab, S.A., Savage, M.J., Kohler, T., Gherezghiher, T. and Hurni, H. 2017. Assessment of Fog-Water Collection on the Eastern Escarpment of Eritrea. *Water International*, 42(8):1022-1036.
14. Fu, L.L., Aloulou, M.A. and Triki, C. 2017. Integrated Production Scheduling and Vehicle Routing Problem With Job Splitting and Delivery Time Windows. *International Journal of Production Research*, 55(20):5942-5957.
15. Gaafar, E. and Zarog, M. 2017. A Low-Stress and Low Temperature Gradient Microgripper for Biomedical Applications. *Journal of Microsystem Technologies*, 18(3):5415-5422
16. Ghodsi, M., Hosseinzadeh, N., Ozer A., Rajabzadeh, H., Varzeghani, N.G., Hojjat, Y., Talebian, S., Sheykholeslami, M. and Al-Yahmedi, A. 2017. Development of Gasoline Direct Injector using Giant Magnetostrictive Materials. *IEEE Transactions on Industry Applications*, 53(1):521-529.
17. Hoshyarmanesh, H., Rezvani Dastgerdi, H., Ghodsi, M., Khandan R. and Zareinia, K. 2017. Numerical And Experimental Vibration Analysis of Olive Tree for Optimal Mechanized Harvesting Efficiency and Productivity, *Computers and Electronics in Agriculture*, 132:34-48.
18. Husain, A. and Ariz, M. 2017. Thermal Performance of Jet Impingement with Spent Flow Management. *IJE Transactions A: Basic*, 30(10):1599-1608.
19. Kamangar, S., Badruddin, I.A., Govindaraju, K., Nik-ghazali, N., Badarudin, A., Viswanathan, G.N., Salman A.N.J. and Khan, T.M.Y. 2017. Patient-Specific 3D Hemodynamics Modelling of Left Coronary Artery Under Hyperemic Conditions. *Medical & Biological Engineering & Computing*. 8(55):1451-1461.
20. Kamangar, S., Badruddin, I.A., Ahamad, N.A., Elahi, M.M., Soudagar, Govindaraju, K., Nik-Ghazali, N., Salman, A.N.J. and Khan, T.M.Y. 2017. Patient Specific 3-D Modeling of Blood Flow in a Multi-Stenosed Left Coronary Artery. *Bio-Medical Materials and Engineering*. 3(28):257-266.
21. Khadem, M., Shamsuzzoha, A., and Piya, S. 2017. Optimization Modeling of a Poultry Industry Supply Chain Network. *International Journal of Supply Chain Management*, 6(2):27-32.
22. Khan, R., Pervez, T., Alrasheedi, N., Al-Abri, O.S. and Sajid, A. 2017. Effects of Expansion Rate on Plasticity and Structural Integrity of Down-Hole Tubular. *ASME J. of Pressure Vessels & Piping*, 151:1-10.
23. Mahmood, M.A.N., Ramanathan, A. and Alzebdeh, K. 2017. Machinability of Natural Fiber Reinforced Composites: a Review. *The International Journal of Advanced Manufacturing Technology*, 88:2985-3004.
24. Mehrabi, D., Mohammadzaheri, M., Firoozfar, A. and Emadi, M. 2017. A Fuzzy Virtual Temperature Sensor for an Irradiative Enclosure. *Journal of Mechanical Science and Technology*, 31(10):4989-4994.
25. Mirsepahi, A., Mehdizadeh, A., Chen, L., O'Neill, B. and Mohammadzaheri, M. 2017. Comparison of Inverse Modelling and Optimization-based Methods in the Heat Flux Estimation Problem of an Irradiative Dryer/Furnace. *Journal of Computational Science*, 19:77-85.

26. Mohammadyan, M., Ghoochani, M., Kloog, I., Abdul-Wahab, S.A., Yetilmezsoy, K., Heibati, B. and Godri Pollitt, K.J. 2017. Assessment of Indoor And Outdoor Particulate Air Pollution at an Urban Background Site in Iran. *Environmental Monitoring and Assessment*, 189(5):235.
27. Mohammadyan, M., Alizadeh-Larimi, A., Etemadinejad, S., Latif, M.T., Heibati, B., Yetilmezsoy, K., Abdul-Wahab, S.A. and Dadvand, P. 2017. Particulate Air Pollution at Schools: Indoor-Outdoor Relationship and Determinants of Indoor Concentrations. *Aerosol and Air Quality Research*, 17(3):857-864.
28. Mohammadzaheri, M. and Qallaf, A. 2017. Nanopositioning Systems with Piezoelectric Actuators, Current State and Future Perspective. *Science of Advanced Materials*, 9(7):1071-1080.
29. Mohammadzaheri, M., Tafreshi, R., Khan, Z., Francheck, M. and Grigoriadis, K. 2017. Analytical-Numerical Investigation of Factors Influencing Overall Heat Transfer Coefficient of Multiphase Petroleum Fluids in Horizontal Subsea Pipelines. *International Journal of Petroleum Science and Technology*, 11(1):23-33.
30. Nassar, M.M., Arunachalam, R. and Alzebedeh, K.I., 2017. Machinability of Natural Fiber Reinforced Composites: a Review. *The International Journal of Advanced Manufacturing Technology*, 88(9-12):2985-3004.
31. Nikoo, AH, Malayeri, M.R. and Al-Janabi, A., Revamp of Heat Transfer Surfaces for Reduction of Crystallization Fouling Based on Polar Component of Surface Energy. *Journal of Iranian Chemical Engineering*, 88:48-58.
32. Piya, S., Khadem, M., Shamsuzzoha, A. and Kindi, M. 2017. Supply Chain Complexity Drivers and Solution Methods. *International Journal of Supply Chain Management*, 6(4):43-50.
33. Shamsuzzoha, A., Ferreira, F., Azevedos, A. and Helo, P. 2017. Collaborative Smart Process Monitoring Within Virtual Factory Environment: an Implementation Issue. *International Journal of Computer Integrated Manufacturing*, 30(1):167-181.
34. Shamsuzzoha, A., Helo, P. and Sandhu, M. 2017. Virtual Enterprise Collaborative Processes Monitoring Through Project Business Approach. *International Journal of Computer Integrated Manufacturing*, 30(10):1093-1111.
35. Shamsuzzoha, A. and Helo, P. 2017. Development of Sustainable Platform for Modular Product Family: a Case Study. *Production Planning and Control*, 28(6-8):512-523.
36. Siddique, M.H., Samad, A. and Husain, A. 2017. Combined Effect of Viscosity and Surface Roughness on Electrical Submersible Pump Performance. *Proceedings of the Institution of Mechanical Engineers, Part A: Journal of Power and Energy*, 231(4):303-316.

37. Thanigaivelan, R., Deepa, D., Mythili, T. and Ramanathan, A. 2017. Experimental Investigation of Natural Convective Heat Transfer Around Micro-fin Arrays. *Journal of Scientific & Industrial Research*, 76(8):501-505.
38. Thanigaivelan, R., Senthilkumar, R., Ramanathan, A. and Natarajan, N. 2017. Impact of the Shape of The Electrode-Tool on the Radical Overcut of Micro-Hole in Electrochemical Micromachining. *Surface Engineering and Applied Electrochemistry*, 53(5):486-492.
39. Triki, C., Mirmohammadsadeghi, S., and Piya, S. 2017. Heuristic Methods for the Periodic Shipper Lane Selection Problem in Transportation. *Computers & Industrial Engineering*, 106:182-191.
40. Triki, C., Zekri, S., Al-Maktoumi, A. and Fallahnia, M. 2017. An Artificial Intelligence Approach for the Stochastic Management of Coastal Aquifers. *Water Resources Management*, 31(15):4925-4939.
41. Triki C. 2017. Solving the Periodic Edge Routing Problem in the Urban Waste Management. *Asia-Pacific Journal of Operational Research*, 34(3):1-13.
42. Triki, C. and Al-Baali, M. 2017. Preface of the Special Issue on Models and Algorithms for Applied Optimisation Problems. *International Journal of Operational Research*, 28(2):141-142.
43. Triki, C., Al-Alawin, A., Ghiani, G. and Manni, E. 2017. Approximated Neighborhood Evaluation for the Design of the Logistics Support of Complex Engineering Systems. *RAIRO Operations Research*, 51:1-16.
44. Triki, C., Akil, J. and Al-Azri, N. 2017. Optimising the Periodic Distribution of Gas Cylinders with Customers Priority. *International Journal of Operational Research*, 28(2):279-289.
45. Zarog, M. 2017. 3C-SiC: A promising Material for Ghz Resonators in Out-Of-Plane Resonance Mode. *Scientific Bulletin of Naval Academy*, 20(1):316-317.
46. Zarog, M. 2017. Towards a Numerical Method to Evaluate and Weigh Benefits and Harms from Islamic Jurisprudence View. *Journal of Islamic Sciences and Research*, 18 (1):21-39.

Conference Papers

1. Abdo, J., Hassan, E. and Al-Shabibi, A. 2017. Fabrication of Experimental Setup for Investigation of Drillstring Fatigue Failure. In: *Proceedings of the ASME International Design Engineering Technical Conferences & Computers and Information in Engineering Conference, ASME 2017 IDETC/CIE*, Cleveland, OH, USA, 6-9 August 2017.
2. Abdo, J., Hassan, E., Boulbrachene, K. and Kawk, J. 2017. Modeling and Experimental Investigation of Drill Pipe Failure. In: *Proceedings of the ASME International Mechanical Engineering Congress and Exposition (IMECE)*, Tampa, Florida, USA, 3-9 November 2017.

3. Abdul-Wahab, S.A. 2017. Study of the Indoor Air Quality in two Residential Houses according to their Ages. In: *Proceedings of the International Conference on Chemical, Agricultural, Biological and Health Sciences (CABHS-2017)*, Bali, Indonesia, 2-3 February 2017.
4. Ahamad, N.A., Kamangar, S., Salman, A.N.J., Manzoor, Elahi, M, Soudagar. and Khan, T.M.Y. 2017. Double Diffusion in Arbitrary Porous Cavity: Part II. In: *Proceedings of the AIP Conference*, Anthra Pradesh, India, 7–8 April 2017.
5. Ahamad, N.A., Salman, A.N.J., Kamangar, S., Khan, T.M.Y. and Soudagar, M.E.M. 2017. Double Diffusion in Arbitrary Porous Cavity: Part III. In: *Proceedings of the AIP Conference Proceedings*, Anthra Pradesh, India, 7–8 April 2017.
6. Al-Harrasi, A., Al-Ajmi, M., Al-Shidhani, M., Ambu-Saidi, M., Khadem M., Shamsuzzoha, A. and Piya, S. 2017. Modeling Supply Chain Network for a Poultry Industry in Oman: a Case Study. In: *Proceedings of the International Conference on Industrial Engineering and Operations Management*, Rabat, Morocco, 11-13 April 2017.
7. Al-Harrasi, A., Qasida, A.A., Al-Qassabi, H. and Shamsuzzoha, A. 2017. Study of the Possibility to Industrial Symbiosis Within Selected Omani SMEs. In: *Proceedings of the 10th International Conference on Thermal Engineering: Theory and Applications*, Muscat, Oman, 26-28 February 2017.
8. Arunachalam, R., Qamar, S.Z. and Al-Rawahi, N.Z. 2017. Engineering Design Education in an Activity-Based Learning Environment. In: *Proceedings of the 8th International Conference on Engineering Education (IFEE2017)*, Sharjah, UAE, 18-20 April 2017
9. Arunachalam, R., Raj, R.P., Mohan, S., Peter, L. and Prataap, R.K.V. 2017. Effect of Different Modes of Electrodeposition on the Morphology of Ruthenium Oxide Deposited From Ruthenium Nitrosylsulfate Electrolyte for Supercapacitor Applications. In: *Proceedings of the XXXI International Conference on Surface Modification Technologies (SMT31)*, Mons, Belgium, 5-7 July, 2017.
10. Ghodsi, M, Ziaiefar, H., Emam, S. and Alam, K. 2017. Development of Magnetostrictive Energy Harvester. In: *Proceedings of the 10th International Conference on Thermal Engineering: Theory and Applications*, Muscat, Sultanate of Oman, 26-28 February 2017.
11. Halder, P., Varghese, F.A., Husain, A., Samad, A. 2017. A Numerical Analysis of Casing Groove Parameter on the Performance of Wave Energy Conversion Device. In: *Proceedings of the International Conference on Thermal Engineering: Theory and Applications*, Muscat, Sultanate of Oman, 26-28 February 2017.
12. Iqbal, M., Malek, A.B.M.A., Akhter, S. Howladar, M.F. and Shamsuzzoha, A. 2017. Study of Energy Utilization Scenario in Bangladesh. In: *Proceedings of the 10th International Conference on Thermal Engineering: Theory and Applications*, Muscat, Oman, 26-28 February 2017.

13. Khan, R., Pervez, T., Qamar, S.Z. 2017. Constitutive Modeling of Martensitic Transformation in Twinning Induced Plasticity Steels subjected to Thermomechanical Load. In: *Proceedings of the International Conference on Martensitic Transformations (ICOMAT 2017)*, Chicago, IL, USA, 9-14 July 2017.
14. Lahti, J., Helo, P., Shamsuzzoha, A. and Phusavat, K. 2017. IoT in Electricity Supply Chain: Review and Evaluation. In: *Proceedings of the 15th International Conference on ICT and Knowledge Engineering (ICT& KE 2017)*, Bangkok, Thailand, 22-24 November 2017.
15. Manzoor, A., Elahi, M.S., Salman, A.N.J. and Badruddin, .A. 2017. Fem Formulation for Heat and Mass Transfer in Porous Medium. In: *Proceedings of the International Conference on Materials, Alloys and Experimental Mechanics (ICMAEM-2017)*, Hyderabad, India, 3-4 July 2017.
16. Mohammadzaheri, M., Ghodsi, M. and Qallaf, A. 2017. Development of a Radial Basis Function Network to Estimate the Head Generated by Electrical Submersible Pumps on Gaseous Petroleum Fluids. In: *Proceedings of 7th International Conference on Artificial Intelligence, Soft Computing and Application*, Sydney, Australia, 23-24 December 2017.
17. Mohammadzaheri, M. and Qallaf, A. 2017. A Fuzzy Model to Estimate Head of Gaseous Petroleum Fluids Driven by Electrical Submersible Pumps. In: *Proceedings of 13th International Conference on Engineering and Technology, Computer, Basic and Applied Sciences*, Sydney, Australia, 19-20 August 2017.
18. Mohammadzaheri, M., Firoozfar, A., Mehrabi, D. and Emadi, M. 2017. A Virtual Temperature Sensor for an Infrared Dryer. In: *Proceedings of 9th IEEE GCC Conference*, Manama, Bahrain, 8-11 May 2017.
19. Mohammadzaheri, M. and Tafreshi, R. 2017. An Enhanced Smith Predictor Based Control System for Time-delay Processes. In: *Proceedings of 9th IEEE GCC Conference*, Manama, Bahrain, 8-11 May 2017.
20. Mohammadzaheri, M., Doust-mohammadi, M., Amouzadeh, A., Jamshidi, E. and Emadi, M. 2017. Fault Detection of an Automobile Cylinder Head Using Mechanical Vibrations and Artificial Intelligence. In: *Proceedings of 9th IEEE GCC Conference*, Manama, Bahrain, 8-11 May 2017.
21. Mohammadzaheri, M., Firoozfar, A., Mehrabi, D., Emadi, M. 2017. A Fuzzy Virtual Temperature Sensor for an Irradiative Enclosure. In: *Proceedings of 10th International Conference on Thermal Engineering: Theory and Applications*, Muscat, Oman, 26-28 February, 2017.
22. Pervez, T. 2017. Trends and Approaches in Design and Development of Tailored Materials. Keynote Talk In: *Emerging Trends in Automotive Engineering (CETAE-2017)*, Karachi, Pakistan, 28-29 December 2017
23. Pervez, T., Alzebdeh, K. and Al Kharusi, M.S. 2017. Effective Mechanical Properties of Nanoscale Representative Volume Element of CNT-based Nanocomposites. In: *Proceedings of the Eleventh International Conference on Composite Science and Technology (ICCST/11)*, Sharjah, UAE, 4-6 April 2017.

24. Qamar S.Z. and Pervez, T. 2017. Tool and Die Steels in Aluminum Extrusion and Tubular Expansion Applications. Keynote Address, In: *Proceedings of the 3rd Euro Congress on Iron, Steel and Construction Engineering*. London, UK, 16-17 November 2017.
25. Qamar S.Z., Chekotu J.C. and Pervez, T. 2017. Mitigation of Major Product Defects in Aluminum Extrusion. Keynote Presentation, In: *Proceedings of the 14th International Conference and Exhibition on Materials Science and Engineering*, Las Vegas, Nevada, USA, 13-15 November 2017.
26. Qamar, S.Z. 2017. Solid Expandable Tubulars; Full-Scale Testing and Analysis. Keynote Address, In: *Proceedings of the International Conference on Geology and Geoscience*, Dubai, UAE, 27-28 April, 2017.
27. Qamar, S.Z. and Pervez, T. 2017. Elastomer Packers in Petroleum Drilling Operations: Changes in Swelling Response and Mechanical Properties. In: *Proceedings of the International Conference on Geology and Geoscience*, Dubai, UAE, 27-28 April 2017.
28. Salman, A.N.J., Ahamad, N.A. and Khan, T.M.Y. 2017. Natural Convection Due To Heating of Small Block in Porous Medium. In: *Proceedings of the International Conference on Materials, Alloys and Experimental Mechanics (ICMAEM-2017)*, Hyderabad, India, 3-4 July 2017.
29. Salman, A.N.J., Azeem, K. and Khan, T.M.Y. 2017. Heat and Mass Transfer in an L Shaped Porous Medium, In: *Proceedings of the International Conference on Materials, Alloys and Experimental Mechanics (ICMAEM-2017)*, Hyderabad, India, 3-4 July 2017.
30. Sayari L.M. and Zaier R. 2017. Dynamic Optimization of Matsuoka Oscillator. In: *Proceedings of the International Conference on Numerical Analysis and Optimization*. Oman, Muscat, 2-5 January 2017.
31. Shamsuzzoha, A., Al-Kindi, M. and Al-Hinai, N. 2017. Application of Product Modularity in Industry: a Case Study. In: *Proceedings of the International Conference on Industrial Engineering and Operations Management*, Rabat, Morocco, 11-13 April 2017.
32. Triki C., MirMohammadsadeghi S. and Piya S. 2017. Solving the Lane Selection Problem in Multi-Period Transportation Auctions. In: *Proceedings of the 5th International Conference on Advances in Engineering and Technology*, Singapore, 27-28 March, 2017.
33. Zaier, R. El Dirdiry, O. and Sayari L.M. 2017. Design and Control of Biomechanical Leg for Enhanced Human Walking. In: *Proceedings of the 5th International Conference on Control Engineering & Information Technology*, Tunisia, Sousse, 17-19 December 2017.
34. Zarog, M. 2017. SiC as a Promising material for MEMS/NEMS: A review. In: *Proceedings of IASTEM International Conference on Mechanical and Aerospace Engineering (ICMAE)*, Marrakech, Morocco, 13-14 October 2017.
35. Zunaid, M. and Husain, A. 2017. Numerical Heat Transfer Analysis of Wavy Micro-Channel at Different Reynolds Number. In: *Proceedings of the International Conference on Advanced Production and Industrial Engineering*, New Delhi, India, 6-7 October, 2017.

Technical Reports

1. Arunachalam, R. and Al-Maharbi, M. 2017. *Development and Characterization of Sustainable Novel Aluminium Metal Matrix Composite for Industrial Applications in the GCC region*. SQU-UAEU Collaborative Research Grant Progress Report submitted to Sultan Qaboos University.
2. Ghodsi, M. 2017. *Development of Energy Harvesting System for Vibrational Structures*. Collaborative Research Grant with UAEU, Technical Report, Sultan Qaboos University, Sultanate of Oman.
3. Ghodsi, M. 2017. *Structural Vibration Control Using Magnetostrictive Actuators*. Internal Research Grant Technical Report, Sultan Qaboos University, Sultanate of Oman.
4. Husain, A. 2017. *Numerical Analysis Visualization and Experimental Measurement of Capillary-Driven Blood Flow Micro-Channel Mixing*. Collaborative Research Grant with UAEU, Technical Report, Sultan Qaboos University, Sultanate of Oman.
5. Shamsuzzoha, A., Al-Kindi, M. and Nasr Al-Hinai, N. 2017. *Measurement of Product Modularity Degree to Scale Up Family Of Product for Achieving Competitive Advantage: Perspectives From Selected Omani Small and Medium Enterprises*. Internal Research Grant Technical Report, Sultan Qaboos University, Sultanate of Oman.
6. Zaier, R. 2017. *Modelling of Biologically Inspired Mechanical Leg*. External Research Grant (RC/ENGMIED/15/03) Technical Report, Sultan Qaboos University, Sultanate of Oman.



OTHER ACTIVITIES

Short Courses

1. Al-Hinai, N., Fundamentals of Project Management and Risk Analysis, Sultan Qaboos University, 30th October - 2nd November 2017.
2. Al-Hinai, N., Production Planning, Project Management, Risk Analysis and Lean Concept training program for Metal Engineering Company, Muscat, 15-19 January 2017.
3. Husain, A., Computational Fluid Dynamics using ANSYS CFX, A Short Training Course in Collaboration with the Independent Learning Center at Sultan Qaboos University, February 2017.

Invited Talks

1. Abdul-Wahab, S.A., Invited as Keynote Speaker by the Qatar University in the 2017 Annual Meeting of the Society of Environmental Toxicology & Chemistry- Arabian Gulf Branch. The Meeting Theme is "Environmental Quality in the GCC: Addressing the Challenges", Doha, Qatar, 21-22 March 2017.
2. Abdul-Wahab, S.A., Invited as Keynote Speaker in the International Conference on Chemical, Agricultural, Biological and Health Sciences (CABHS-2017), Bali, Indonesia, 2 February 2017.

3. Abdul-Wahab, S.A., Invited as Technical Session Chair in the International Conference on Chemical, Agricultural, Biological and Health Sciences (CABHS-2017), Bali, Indonesia, 2 February 2017.
4. Al-Rawahi, N. Z., Invited for Guest lecture at the Higher College of Technology, Muscat, 8 November 2017.
5. Al-Rawahi, N. Z., Speaker in the Science Collaboration Symposium on Clean and Renewable Energy, Abu Dhabi, UAE, 30th October – 1st November 2017.
6. Al-Rawahi, N. Z., Speaker in the First Environmental Forum for Renewable Energy, “Power and Solar Cooling Cogeneration”, Muscat, Oman, 27-28 December 2017.
7. Arunachalam, R., Developing Innovative Concepts for Products – a bird’s eye view of the concept development process, AVS Engineering College, Salem, India, 23rd June, 2017.
8. Husain, A., Invited as Keynote Speaker in The 2nd International Conference on Advanced Production and Industrial Engineering (ICAPIE-17). Organized by the Delhi Technological University (DTU), New Delhi, India, 6 October 2017.
9. Husain, A., Invited Guest Lecture at Aligarh Muslim University. Aligarh, India, 26 August 2017.
10. Pervez, T. 2017. Trends and Approaches in Design and Development of Tailored Materials. Keynote Talk In: *Emerging Trends in Automotive Engineering (CETAE-2017)*, Karachi, Pakistan, 28-29 December 2017.
11. Piya, S., Invited Speaker in International Conference on Recent Advances in Mechanical Engineering Operations organized by Government Engineering College, Salem, India 2-3rd Marc 2017.
12. Summad, E., Invited Speaker on Challenges of Skills and Competencies for Education and Training in the Field of Intellectual Property. WIPO Oman Workshop on IP Education and Training, Ministry of Tourism, Muscat 26-27 April 2017.
13. Summad, E., Invited Speaker on Entrepreneurship Future Trends. Incubation Conference, Hormuz Grand Hotel, Muscat 5-6 December 2017.

Cooperation with Local and Foreign Organizations

1. Al-Janabi A., Setting Collaboration/Cooperation with Research Institute of Automotive Engineering and Vehicle Engines Stuttgart (FKFS), Baden-Württemberg Germany. *Utilization of Electrical Vehicles in Muscat-Oman*.
2. Al-Janabi A., Setting Collaboration/Cooperation with TU-Dresden, Germany. *Assisting in construction an experimental apparatus to investigate the influences of crystallization fouling on industrial heat exchangers*.
3. Arunachalam, R., Metal Matrix Composites Development with Prof. Abdel-Hamid I Mourad (UAE).

4. Arunachalam, R., Micromachining with Prof. R. Thanigaivelan (India).
5. Arunachalam, R., Pulse Electrodeposition with Dr. S. Mohan (India).
6. Arunachalam, R., Electrodes material development for Supercapacitor with Dr. L. Peter (Hungary).
7. Arunachalam, R., Machining of advanced materials with Prof. M. Chandrasekaran (India).
8. Arunachalam, R., Development of High Entropy Materials with Dr. Sathish Kannan (UAE).
9. Husain A., Electronics cooling, Collaboration with Mr. Mohd. Zunaïd (India).
10. Husain A., Fluid machinery analysis, Collaboration with Dr. Abdus Samad (India).
11. Husain A., Micro-scale cooling enhancement techniques, Collaboration with Dr. Ansari, M.Z. (India).
12. Husain A., Micro-scale mixing analysis, Collaboration with Dr. Ansari, M.A. (India).
13. Husain A., Numerical Analysis Visualization and Experimental Measurements of Capillary-Driven Blood Flow Micro-Channel Mixing, Collaboration with Dr. Elnajjar, E. (UAE).
14. Ghodsi. M., Investigation of effective parameters on attenuation and reflection coefficient of acoustic wave in giant magnetostrictive materials, collaboration with Dr. Dr. Mohammad Reza Sheykheslami (Iran)
15. Shamsuzzoha, A., Measurement of Product Modularity Degree to Scale Up Family of Product for Achieving Competitive Advantage: Perspectives From Selected Omani Small and Medium Enterprises, Collaboration with Professor Petri Helo (Finland) and Mr. Timo Kankaanpaa (Finland).
16. Shamsuzzoha, A., Circular Economy – Perspectives from SMEs Viewpoint, Collaboration with Professor Kanan Govindan (Denmark).
17. Zaier, R. Cluster of Mechatronics and Automation (Germany).
18. Zaier, R. Training Course on Industry 4.0, the Cluster of Mechatronics and Automation (Germany).


Students' activities/awards

1. Al-Hinai, N. Supervisor of Students: Noor Al-Yazidy, Anfal Al-Hooti, Ekhlas Al-Shereiqi: First Place for the FYP design competition at Mechanical and Industrial Engineering Department. Title of the project: "Designing an Automated Scheduling Emergency Room Nurses at SQUH", May 2017.
2. Al-Janabi A., Final Year Design Projects Competition in MIE Department, *Design and manufacture a prototype of oscillating water column wave energy converter.*
3. Shamsuzzoha, A., Al-Kindi, M. and Al-Hinai, N. Best track paper award, Paper title: Application of product modularity in industry: a case study. In: *Proceedings of the International Conference on Industrial Engineering and Operations Management*, Rabat, Morocco, 11-13 April 2017.

Additional Activities

1. Al-Hinai, N., Associate Editor of The Journal for Engineering Research at SQU, 2017.
2. Al-Hinai, N., Military Technical College, Advisory Board Member, (Oman), 2017.
3. Al-Hinai, N., Attended the 'Critical Thinking" workshop at SQU, Muscat, Oman, 17 May 2017.
4. Al-Hinai, N., Attended the 'Alternative Teaching Methods" workshop at SQU, Muscat, Oman, 18 May 2017.
5. Al-Janabi A., Attended the workshop "Numerical Optimization Software", SQU, Oman, 8-9 January 2017.
6. Al-Janabi A., Attended the workshop "Critical Thinking Skill for the 21st Century", SQU, Oman, 16 May 2017.
7. Al-Janabi A., Attended the workshop "German-Oman Cooperation on Sustainable Energy Concepts", Muscat, Oman, 18th May 2017.
8. Al-Janabi A., Attended the workshop 'Using Interactive Technology to Engage Students in Deeper Learning at SQU" SQU, Oman, 26 December 2017.
9. Al-Janabi A., Invited to the annual research forum of the TRC, Oman, December 2017.
10. Al-Janabi A., Conducted a Seminar on Engineer and his applications for Kids, Child Care Center, Early Childhood Education Department, College of Education, SQU, Oman, 2017.
11. Al-Janabi A., External Examiner for MSc study titled "Effect of CO₂/Water Ratio on CO₂-Based EOR) Muscat, Oman, May 2017.
12. Al-Janabi A., External Examiner for MSc study titled "Development and Comparison of TMys for Renewable Energy Applications in Oman Using Ground and Satellite Meteorological Data, Muscat, Oman, May 2017.
13. Al-Janabi A., External Examiner for the architectural engineering students, final year graduation projects, December 2017.
14. Al-Janabi A., Attended the 2nd Omani Desalination Network Meeting & 2nd MEDRC Alumni Lecture Series, at Middle East Desalination Research Center (MEDERC), Oman, Muscat, 23th May 2017.
15. Al-Janabi A., Invited to attend the Oman Waste & Environmental Services Conference & Exhibition, Muscat, Oman, 13-14, December 2017.
16. Al-Janabi A., Reviewer for the 5th International Conference on Machine Design and Manufacturing Engineering (ICMDME2018), December 2017.
17. Al-Janabi A., External Reviewer for TRC Project titled "Continues hybrid cooling using geothermal and solar heat sources and underground storage systems. July 2017.
18. Al-Janabi A., Reviewer for the Heat Transfer Engineering Journal papers, 2017.
19. Al-Rawahi, N., Associate Editor of The Journal for Engineering Research at SQU, 2017.

20. Al-Rawahi, N., Campus Representative of the American Society for Engineering Education (ASEE).
21. Al-Rawahi, N., Chair Session. 2nd World Congress on Momentum, Heat and Mass Transfer (MHMT'17) Barcelona, Spain, 7-8 April 2017
22. Husain, A., Chair Session. International Conference on Advanced Production and Industrial Engineering (ICAPIE-17). DTU, New Delhi, India, 6-7 October 2017.
23. Husain, A., Coordinated Final Year Project (FYP) Design Competition 2017 in collaboration with Industrial Advisory Board, Mechanical and Industrial Engineering, Sultan Qaboos University.
24. Mohammadzaheri, M., Session Chair at *7th International Conference on Artificial Intelligence, Soft Computing and Application*, Sydney, Australia, 23-24 December 2017.
25. Mohammadzaheri, M., A higher education program reviewer, Ministry of Education, Oman, 2017.
26. Piya, S., Gave seminar to final year project (FYP) students on Introduction to FYP, 4th October 2017.
27. Piya, S., Editorial Board member of "Journal of Industrial Automation and Production Engineering", 2017.
28. Shamsuzzoha, A. Editorial Review Board Member: International Journal of Risk and Contingency Management, IGI-Global Publications, USA, 2017.
29. Shamsuzzoha, A. Editorial Board Member: Industrial and Systems Engineering, Science Publishing Group, USA, 2017.
30. Shamsuzzoha, A. Editorial Board Member: AIMS Energy, AIMS Press Publications, USA, 2017.
31. Shamsuzzoha, A. Editorial Board Member: Management Studies, David Publishing Company, USA, 2017.
32. Shamsuzzoha, A. Conducted a Workshop on Strategic Alliances and Applications of IT in Supply Chain, organized by Independent Learning Centre (ILC) at SQU, 3-4 October 2017.
33. Shamsuzzoha, A. Conducted a workshop on Measurement of product modularity to scale up product family, Department of Production, University of Vaasa, Finland, 26 July 2017.
34. Shamsuzzoha, A. Conducted a workshop on Simulation modeling and analysis with ARENA software, SQU, 19-21 March 2017.
35. Shamsuzzoha, A. Organized a seminar on Object modelling, simulation and visualization using virtual reality, by Professor Mohammad Iqbal, Shahjalal University of Science and Technology, Bangladesh, 26 February, 2017.
36. Shamsuzzoha, A. Technical Program Committee member, The 2017 International Conference on Electronic Industry and Automation (EIA 2017), Xiamen, China, 23-25 June, 2017.
37. Shamsuzzoha, A. International Program Committee Member, 19th International Conference on



Enterprise Information System (ICEIS 2017), Porto, Portugal, 26-29th April, 2017.

38. Shamsuzzoha, A. Graduate/Postgraduate Student Paper Competition Chair, The International Conference on Industrial Engineering and Operations Management, Rabat, Morocco, 11-13 April, 2017.
39. Summad, E., Delivered a workshop: “Business Model Innovation - A life Changer”. SQU Independent Learning Centre, 18 March 2017.
40. Summad, E., Delivered a workshop: “Innovation in Logistics”. SQU Independent Learning Centre, 23 October 2017.



Petroleum and Chemical Engineering



EXECUTIVE SUMMARY

The Department of Petroleum and Chemical Engineering in the College of Engineering at Sultan Qaboos University was established in 1986 under the name of Petroleum and Mining Engineering. Considering the country's industrial development, the Department thereafter underwent several transformations to meet the job market. In 2003, a comprehensive self-study led to two independent undergraduate degree programs in Petroleum and Natural Gas Engineering (PNGE) and Chemical and Process Engineering (CHPE). Currently, Graduate degree program at both Master and Doctorate levels are offered in both CHPE and PNGE majors. In 2006, Petroleum and Natural Gas Engineering Program was substantially accredited by the Accreditation Board of Engineering and Technology (ABET). In 2008, Chemical and Process Engineering was accredited by ABET. In 2013, a visit by ABET team led to another successful accreditation cycle for both programs in August 2014. The Department is expecting another ABET visit in year 2019 for accreditation of both programs. The Department aims at providing a comprehensive state-of-the-art education for its students and thus equipping the students with essential skills needed to prepare them for the challenging highly competitive job market in the Petroleum/Chemical sectors.

This is achieved through a progressive sequence of subjects well-tailored to build a deep and sound understanding of the principles of engineering, emphasizing reasoning and engineering application in problem solving. All the programs are solidly constructed, with an excellent technology base, to provide sound and internationally acclaimed engineering education. The programs were designed in such a way to allow broad perspective, engendering social, cultural, ethical components, all combined to produce the engineer who is well aware of his/her leading role in the community.

The research in the Department covers many areas such as enhanced oil recovery, wastewater treatment, green engineering, modeling and control, CO₂ capture, process optimization, desalination, multiphase flow, mineral resources, reservoir simulation, rock mechanics and reaction engineering. The formation of research groups at the department and college level is encouraged to enhance the research output. The faculty publications included 39 refereed journal articles, 1 book, 1 book chapter, 19 international conferences, 5 technical reports, and 4 newly approved research grants.

The Department also organizes workshops and conferences on regular basis. The most recent was The International Conference on Thermal Engineering: Theory and Applications, which was held in 2017. The conference was organized in collaboration with Ryerson University, Canada. Both faculty and post graduate students presented their research findings in front of international delegates as over 100 papers were presented at this occasion. The Department is committed to achieve excellence both in academic and research.

Prof. Rashid Al-Maamari
HoD, Department of Petroleum and Chemical Engineering



- *Create an enabling environment that inspires students and staff to promote knowledge culture, innovation and creativity to produce quality engineers who will take a key role in the development of the society, oil and gas industry and the country.*



SUMMARY

Table E1: Summary

	2016	2017
Faculty	22	21
Support staff	9	8
Total	31	29
On-study leave	0	1
Undergraduate Program		
Enrollment (Y2-5)	315	311
Courses offered	57	57
Graduates	90	83
Graduate Program		
Enrollment	55	31
Courses offered	18	15
Graduates	12	20
Research		
Grants	6	4
Publications		
Refereed journals	53	39
Conference proceedings	31	19

DEPARTMENTAL PROFILE



Prof. Rashid Al-Maamari

Dr. Ali Saud Al-Bemani

Dr. Abdul Aziz Al-Hashmi

Prof. Rashid Al-Maamari

Head of the Department

Research Interests: Enhanced Oil Recovery (Chemical, Thermal), Treatment and Utilization of Oilfield Produced Water

Dr. Ali Saud Al-Bemani

Associate Professor and Vice Chancellor of Sultan Qaboos University

Research Interests: Well Testing, Reservoir Engineering, Rock and Fluid Properties, Water Flooding, EOR, PVT, Formation Damage Studies and Computer Application in Petroleum Engineering

Dr. Abdul Aziz Al-Hashmi

Associate Professor

Research Interests: Polymer Enhanced Oil Recovery, Polymer Flow and Retention in Porous Media, Use of High Molecular Weight Polymers in Oil Field Applications, Water Conformance/Control from the Oil and Gas Wells, Polymer Rheology



Dr. Adel Al-Ajmi

Dr. Ala'a Al-Muhtaseb

Dr. Farouq Mjalli

Dr. Gholamreza Vakili-Nejad

Dr. Adel Al-Ajmi

Associate Professor

Research Interests: Rock Mechanics, Petroleum Engineering

Dr. Ala'a Al-Muhtaseb

Associate Professor

Research Interests: Biofuel Production from Bio-Waste, Fuel and Environment, Wastewater Treatment

Dr. Farouq Mjalli

Associate Professor

Research Interests: Ionic Liquids and Deep Eutectic Solvents Applications as Green Solvents, Application of Advance Model-Based Process Control Strategies, Neural Network Based Modeling and Control

Dr. Gholamreza Vakili-Nejad

Associate Professor

Research Interests: Applied Statistical Thermodynamics, Applied Hydrocarbon Thermodynamics, Characterization of Petroleum Fluids, Nano-Thermodynamics, Nano-Fluids



Dr. Hasan Abdellatif

Dr. Talal Al-Wahaibi

Dr. Yahya Al-Wahaibi

Dr. Ashish Gujarathi

Dr. Hasan Abdellatif

Associate Professor

Research Interests: Renewable Energy, Colloid Science, Water Treatment

Dr. Talal Al-Wahaibi

Associate Professor and Assistant Dean of Deanship of Research

Research Interests: Multiphase Flow and Separation, Flow and Diffusion in Porous Media, Multiphase Flow and Mixing

Dr. Yahya Al-Wahaibi

Associate Professor and Dean, Deanship of Research

Research Interests: Enhanced Oil Recovery with Emphasis on EOR, WAG Injection, Chemical Injection and VAPEX, Ionic Liquids Applications as Green Solvents, Flow and Diffusion in Porous Media, Multiphase Flow and Mixing

Dr. Ashish Gujarathi

Assistant Professor

Research Interests: Process Optimization, Evolutionary Computation, Modeling and Simulation, Bio-Waste Utilization



Dr. Ghulam Murshid

Dr. Hamoud Al-Hadrami

Dr. Jamil Naser

Dr. Khalid Al-Rawahi

Dr. Ghulam Murshid

Assistant Professor

Research Interests: CO₂ Separation via Reactive Absorption (Amines, Amino Acids), Synthesis of MOFs for CO₂ Capture

Dr. Hamoud Al-Hadrami

Assistant Professor

Research Interests: Formation Damage, Drilling Engineering, Simulation Modeling, Geological Modeling

Dr. Jamil Naser

Assistant Professor

Research Interests: Environmental Engineering, Water Quality, Green Solvents, Liquid Phase Sintering in Microgravity

Dr. Khalid Al-Rawahi

Assistant Professor

Research Interests: Mineral Resources, Geology, Economic Analysis, Sustainable Development



Dr. Majid Al-Wadhahi

Dr. Majid Al-Wadhahi

Assistant Professor

Research Interests: Reservoir Simulation, -3Phase Flow in Porous Media, Artificial Neural Network



Dr. Mohammad Al-Abri

Dr. Mohammad Al-Abri

Assistant Professor

Research Interests: Desalination, Water Treatment, Nanotechnology, Membrane Technology, Water Quality



Dr. Mohammad Usman

Dr. Mohammad Usman

Assistant Professor

Research Interests: Catalysis, Reaction Engineering



Dr. Omar Houache

Dr. Omar Houache

Assistant Professor

Research Interests: Production and End Use of New Absorbent for Mercury Removal, Production of Membrane Support using Natural Materials, Chemical Process Safety



Dr. Peyman Pourafshary

Dr. Peyman Pourafshary

Assistant Professor

Research Interests: Production Engineering, Enhanced Oil Recovery, Formation Damage, Fast Reservoir Simulation

Dr. Rashid Al-Hajri

Assistant Professor

Research Interests: Engineering of Catalytic Processes for the Synthesis of Intermediates and Fine Chemicals, Modeling of Reaction Kinetics in Laboratory-Scale Catalytic Reactors, Methodologies for Efficient Catalyst Recycle, Chemical EOR

Suaad Al-Zakwani (Study Leave)

Demonstrator

Research Interest: Chemical Engineering

Nasser Al-Mandhary

Department Technician Superintendent

Research Interest: Surface Area Analysis



Dr. Rashid Al-Hajri



Suaad Al-Zakwani



Nasser Al-Mandhary



Sabri Al-Khusaibi

Hamdan Al-Amri

Nayyar Afzal

Mazin Al-Mahrezi

Sabri Al-Khusaibi

Chief Technician C

Research Interest: Rheology

Hamdan Al-Amri

Lab Supervisor B

Research Interests: Rock and Fluid Properties, Drilling Technology

Nayyar Afzal

Lab Supervisor A

Research Interest: Core Flooding-EOR

Mazin Al-Mahrezi

Engineer

Research Interest: Process Control



Salim Al-Mazrui

Adel Al-Rubkhi

Marycon Cordova

Salim Al-Mazrui

Lab Supervisor B

Research Interests: Produced Oil Field Water, Cleaning and Utilization

Adel Al-Rubkhi

Technician B

Research Interest: Chemical EOR

Marycon Cordova

Coordinator





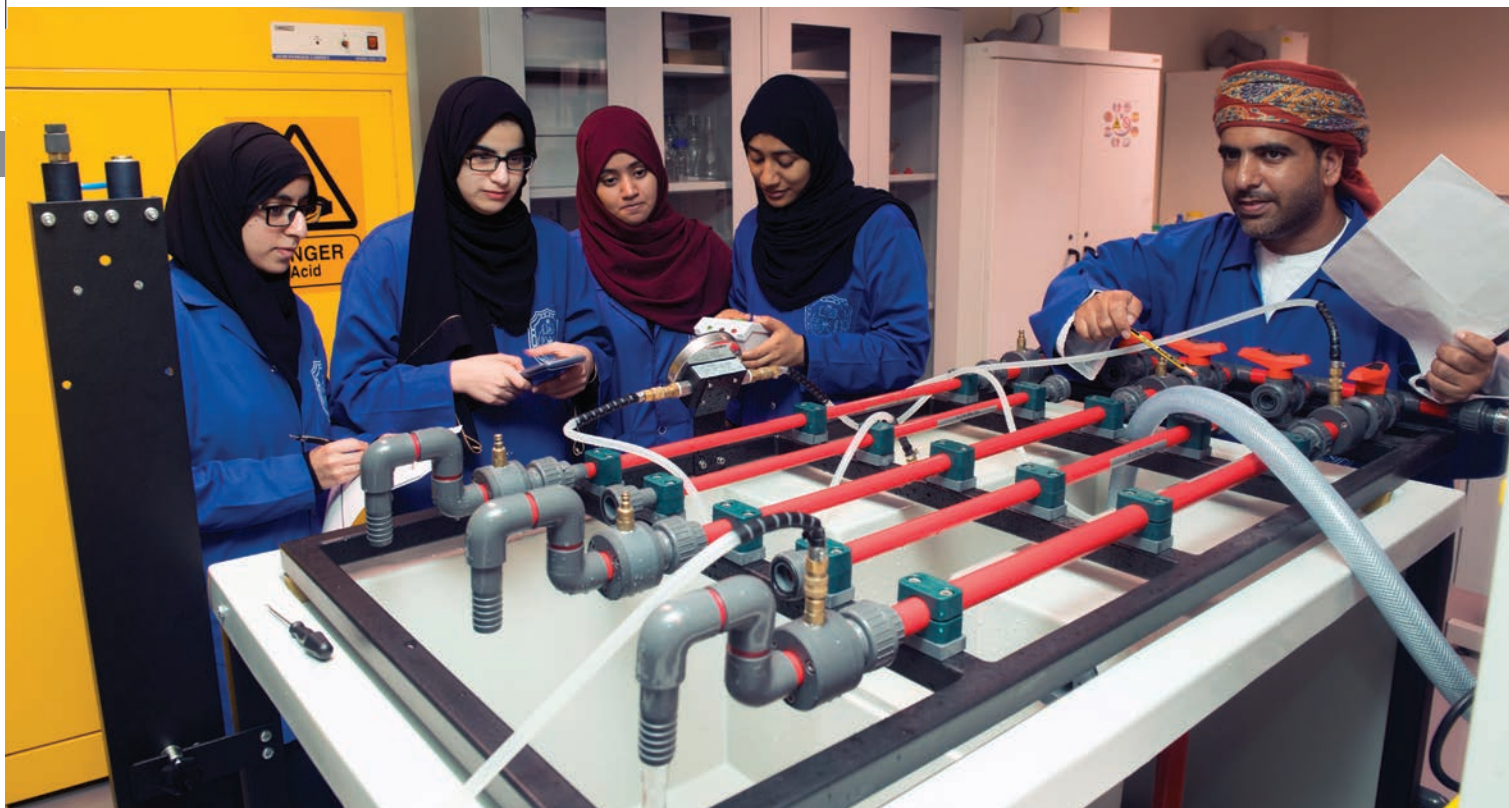
DEPARTMENTAL COMMITTEES

Table E2: Departmental Committees

PCED Postgraduate Studies and Research Committee	Dr. Gholamreza Vakili-Nejad (Chair) Dr. Ashish M. Gujarathi Dr. Majid Al-Wadhahi
PCED Publication and Web Coordinators	Dr. Ghulam Murshid
PCED Information and Communication Committee	Dr. Adel Al-Ajmi
PCED Curriculum and Accreditation Committee	Dr. Abdulaziz Al-Hashmi (Chair) Prof. Rashid Al-Maamari (HoD) Dr. Omar Houache Dr. Ashish Gujarathi Dr. Hamoud Al-Hadrami (PNGE timetabling officer) Dr. Jamil Naser (CHPE timetabling officer)
PCED Industrial Training Committee (In-House and Summer)	Dr. Mohammad Al-Abri (Chair) Dr. Ala'a Al-Muhatsab



PCED HSE Committee	Dr. Omar Houache (Chair) Dr. Farouq Mjalli Mr. Nasser Al-Mandhari Mr. Salim Al-Mazrui
PCED Societies Advisors	Dr. Adel Al-Ajmi (SPE, SQU) Dr. Ala'a Al-Muhatseb (SCHEME)
PCED Staff-Student Liaison	Prof. Rashid Al-Maamari (HoD) Dr. Jamil Naser Four students from each cohort (2013 to 2015)
PCED Strategic Planning and Development Committee	Dr. Farouq Mjalli (Chair) Dr. Hasan Abdellatif Hasan Dr. Talal Al-Wahaibi Dr. Muhammad Rashid Usman Dr. Adel Al-Ajmi Dr. Ghulam Murshid
PCED Book and Library Coordinator	Dr. Muhammad Rashid Usman
PCED Industrial Outreach and Community Services Committee	Dr. Rashid Al-Hajri (Chair) Dr. Yahya Al-Wahaibi
PCED Appointment Committee	Prof. Rashid Al-Maamari (Chair) Dr. Majid Al-Wadhahi Dr. Khalid Al-Rawahy Dr. Omar Houache Dr. Rashid Al-Hajri Dr. Gholamreza Vakili-Nejad
PCED Social Activity committee	Dr. Ala'a Al-Muhatseb (Chair) Dr. Abdul Aziz Al-Hashmi
PCED Board Secretary	Dr. Muhammad Rashid Usman



UNDERGRADUATE STUDIES

Courses

Table E3: Courses Offered in Spring 2017

Code	Title	Instructor(s)
CHPE3102/10	Engineering Thermodynamics	Dr. Ala'a Al-Muhtaseb
CHPE3103/10	Professional Practice	Dr. Hasan Abdellatif Hasan
CHPE3112/10	Principles of Chemical Processes	Dr. Jamil Nasser
CHPE3302/10	Fluid Flow	Dr. Talal Khamis Al-Wahaibi
CHPE3302/20	Fluid Flow	Dr. Ghulam Murshid
CHPE3402/10	Heat Transfer	Dr. Abdul Aziz Rashid Al-Hashmi
CHPE4114/10	Comp Aided Design	Dr. Ashish Gujrathi
CHPE4114/20	Comp Aided Design	Dr. Ashish Gujrathi
CHPE4192/10	Chemical Engineering Practice	Dr. Ghulam Murshid
CHPE4402/10	Natural Gas Processing	Dr. Omar Houache
CHPE4412/10	Process Heat Transfer	Dr. Gholamreza Vakili-Nejad

Code	Title	Instructor(s)
CHPE4412/20	Process Heat Transfer	Dr. Gholamreza Vakili-Nejad
CHPE4512/10	Chemical Reaction Engineering	Dr. Rashid Salim Al-Hajri
CHPE4512/20	Chemical Reaction Engineering	Dr. Rashid Salim Al-Hajri
CHPE4612/10	Unit Operation II	Dr. Mohammad Zaher Al Abri
CHPE4612/20	Unit Operation II	Dr. Mohammad Zaher Al Abri
CHPE4912/10	Special Topics II	Dr. Gholamreza Vakili-Nejad
CHPE5207/10	Petroleum Refining	Dr. Abdul Aziz Rashid Al-Hashmi
CHPE5116/10	Biochemical Engineering	Dr. Ala'a Al-Muhtaseb
CHPE5212/10	Chemical Engineering Lab III	Dr. Farouk Sabri Mjalli
CHPE5212/20	Chemical Engineering Lab III	Dr. Farouk Sabri Mjalli
CHPE5512/10	Project II	Dr. Abdul Aziz Rashid Al-Hashmi
CHPE5512/20	Project II	Dr. Ala'a Al-Muhtaseb
CHPE5512/30	Project II	Dr. Ghulam Murshid
CHPE5512/40	Project II	Dr. Farouk Sabri Mjalli
CHPE5512/50	Project II	Dr. Omar Houache
CHPE5512/60	Project II	Dr. Jamil Nasser
CHPE5512/70	Project II	Dr. Rashid Salim Al-Hajri
CHPE5512/80	Project II	Dr. Ashish Gujrathi
CHPE5512/90	Project II	Dr. Gholamreza Vakili-Nejad
CHPE5512/100	Project II	Dr. Mohammad Zaher Al Abri
CHPE5512/110	Project II	Dr. Talal Khamis Al-Wahaibi
CHPE5512/120	Project II	Dr. Hasan Abdellatif Hasan
PETM3006/10	Engineering Geology	Dr. Khalid Hilal Al-Rawahi
PNGE2102/10	Basic Mechanics	Dr. Farook Khalfan
PNGE3202/10	Numerical Methods	Dr. Farouk Sabri Mjalli
PNGE3202/20	Numerical Methods	Dr. Farouk Sabri Mjalli
PNGE3212/10	Rock & Fluid Properties	Dr. Hamoud Khalfan Al-Hadrami
PNGE4101/10	Statistics for Engineers	Dr. Adel Mohammad Al-Ajmi
PNGE4101/20	Statistics for Engineers	Dr. Adel Mohammad Al-Ajmi
PNGE4512/10	Formation Evaluation	Dr. Hamoud Khalfan Al-Hadrami
PNGE4612/10	Well Testing	Prof. Rashid Salim Al-Maamari
PNGE4712/10	Reservoir Simulation	Dr. Majid Ahmed Al-Wadhahi

Code	Title	Instructor(s)
PNGE5102/10	Health, Safety & Environment	Dr. Omar Houache
PNGE5103/10	Engineering Economy	Dr. Hasan Abdellatif Hasan
PNGE5103/20	Engineering Economy	Dr. Hasan Abdellatif Hasan
PNGE5203/10	Management for PCE	Dr. Khalid Hilal Al-Rawahi
PNGE5215/10	Project II	Dr. Majid Ahmed Al-Wadhahi
PNGE5412/10	Field Process of NG	Dr. Yahya Mansoor Al-Wahaibi

Table E4: Courses Offered in Fall 2017

Code	Title	Instructor(s)
CHPE3101/10	Materials Engineering	Dr. Abdul Aziz Rashid Al-Hashmi
CHPE3102/10	Engineering Thermodynamics	Dr. Ala'a Al-Muhataseb
CHPE3102/20	Engineering Thermodynamics	Dr. Ala'a Al-Muhataseb
CHPE3103/10	Professional Practice	Dr. Hasan Abdellatif Hasan
CHPE3103/20	Professional Practice	Dr. Hasan Abdellatif Hasan
CHPE3112/10	Principles of Chemical Processes	Dr. Jamil Naser
CHPE3302/10	Fluid Flow	Dr. Talal Khamis Al-Wahaibi
CHPE3402/10	Heat Transfer	Dr. Muhammad Rashid Usman
CHPE4112/10	Chemical Eng. Thermodynamics	Dr. Ghulam Murshid
CHPE4112/20	Chemical Eng. Thermodynamics	Dr. Ghulam Murshid
CHPE4212/10	Unit Operations I	Dr. Rashid Salim Al-Hajri
CHPE4212/20	Unit Operations I	Dr. Rashid Salim Al-Hajri
CHPE4302/10	Desalination	Dr. Mohammad Zaher Al Abri
CHPE4312/10	Chemical Engineering Lab I	Dr. Jamil Naser
CHPE4312/20	Chemical Engineering Lab I	Dr. Jamil Naser
CHPE4712/10	Chemical Engineering Lab II	Dr. Farouq Sabri Mjalli
CHPE4712/20	Chemical Engineering Lab II	Dr. Farouq Sabri Mjalli
CHPE5112/10	Chemical Process Control	Dr. Farouq Sabri Mjalli
CHPE5112/20	Chemical Process Control	Dr. Farouq Sabri Mjalli
CHPE5312/10	Project I	Dr. Ashish Gujrathi
CHPE5312/20	Project I	Dr. Ala'a Al-Muhataseb
CHPE5312/30	Project I	Dr. Ala'a Al-Muhataseb
CHPE5312/40	Project I	Dr. Jamil Naser

Code	Title	Instructor(s)
CHPE5312/50	Project I	Dr. Talal Khamis Al-Wahaibi
CHPE5312/60	Project I	Dr. Abdulaziz Rashid Al-Hashmi
CHPE5312/70	Project I	Dr. Gholamreza Vakili-Nejad
CHPE5312/80	Project I	Dr. Rashid Salim Al-Hajri
CHPE5312/90	Project I	Dr. Mohammad Zaher Al Abri
CHPE5312/100	Project I	Dr. Farouk Sabri Mjalli
CHPE5312/110	Project I	Dr. Hasan Abdellatif Hasan
CHPE5312/120	Project I	Dr. Ghulam Murshid
CHPE5312/130	Project I	Dr. Muhammad Rashid Usman
CHPE5412/10	Plant & Process Design	Dr. Hasan Abdellatif Hasan
CHPE5412/20	Plant & Process Design	Dr. Hasan Abdellatif Hasan
CHPE5612/10	Chemical Process Safety	Dr. Omar Houache
CHPE5612/20	Chemical Process Safety	Dr. Omar Houache
PETM3006/10	Engineering Geology	Dr. Khalid Hilal Al-Rawahi
PNGE3111/10	Chemistry for Petroleum Engineering	Dr. Muhammad Rashid Usman
PNGE3112/10	Introduction to PNGE	Dr. Mahvash Karimi
PNGE3202/10	Numerical Methods	Dr. Ashish Gujrathi
PNGE4101/10	Statistics for Engineers	Dr. Adel Mohammad Al-Ajmi
PNGE4212/10	Drilling Technology	Dr. Hamoud Khalfan Al-Hadrami
PNGE4312/10	Drilling Technology Lab	Dr. Hamoud Khalfan Al-Hadrami
PNGE4412/10	Reservoir Engineering	Prof. Rashid Salim Al-Maamari
PNGE5103/10	Engineering Economy	Dr. Ashish Gujrathi
PNGE5112/10	Production Engineering	Dr. Yahya Mansoor Al-Wahaibi
PNGE5115/10	Project I	Dr. Majid Ahmed Al-Wadhahi
PNGE5122/10	Introduction to Rock Mechanics	Dr. Adel Mohammad Al-Ajmi
PNGE5203/10	Management for PCE	Dr. Khalid Hilal Al-Rawahi
PNGE5212/10	Secondary Oil Recovery	Dr. Majid Ahmed Al-Wadhahi



POSTGRADUATE STUDIES

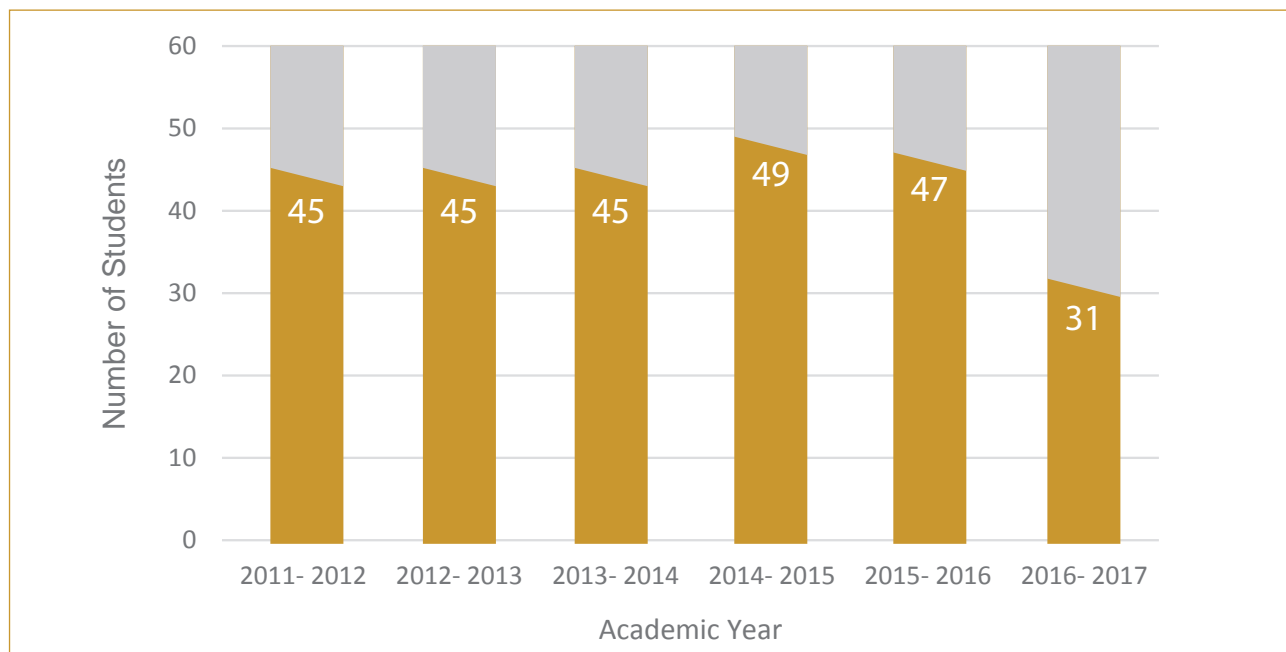


Figure E1: Postgraduate Students' Enrollment for the Past Six Years

Courses

Table E5: Postgraduate Courses Offered in Year 2017

Semester	Code	Title	Instructor(s)
Fall 2017	CHPE6200/10	Advanced Chemical Thermodynamic	Dr. Gholamreza Vakili-Nejad
	CHPE7001/10	Thesis	Dr. Gholamreza Vakili-Nejad
	CHPE8001/10	PhD Thesis	Dr. Gholamreza Vakili-Nejad
	PNGE6001/10	Transport Processes	Dr. Nader Mosavat
	PNGE6108/10	Thermo physical Properties of Fluids	Dr. Gholamreza Vakili-Nejad
	PNGE7001/10	Thesis	Dr. Majid Al-Wadhahi
	PNGE8001 /10	PhD Thesis	Dr. Gholamreza Vakili-Nejad
Spring 2017	CHPE6100/10	Advanced Transport Phenomena	Dr. Gholamreza Vakili-Nejad
	CHPE6300/10	Advanced Chemical Reaction	Dr. Ashish Gujrathi
	CHPE7001/10	Thesis	Dr. Gholamreza Vakili-Nejad
	CHPE8001/10	PhD Thesis	Dr. Gholamreza Vakili-Nejad
	PNGE6002/10	Advanced Reservoir Engineering	Dr. Peyman Pourafshary
	PNGE6105/10	Oil Recovery Methods	Dr. Peyman Pourafshary
	PNGE7001/10	Thesis	Dr. Majid Al-Wadhahi
	PNGE8001 /10	PhD Thesis	Dr. Majid Al-Wadhahi

Postgraduate Students' Projects

Table E6: Students' Projects in Year 2017

No	Name	Project Title
1	Yaqoob Sulaiman Mohammad Al Marshoudi	Numerical Modeling and Economical Evaluation of Low Salinity Waterflooding in Tight Carbonate Reservoir in North Oman
2	Jamal Saif Mansour Al Aamri	Modified Cubic EOS for Improved Density Prediction
3	Iman Khalifa Mohamed Al Khanbashi	Measurement of Oil Swelling using Carbonated Water Injection
4	Taher Yousuf Al Ghailani	Alkaline-Biosurfactant- Biopolymer Process and its Potential for Enhancing Oil Recovery in Omani Oil Field: Experimental Study

5	Khulood Salim Khamis Al Nofli	Effect of the Initial Wettability on Performance of LSW for Carbonate
6	Hamda Said Ali Al Kindi	Intergration of Fibre Optics Data (DTS & DAS) with Reservoir Petrophysical Properties
7	Nadia Said Masoud Al Khalifin	Wellbore Stability Analysis in Sandstone Formations During Production
8	Bilal Sami Shaheed	Geomechanical Stability Analysis in Shale Formations During Drilling
9	Walaa Sid Ahmed Rahma Mohammad	Enhancement of Deep Desulfurization of Liquid Fuels Using Deep Eutectic Solvents and Emulsification
10	Amira Sulaiman Rashid Al Gharibi	Modeling and Optimization Hydrotreating Process in Trickle Bed Reactor
11	Alla Salim Ali Al Abri	Simulation of a Gas with Condensate Pipeline in Oman North to Estimate the Physical Parameters
12	Alanood Nasser Abdullah Al Breiki	Economic, Energy and Environment Based Criteria for Recovery Processes using Evolutionary Multi-objective Optimization Approach
13	Ibtisam Saif Rashid Al Shabibi	Investigating Water Compatibility and Injectivity Decline at Bahja Field
14	Maryam Mohammed Isma'il Alkamali	Non-Routine Flaring in Upstream Oil and GAS Industry - Root Causes AND Mitigations
15	Mohammed Mahdi Eshrati (PhD)	Mechanistic Study of Drag Reducing Polymers
16	Abdullahi Yusuf (PhD)	Catalytic Upgrading of Heavy Oil using Liquid Catalyst
17	Muna Hamed Salim Al Hinaï (PhD)	Multifunctional Membrane Fabrication for Enhanced Desalination Processes of Seawater
18	Farrukh Jamil (PhD)	Green Fuel Production from Oman Based Biomass



RESEARCH

Grants and Contracts

Table E7: : New Grants, Contracts and Consultancies by Faculty Members in Year 2017

Research Title	Principal Investigator	Sponsors	Budget (OMR)
Elimination of Polutted Brine well-recharge using solar-powered zero-liquid discharge brackish water desalination in Oman	Dr. Mohammad Al-Abri	SQU, Internal	700
Carbon Dioxide Capture Using Environmentally Friendly Solvents	Dr. Jamil Nasir	SQU, Internal	5,500
Optimization of Process Design Problems Using Evolutionary Algorithms	Dr. Ashish Gujarathi	SQU, Internal	5,500
Analysis of Solids from Nimlr Export Pumps	Dr. Mohammad Al-Abri	PDO	75,000

Publications

Refereed Journal Papers

1. Alkhamisi, S.A., Hamid, C.A., Nadaf, S.K., Al-Bakri, A.N., Al-Maamari, R.S. and Choudri, B. 2017. Influence of Boron on Sorghum (*Sorghum Bicolor* L.) Forage Yield under Different Water Salinity Levels. *International Journal of Contemporary Applied Researches*, 4:50-61.
2. Jamil, F., Saxena, S.S., Al-Muhtaseb, A.H., Baawain, B., Al-Abri, M., Viswanadham, N., Kumar, G. and Abu-Jrai, A.M. 2017. Valorization of Waste “date seeds” Bio-Glycerol for Synthesizing Oxidative Green Fuel Additive. *Journal of Cleaner Production*, 165:1090-1096.
3. Jamil, F., Al-Muhtaseb, A.H., Baawain, M., Al-Haj, L. and Al-Hinai, M. 2017. Phoenix *Dactylifera* Kernel Oil Used As Potential Source for Synthesizing Jet Fuel and Green Diesel. *Energy Proceedia*, 118:35-39.
4. Al-Muhtaseb, A.H., Jamil, F., Zar Myint, M.T., Baawain, M., Al-Abri, M., Bao Dung, T.N., Kumar, G. and Ahmad, M.N. 2017. Cleaner Fuel Production from Waste Phoenix *Dactylifera* I. Kernel Oil in the Presence of a Bimetallic Catalyst: Optimization and Kinetics Study. *Energy Conversion and Management*, 146:195-204.
5. Viswanadham, N. Saxena, S.K. and Al-Muhtaseb, A.H. 2017. Effect of Zeolite Pore Morphology on Solvent-less Alkylation of Benzene with 1-Hexene. *Materials Today Chemistry*, 4:45-52.
6. Viswanadham, N., Saxena, S.K. and Al-Muhtaseb, A.H. 2017. Cu Functionalized Nano Crystalline ZSM-5 as Efficient Catalyst for Selective Oxidation of Toluene. *Materials Today Chemistry*, 3:37-48.
7. Abu-Jrai, A.M., Al-Muhtaseb, A.H. and Hasan, A.O. 2017. Combustion, Performance, and Selective Catalytic Reduction of NO_x for a Diesel Engine Operated with Combined Tri Fuel (H₂, CH₄, and Conventional Diesel). *Energy*, 119:901-910.
8. Soltani, S., Rashid, U., Arbi Nehdi, I., Al-Resayes, S.I. and Al-Muhtaseb, A.H. 2017. Sulfonated Mesoporous Zinc Aluminate Catalyst for Biodiesel Production from High Free Fatty Acid Feedstock using Microwave-Heating System. *Journal of the Taiwan Institute of Chemical Engineers*, 70:219-228.
9. Sharma, G., Kumar, D., Kumar, A., Al-Muhtaseb, A.H, Pathania, D., Naushad, M. and Mola, G.T. 2017. Revolution from Monometallic to Trimetallic Nanoparticle Composites, Various Synthesis Methods and Their Applications: A Review. *Materials Science and Engineering*, 71:1216-1230.
10. Munir, D.A., Piepenbreier, F. and Usman, M.R. 2017. Hydrocracking of a Plastic Mixture over Various Micro-Mesoporous Composite Zeolites. *Powder Technology*, 316:542-550.

11. Khawaja, S.Y., Usman, M.R., Nasif, M., Akram, M.S., Afzal, W. and Akhtar, N.A. 2017. Mass Transfer Efficiency of a Tall and Low Plate Free Area Liquid Pulsed Sieve-Plate Extraction Column. *International Journal of Industrial Chemistry*, 14:397-410.
12. Mjalli, F.S. and Mousa, H. 2017. Viscosity of Aqueous Ionic Liquids Analogues as a Function of Water Content and Temperature. *Chinese Journal of Chemical Engineering*, 25:1877-1883.
13. Mjalli, F.S. and Jabbar, N.A. 2017. Ultrasonic Study of Binary Mixtures of Three Common Eutectic Solvents with Water at Different Temperatures. *Journal of Solution Chemistry*, 3:1-18.
14. Shahbaz K., Williamson, S.T., Mjalli, F.S., Al-Nashef, I.M. and Farid, M.A. 2017. Application of Deep Eutectic Solvents as Catalysts for the Esterification of Oleic Acid with Glycerol. *Renewable Energy*, 114B:480–488.
15. Walaa, S., Rahma, A., Mjalli, F.S., Al-Wahaibi, T. and Al-Hashmi, A.A. 2017. Polymeric-Based Deep Eutectic Solvents for Effective Extractive Desulfurization of Liquid Fuel at Ambient Conditions. *Chemical Engineering Research and Design*, 120:271–283.
16. Shah, D., Zhakenov, T., Toksanbayev, N., Kazakbayeva, Z. and Mjalli, F.S. 2017. Formation of type III Deep Eutectic Solvents and Effect of Water on their Intermolecular Interactions. *Fluid Phase Equilibria*, 441:43-48.
17. Mjalli, F.S., Murshid, G., Al-Zakwani, S. and Hayyan, A. 2017. Monoethanolamine-based Deep Eutectic Solvents, their Synthesis and Characterization. *Fluid Phase Equilibria*, 448:30-40.
18. Mjalli, F.S. and Ahmed, O.U. 2017. Ethaline and Glyceline Binary Eutectic Mixtures and their Characteristics and Intermolecular Interactions. *Asia Pacific Journal of Chemical Engineering*, 12:313-320.
19. Mjalli, F.S. and Ahmed, O.U. 2017. Density of Aqueous Choline Chloride-Based Ionic Liquids Analogues. *Thermochimica Acta*, 647:8–14.
20. Vakili-Nezhaad, G.R., Al-Wadhahi, M., Gujrathi, A.M., Al-Maamari, R. and Mohammadi, M. 2017. Effect of Temperature and Diameter of Narrow Single-Walled Carbon Nanotubes on the Viscosity of Nanofluid: A Molecular Dynamics Study. *Fluid Phase Equilibria*, 434:193-199.
21. Vakili-Nezhaad, G.R., Aisaee, A.M., Jabri, M.A. and Barwani, S.S. 2017. Density Calculation of Ionic Liquids. *Materials Physics and Mechanics*, 32:8-13.
22. Rudyk, S., Spirov, P., Hajri, R. and Vakili-Nezhaad, G.R. 2017. Supercritical Carbon Dioxide Extraction of Oil Sand Enhanced by Water and Alcohols as Co-Solvents. *Journal of CO₂ Utilization*, 17:90-98.
23. Hassani, A., Veyskarami, M., Al-Ajmi, A. and Masihi, M. 2017. A Modified Method for Predicting the Stresses Around Producing Boreholes in an Isotropic in-situ Stress Field. *International Journal of Rock*

Mechanics and Mining Sciences, 96:85-93.

24. Naser, J., Mjalli, F.S. and Gano, Z.S. 2017. Molar Heat Capacity of Tetrabutylammonium Chloride-based Deep Eutectic Solvents and their Binary Water Mixtures. *Asia Pacific Journal of Chemical Engineering*, 12:938-947.
25. Abubakar, A., Al-Wahaibi, T., Al-Hashmi, A.R., Al-Wahaibi, Y. and Al-Ajmi, A. 2017. Effect of Pipe Inclination on Holdups/Velocity Ratios of Oil-Water Flow without and with Addition of Drag-Reducing Polymer. *International Journal of Multiphase Flow*, 89:359-374.
26. Al-Wahaibi, T., Abubakar, A., Al-Hashmi, A.R., Al-Wahaibi, Y. and Al-Ajmi, A. 2017. Energy Analysis of Oil-Water Flow with Drag-Reducing Polymer in different Pipe Inclinations and Diameters. *Journal of Petroleum Science and Engineering*, 149:315-321.
27. Al Ani, Z., Al Wahaibi, T., Mjalli, F.S., Al Hashmi, A. and Abujdayil, B. 2017. Flow of Deep Eutectic Solvent-Simulated Fuel in Circular Channels: Part II-Extraction of Dibenzothiophenec. *Chemical Engineering Research and Design*, 119:294-300.
28. Al Ani, Z., Al Wahaibi, T., Mjalli, F.S., Al Hashmi, A. and Abujdayil, B. 2017. Flow of Deep Eutectic Solvent-Simulated Fuel in Circular Channel: Part I—Flow Patterns and Pressure Drop. *Chemical Engineering Research and Design*, 119:286-293.
29. Eshrati, M., Al-Wahaibi, T., Al-Hashmi, A.R., Al-Wahaibi, Y., Al-Ajmi, A. and Abubakar, A. 2017. Experimental Study of Drag Reduction of Polymer-Polymer Mixtures in Horizontal Dispersed Oil-Water Flow. *Experimental Thermal and Fluid Science*, 83:169-176.
30. Hosein, G., Ayoub, M., Suriati, S., Murshid, G., Sarah. F. and Azmi, A.S. 2017. Investigation of Various Process Parameters on the Solubility of Carbon Dioxide in Phosphonium-based Deep Eutectic Solvents and their Aqueous Mixtures: Experimental and Modelling. *International Journal of Greenhouse Gas Control*, 66:147-158.
31. Hosein, G., Ayoub, M., Suriati, S., Sintayehu, M.H., Murshid, G., Sarah. F. and Saleem, N.K. 2017. Experimental and Prediction of Volumetric Properties of Aqueous Solution of Allyltriphenyl Phosphonium Bromide Triethylene Glycol) Deep Eutectic Solvents. *Thermochimica Acta*, 657:123-133.
32. Sahil, G., Murshid, G., Mjalli, F.S. and Waqar, A. 2017. Physical Properties of Aqueous Blend of Diethanolamine and Sarcosine: Experimental and Correlation Study. *Chemical Papers*, 71:1799-1807.
33. Murshid, G., Sahil, G. and Mjalli, F.S. 2017. Experimental and Correlation Study of Selected Physical Properties of Aqueous Blends of Potassium Sarcosinate and 2-Piperidineethanol as a Solvent for CO₂

Capture. *Chemical Engineering Research & Design*, 118:121-130.

34. Karthik, L., Manal, A.R., Jamal, A.S., Al Abri, M. and Joydeep, D. 2017. Supported versus Colloidal Zinc Oxide for Advanced Oxidation Processes. *Applied Surface Science*, 411:285-290.
35. Muna, A.H., Priyanka, S., Al Abri, M., Sergey, D., Ashraf, A.H. and Joydeep, D. 2017. Antimicrobial Activity Enhancement of Polyethersulfone Membranes by In-Situ Growth of ZnO Nanorods. *ACS Omega*, 2:3157-3167.
36. Al-Hadi, M.A., Geetha Devi, M., Al Abri, M. and Anjali Prajith, K.A. 2017. Adsorption studies of Tamarind Shell Carbon in the Treatment of Industrial Effluent. *Journal of Advanced Science of Engineering and Medicine*, 9:1-7.
37. Castelletto, S., Rosa, L., Blackledge, J., Al Abri, M. and Boretti, M. 2017. Advances in Diamond Nanofabrication for Ultrasensitive Devices. *Microsystems & Nano Engineering*, 3:17061.
38. Boretti, A. Castelletto, S., Al-Zubaidy, S., Vaclavikova, M., Mikhailovsky, S. and Al-Abri, M. 2017. Outlook for Graphene-based Desalination Membranes. *Clean Water*, 8:13-24.
39. Nikkam, N., Toprak, M.S., Dutta, J., Al-Abri, M., Zar Myint, M.T., Souayah, M. and Mohseni, S.M. 2017. Fabrication and Thermo-Physical Properties Characterization of Ethylene Glycol—MoS₂ Heat Exchange Fluids. *International Communications in Heat Mass Transfer*, 89:185–189.

Conferences

1. Al-Sabahi, J., Bora T., Al-Abri, M. and Dutta, J. 2017. Plasmonic Photocatalysis by Gold Nanoparticle Decorated Zinc Oxide Nanorods for Efficient Degradation of Pharmaceutical Wastes". In: *11th edition of International Conference on Composite Science & Technology*, Sharjah, UAE, 4-6 April 2017.
2. Al-Ghafri B., Sathe B., Bora, T., Dobretsov, S. and Al-Abri, M. 2017. Photocatalytic Disinfection of PES Membranes. In: *3rd International Conference on Desalination using Membrane Technology*, Spain, 2-5 April 2017.
3. Mohammad, A., Naser, J. and Mjalli, F.S. 2017. Aliphatic and Aromatic Separation Using Deep Eutectic Solvents as Extracting Agent. In: *The 10th International Conference on Thermal Engineering: Theory and Applications*, Sultanate of Oman, Muscat, 26-28 February 2017.
4. Behnoud far, P., Gholilou, A. and Al-Ajmi, A. Inverse Problem Theory to Estimate Thermo-Poroelastic Parameters: An Analytical/Experimental Approach. In: *51st US Rock Mechanics Geomechanics*

Symposium. San Francisco, California, USA, 25-28 June 2017.

5. Hatmi, K.A., Mashrafi, A.A., Balushi, S.U.A., Kalbani, H., Shaikh, M. and Vakili-Nezhaad, G.R. 2017. Ways for Optimizing and Increasing Reliability of Centrifugal Compression Systems in Oil and Gas Industry: Case Study in Sultanate of Oman. In: *Abu Dhabi International Petroleum Exhibition and Conference (ADIPEC)*, Abu Dhabi, UAE, 13-16 November 2017.
6. Vakilinejad, A., Ahmad, W. and Vakili-Nezhaad, G.R. 2017. Volumetric Behavior Study of Petroleum Fluids Mixtures through Shrinkage Factor. In: *ICTEA: The 10th International Conference on Thermal Engineering*, Oman, Muscat, 26-28 February 2017.
7. Mohammad, A., Naser, J. and Mjalli, F.S. 2017. Aliphatic and Aromatic Separation using Deep Eutectic Solvents as Extracting Agents, In: *The 10th International Conference on Thermal Engineering Theory and Applications*, Muscat, Oman, 26-28 February 2017.
8. Al-Ani, Z., Mjalli, F.S., Al-Wahaibi, T., Al-Hashmi, A.A. and Abu-Jdayil, B. 2017. Deep Desulfurization with Deep Eutectic Solvent using Small Channels. In: *The 10th International Conference on Thermal Engineering Theory and Applications*, Muscat, Oman, 26-28 February 2017.
9. Alazzawi, M., Mjalli, F.S., Al-Wahaibi, T., Al-Hashmi, A.A. and Abu-Jdayil, B. 2017. Flow of Two Phase Simulated Fuel-Peg 200 in Small Channels. In: *The 10th International Conference on Thermal Engineering Theory and Applications*, Muscat, Oman, 26-28 February 2017.
10. Alazzawi, M., Mjalli, F.S., Al-Wahaibi, T., Al-Hashmi, A.A. and Abu-Jdayil, B. 2017. Influence of liquid–liquid Flow Patterns on the Fuel Desulfurization Efficiency in Mini Channels. In: *Green and Sustainable Chemistry*, Muscat, Oman, 13-15 November 2017.
11. Jamil, F., Al-Muhtaseb, A.H., Al-Haj, L., Al-Hinai, M.A. and Baawain, M. 2017. Phoenix Dactylifera Kernel Oil Used as Potential Source for Synthesizing Jet Fuel and Green Diesel. In: *2nd International Conference on Advances on Clean Energy Research*, Berlin Germany, 7-9 April 2017.
12. Munir, D. and Usman, M.R. 2017. Investigating Hydrocracking of Waste Plastic Mixture Using Mesoporous Beta Catalysts, In: *67th Canadian Chemical Engineering Conference*. Edmonton, 22–25 October 2017.
13. Usman, M.R. and Akram, M.S. 2017. Simulation of a Hydrogen Fuelled Mobile Power Plant Based on a Sustainable Organic Hydride. In: *The 10th International Conference on Thermal Engineering: Theory and Applications*, Muscat, 26–28 February 2017.
14. Al-Siyabi, B., Gujarathi, A.M., Sivakumar, N. and Mathew, M. 2017. Multi-objective Optimization of

Fed-Batch Bioreactor Towards Lysine Production. In: *The 10th International Conference on Thermal Engineering: Theory and Applications*, Muscat, Oman, 26-28 February 2017.

15. Al-Harathi, A., Gujarathi, A.M. and Vakili-Nejad, G. 2017. Evolutionary Approach to find Kinetic Parameters for Bioreactor for Lactic Acid Production. In: *The 10th International Conference on Thermal Engineering: Theory and Applications*, Muscat, Oman, 26-28 February 2017.
16. Tikadar, D. Gujarathi, A.M. and Guria, C. 2017. Detailed Analysis of MDEA based Gas Sweetening Process. In: *The 10th International Conference on Thermal Engineering: Theory and Applications*, Muscat, Oman, 26-28 February 2017.
17. Al-Harathi, A., Gujarathi, A.M. and Vakili-Nejad, G. 2017. Optimization of Fed-batch Bioreactor based Lactic Acid Production using Date Juice. In: *4th International conference on Numerical Analysis and Optimization*, Muscat, Oman, 2-5 January 2017.
18. Gujarathi, A.M., Al-Siyabi, B., Sivakumar, N. and Mathew, M. 2017. Differential Evolution Approach for Optimization of Selected Biochemical Processes. In: *KOMPLASTECH: The 24th Conference Computer Methods in Materials Science*, Zakopane, Poland, 15-18 January 2017.
19. Gujarathi, A.M. 2017. Multi-objective Differential Evolution with Decomposition and Jumping Gene Adaptation (MODE-DJGa) Algorithm. In: *4th International conference on Numerical Analysis and Optimization*, Muscat, Oman, 2-5 January, 2017.

Books

1. Usman, M.R. 2017. Short Handbook of Mathematical Formulas for Chemical Engineers, Creatspace, ISBN-13: 978-1976404467.

Book Chapters

1. Naushad, M., Al-fadul, S.M., Al-Muhtaseb, A.H., Ponnusamy, S.K., AL-Othman, Z.A. and Bushra, R. (2017). Progress from Composite Materials to Biocomposite Materials and Their Applications. In: *Modified Biopolymers: Challenges and Opportunities*, Nova Science Publisher, NY, USA, pp. 163-188.

Technical Reports

1. Al-Maamari, R.S. 2017. *Coreflooding Study on BJ and SDDN Fields: BJ Coreflooding Experiments*, Interim Report, Petroleum Development Oman.
2. Al-Maamari, R.S. and Al-Hashmi, A.Z. 2017. *Polymer EOR in PDO: Oil recovery by FLOPAAM 3630s at different solution viscosities*, Interim Report, Petroleum Development Oman.
3. Al-Maamari, R.S. and Al-Hashmi, A.Z. 2017. *Polymer EOR in PDO: BASF ASPIRO P6201X Adsorption and In-situ Rheology*, Interim Report, Petroleum Development Oman.
4. Mjalli, F.S., Al-Wahaibi, T. and Al-Hashmi, A.A. 2017. *Deep desulfurization of liquid fuel in microchannels using deep eutectic solvents. SQU-UAEU Collaborative Research Grant, CL/SQU-UAE/16/02*. Technical Report, Sultan Qaboos University, Sultanate of Oman.
5. Mjalli, F.S. and Naser J. 2017, *Eutectic Solvents for The Separation Of Aromatic And Aliphatic Compounds, SQU Internal Research Grant*, Technical Report, Sultan Qaboos University, Sultanate of Oman.



OTHER ACTIVITIES

Awards

1. Ala'a H. Al-Muhtaseb, Best Researcher Award for 2017 (College of Engineering, SQU), May 2017.
2. Farouk S. Mjalli, Student: Walaa S. Ahmed Rahma, First Place at the 3 Minutes Thesis Competition (SQU 2017). Title of the project: "Enhancement of extractive deep desulfurization of liquid fuels using polymeric-based eutectic solvents and emulsification".
3. Mohammad Al-Abri, Student: Mona Hamed Al-Hinai: Best young researcher award at Second GCC Marine Biotechnology Conference: Emerging opportunities and future perspectives (2017, Oman). Title of the project: "Toward Biofouling Inhibition of Poly(ether sulfone) Membranes by in Situ Growth of ZnONanorods".
4. Dr. Adel Al-Ajmi, Students: Bilal Shaheed and Nadia Al Khalifin: Second Place at the SPE Annual Student Poster Competition (SASPC 2017, Oman). Title of the project: "Geomechanical Stability Charts for Omani Fields".

Short Courses and Co-operations

1. Al-Abri, M. 2017. *"JINR Expertise for Member States and Partner Countries"* International Training Programme, Duna, Russia, 17-21 April 2017.
2. Al-Wadhahi, M.A. 2017. *tNavigator training course*, SQU, Muscat, Oman, 15-18 January 2017.

Invited Talks/Guest Speaker

1. Al-Maamari, R.S. 2017. *Core flooding Study on BJ and SDDN Fields: SDDN Core flooding Experiments, Final Report, Petroleum Development Oman.*
2. Al-Muhtaseb, A.A. 2017. *2nd International Conference on Alternative Fuels: Future and Challenges (ICAF2017). Daegu, South Korea, 8 October 2017.*
3. Mjalli, F.S. 2017 *"Designer Solvents", New Findings and Challenges, The 10th International Conference on Thermal Engineering Theory and Applications, Muscat, Sultanate of Oman, 26 February 2017.*
4. Vakili-Nezhaad, G.R. 2017. *Interaction of Ethanol and Single-Walled Carbon Nanotubes, INN International Conference/Workshop on Nanotechnology and Nanomedicine. Albroz, Iran, 2 May 2017.*

Society of Chemical Engineers (SChemE)



Workshops, Short Training Courses and Competitions

1. Aspen Plus Workshop (8/10/2017): Aspen Plus work shop was organized by the society of chemical engineering students (SchemE) to teach basics of the software and its application to final year design project.
2. Safety Seminar (28/11/2017): Seminar on safety was organized by the society of chemical engineering students (SCHEME) at PCED to bring awareness about personal and workplace safety. The students were involved in first aid training and lab safety rules.
3. Blood donation (12/9/2107): Team of students known as "Together for Good" organized the blood donation drive at SQU.
4. Chemical Engineering Gathering (12-15/02/2017): Focus was on chemical plant design including safety and environmental issues receiving great attention globally.
5. Engineering Challenge (20/02/2017): Organized between students of various engineering majors In the College of Engineering at SQU. In addition, some engineering colleges from outside with the aim of compete and exchange ideas between the students.
6. Chem E Car Competition (13/02/2017): Designing a car that uses a green energy.

Society of Petroleum Engineers – SQU SPE Students Chapter



Workshops, Short Training Courses and Competitions

1. Excel/Matlab Workshop (16/11/2017): A workshop on Excel and Matlab was organised in PNGE computer lab to develop efficient use of the two softwares
2. Petro-field Competition (02/12/2017): Competition for PNGE students to familiarize students with culture of petroleum industry.
3. Art of Presentation (27/11/2017): A workshop for PNGE students, designed to enhance their powerpoint presentation skills.
4. National Day Celebration (20/11/2017): PNGE students organised an open day to celebrate national day.



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