



2010 Annual Report



College of Engineering

<http://www.squ.edu.om/eng/>

College of Engineering

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Dr. Jamil Naser (Department of Petroleum and Chemical Engineering)

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College of Engineering



EXECUTIVE SUMMARY

- The College offers Bachelor of Engineering degrees in eight undergraduate programs: Civil, Mechanical, Electrical & Computer, Petroleum & Natural Gas, Architectural, Industrial, Chemical & Process, and Mechatronics. The programs in Architectural Engineering, Chemical & Process Engineering, Industrial Engineering, and Mechatronics Engineering have been accredited by ABET, Inc. in 2009, while the engineering programs in Civil, Mechanical, Electrical & Computer, Petroleum & Natural Gas received substantially equivalency in 2006 and will be assessed for accreditation by ABET in 2013. In addition, the College offers a joint program in Agricultural Engineering which is housed in the College of Agriculture and Marine Science (CAMS).
- The number of new undergraduate students admitted every year in the College has remained relatively constant at around 460 students for the last three years. The total number of students enrolled in the College remains at around 2600 undergraduate students. The number of engineering students graduating every year has been increasing during the last three years. In 2009 and 2010 commencements, 387 and 391 undergraduate students were graduated respectively.
- The College is starting to see a gradual increase in post graduate students enrollment. In 2010, the number of registered Master students is slightly more than 100. For the first time, PhD students have been admitted, where the total number is now 8 PhD students. About 20 Master students graduated in 2009 and 2010 Commencements.
- The College continues to attract external contracts every year. The total value of external research contracts, grants and support services reached respectively, about 650,000 in 2009 and 330,000 Omani Rials in 2010. As for internal grants from the University, 17 research projects were granted in 2009 and 11 research projects in 2010 with a budget of around 70,000 each year, a value within the range that has remained almost constant for the last eight years.
- The Renewable Energy Development of Oman Forum (REDOF09) which was held 22-23 November 2009 at SQU was well organized and attended. Well known scientists from US, Spain and Germany delivered keynote presentations. Constructive recommendations to SQU and to Governmental agencies were concluded.
- The College successfully organized two other conferences, The 2nd International Conference on Coastal Zone Engineering and Management (ArabCoast2010) was held on 01-03 November 2010 and International Conference on Applied Mechanics, Materials and Manufacturing (ICAMMM 2010) was held on 13-15 December 2010.



- The Dean and Prof. Adel Gastli participated in an official trip to Spain April 12-16 2010 along with a delegation from the Oman Chamber of Commerce. The aim of the visit is to improve ties with Spain especially in the area of Renewable Energy. Along with meetings with Spanish counterparts, important sites and institutions were visited.
- The Dean also participated in the GCC Deans of Engineering Meeting in Bahrain in April 2010.
- The College organized its retreat in March 2010 at Barr Al Jissa to develop its strategic plan on graduate studies and research. H.E. Dr Ali Bemani, VC, Dr Saif Al Haddabi, Assistant to Secretary General, TRC, Prof. Amer Al Rawas, DVCPS&R, Prof. Reginald Victor Dean of Research, also contributed to the discussions.
- The College organized an Open Day with the College of Science in April 2010 where both colleges discussed way of developing research collaboration among them.
- The 4th Engineering Gathering Student Gathering that included the Colleges of Engineering from UAE University, Qatar University in addition to Engineering Colleges in Oman was hosted by the College 3-7 April 2010.
- Offices in the new Lab Building (Block C) have been occupied and the laboratory fixed furniture (Phase I) will be completed in February 2011.

Dr. Ali Salem Al-Harthy
Dean, College of Engineering

College of Engineering

ADMINISTRATION, FACULTY, TECHNICAL AND SUPPORT STAFF

Dean

Dr. Ali Salem Al-Harthy, Associate Professor

Assistant Deans

Dr. Khalifa Al-Jabri, Associate Professor
Assistant Dean for Postgraduate Studies and Research

Dr. Hamoud Al-Hadhrami, Assistant Professor,
Assistant Dean for Undergraduate Studies

Dr. Mansoor Al-Harthy, Assistant Professor
Assistant Dean for Training & Community Service

Director of Administration

Mohammed Al-Shueily, Director
Ibrahim Al-Saifi, Deputy Director

College Administration Coordinators & Clerks

Syed Muneer Uddin (Dean's Office)
Ahmed Al-Kharboushi (ADPSR)
Abdullah Omar Al-Ojaily (ADTCS)
Sophie Tayco-Soldevilla (ADUS)
Hamed Al-Khanbashi (College Administration)
Salim Al-Hinai (College Administration).
Mohamed Reyaas Technician
Mohamed Al-Mufarji Technician
Ghareeb Khalfan Al-Mazrouey (College Administration)

College Computer Engineers

Khalfan Salem Al-Abri
Mahmood Nasser Al-Tobi

College Messengers

Issa Salim Al-Fori
Khalfan Masi Al-Rubkhi



STAFF

New Academic Staff

Department of Civil and Architectural Engineering
Dr. Mohamed El Kamash, Assistant Professor
Dr. Maatouk Khoukhi, Assistant Professor

Department of Electrical and Computer Engineering
Dr. Hassan Yousef, Associate Professor
Dr. Mohammad Shafiq, Associate Professor
Dr. Mounir Bouzguenda, Associate Professor

Department of Mechanical and Industrial Engineering
Dr. Yousef Hassan Zurigat, Associate Professor
Dr. Riadh Zaier, Assistant Professor
Dr. Khalid Goher, Assistant Professor

Department of Petroleum and Chemical Engineering
Dr. Farouk Mjalli, Associate Professor
Dr. Jamshid Fathi, Associate Professor

New Technical and Administrative Staff

Department of Civil and Architectural Engineering
Mr. Induka Nilupul Halwalage, Technician

Department of Mechanical and Industrial Engineering
Mr. Marshal Miranda, Technician

Department of Electrical and Computer Engineering
Mr. Nabil Hamza, Lab Supervisor
Ms. Rona George Allwyn, Engineer

Department of Petroleum and Chemical Engineering
Mr. Mohammed Al-Amri, Engineer
Mr. Adil Al-Rubkhi, Technician

New Lecturers and Demonstrators

Department of Civil and Architectural Engineering
Ms. Alya Abdul Sattar Al-Hashim, Demonstrator
Mr. Mubarak Khamis Al-Alawi, Demonstrator

Department of Electrical and Computer Engineering
Mr. Said Al-Abri, Demonstrator

Department of Mechanical and Industrial Engineering
Ms. Nasra Said Al-Maskari, Demonstrator
Mr. Mohamed Ali Al-Lawati, Demonstrator

College of Engineering

Academic Staff on Scholarships

Department of Civil and Architectural Engineering

Mr. Saleh Nasser Al-Saadi, Lecturer
Mr. Mohammed Al Shahri, Lecturer
Mr. Mubarak Khamis Al-Alawi, Demonstrator

Department of Electrical and Computer Engineering

Mr. Amir M. AbdulGhani, Lecturer
Mr. Mohammed Bait-Suwailem, Lecturer
Mr. Rashid Al-Abri, Lecturer
Mr. Hassan Murtadha Al-Lawati, Lecturer
Mr. Ahmed Al-Maashri, Lecturer

Department of Mechanical and Industrial Engineering

Mr. Nassr H. Al Hinai, Lecturer
Mr. Issam Mahfoodh Bait Bahadur, Lecturer
Ms. Nasra Said Al-Maskri, Demonstrator

Technical and Administrative Staff on Scholarships

Dean" Office

Mr. Khalfan Salim Al-Abri

Department of Electrical and Computer Engineering

Ms. Laila Hamood Al-Hasani, Coordinator

Department of Mechanical and Industrial Engineering

Ms. Basma Suleiman Al-Farsi, Coordinator

Promotions

From Assistant Professor to Associate Professor:

Department of Civil and Architectural Engineering

Dr. Mohammed Yousuf Al-Aghbari
Dr. Ahmad Sana
Dr. Ahmed Al-Futaisi

From Associate Professor to Professor:

Department of Mechanical and Industrial Engineering

Dr. Sabah Al-Sulaiman

Department of Electrical and Computer Engineering

Prof. Adel Gastli
Prof. Hadj Bourdoucen



COLLEGE COMMITTEES

Committees	Members	
College Board	Dr. Ali Salem Al-Harthy	Chair
	Dr. Hamoud Al-Hadhrami	Assistant Dean for Undergraduate Studies (ADUS)
	Dr. Khalifa Al-Jabri	Assistant Dean for Postgraduate Studies & Research (ADPSR)
	Dr. Mansoor Al-Harthy	Assistant Dean for Training and Community Service (ADTCS)
	Prof. Mohammed Ould Khaoua	HoD, Electrical and Computer Engineering (ECE)
	Dr. Ashraf Shikdar	HoD, Mechanical and Industrial Engineering (MIE)
	Dr. Ibrahim Ashour	HoD, Petroleum and Chemical Engineering (PCE)
	Dr. A.W. Hago	HoD, Civil and Architectural Engineering (CAE)
	Prof. Awni Shaaban	Invited Member, CAE
	Dr. Afaq Ahmad	Invited Member, ECE
Dr. Abdullah Al-Saidy	CAE	
Dr. Ali Al-Lawati	ECE	
Dr. Nasser Al-Azri	MIE	
Dr. Yahya Al-Wahaibi	PCE	
Mr. Mohammed Al-Shueily	Director of Administration	
Syed Muneer uddin	Secretary	
Executive	Dean	Chair
	Assistant Deans	
	Heads of the Departments	
	Director of Administration	

College of Engineering

Postgraduate Studies & Research	Dr. Khalifa Al-Jabri	ADPSR, Chair
	Dr. Khaled Al-Shamsi	CAE
	Dr. Mahmoud Abdel Goad	PCE
	Dr. Mahmoud Tahat	MIE
	prof. Hadj Bourdoucen	ECE
Computing	Dr. Talal Al-Wahaibi	PCE, Chair
	Dr. Dawood Al-Abri	ECE
	Dr. Ahmed Al-Futaisi	CAE
	Dr. Mohammed Khadem	MIE
	Mr. Mohammed Al-Shueily	DoA
	Mr. Mahmood Al-Toubi	Computer Eng
Accreditation	Dr. Ali Al-Harthy	Dean, Chair
	Dr. Hamoud Al-Hadhrami	ADUS
	Dr. Mansoor Al-Harthy	ADTCS
	Prof. Ramzi Taha	CAE
	Prof. Awni Shaaban	CAE
	Dr. Ibrahim Ashour	PCE
	Dr. Majid Al-Wadhahi	PCE
	Dr. Yousuf Zurigat	MIE
	Dr. Ashraf Shikdhar	MIE
	Dr. Faical Mnif	MCTE
	Dr. Joseph Jervase	ECE
Prof. Adel Gastli	ECE	
Industrial Training	Dr. Mansoor Al-Harthy	ADTCS, Chair
	Dr. Hossam Hassan	CAE
	Dr. Ayman Elnaggar	ECE
	Dr. Mohammed Shafiq	MCTE
	Dr. Abdullah Al-Shabibi	MIE
	Dr. Addul Aziz Al-Hashmi	PCE
	Mr. Mohammed Al-Shueily	DoA
HSE	Dr. Khalifa Al-Jabri	ADPSR, Chair
	Dr. Siegfried E. Trautwein	MIE
	Mr. Mohammed Al-Hadhrami	MIE
	Dr. Mohammed Al-Abri	PCE
	Mr. Nasser Al-Mandhari	PCE
	Dr. Farid Touati	ECE
	Mr. Saleh Al-Yazidi	ECE
	Mr. Juma Al-Ruzaiqi	CAE
Mr. Mohammed Al-Shueily	DOA/Coordinator	



Technical Staff Committee	Dr. Mansoor Al-Harthy	ADTCS, Chair
	Dr. Siegfried E. Trautwein	MIE
	Mr. Mohammed Al-Hadhrami	MIE
	Dr. Ilham Kirm	PCE
	Mr. Nasser Al-Mandhari	PCE
	Dr. Asaad El-Moudi	ECE
	Mr. Saleh Al-Yazidi	ECE
	Mr. Suleiman Al-Kindi	CAE
Mr. Mohammed Al-Shueily	DOA	
Publication & Web	Dr. Nabeel Al-Rawahi	MIE, Chair
	Dr. Salim Ferwati	CAE
	Dr. Fahad Bait Shiginah	ECE
	Dr. Mounir Bouzeguenda	ECE
	Dr. Jamil Naser	PCE
	Mr. Mohammed Al-Shueily	DOA
	Engr. Jamil Al-Yaqoubi	CAE
	Mr. Mohamed Reyaas	Dean's Office
Mr. Idris Al-Hooti	CET	
Curriculum	Dr. Hamoud Al-Hadhrami	ADUS, Chair
	Dr. Yahya Zain	CAE
	Dr. Hisham Eissa	CAE
	Dr. Afaq Ahmed	ECE
	Dr. Joseph Jervase	ECE
	Dr. Jamil Abdo	MCTE
	Dr. Faical Mnif	MCTE
	Dr. Hamdi Bashir	MIE
	Dr. Baba Jibril	PCE
	Dr. Rashid Al-Maamari	PCE
Engineering Society Advisors and Social Activity	Dr. Issal Al-Harthy	PCE, Chair
	Dr. Mohammed Al-Aghbari	CAE
	Dr. Hasan Yousuf	ECE
	Dr. Nasser Al-Azri	MIE
	Dr. Hamoud Al-Hadhrami	Invited Member
	Engr. Jamil Al-Yaqoubi	CAE
	Mr. Mohammed Al-Shueily	DoA
	Dr. Abdul Aziz Al-Hashami	PCE
	Mr. Hamdan Al-Amri	PCE
	Mr. Yousuf Al-Shueily	ECE
Mr. Mohamed Ali Al-Hadfami	MIE	

College of Engineering

Staff/Student Liaison	Dr. Ali Al-Harthy	Chair
	Dr. Hamoud Al-Hadhrami	ADUS
	Dr. Abdullah Al-Saidy	CAE
	Dr. Ali Al-Maqrashi	ECE
	Dr. R.A. Siddiqui	MIE
	Dr. Talal Al-Wahaibi	PCE
College Strategic Planning and Development	Dr. Ali Al-Harthy	Chair
	Dr. Zahid Qamar	MIE
	Dr. Khalifa Al-Jabri	ADGSR
	Dr. Hamoud Al-Hadhrami	ADUS
	Dr. Mansoor Al-Harthy	ADTCS
	Dr. Ali Al-Nuaimi	CAE
	Prof. Adel Gastli	ECE
	Dr. Fathi Jamshidi	PCE
College Academic Promotions	Dr. Ali Al-Harthy	Chair
	HoDs (Except HoD, ECE)	
	Prof. Adel Gastli	
	Prof. Ramzi Taha	
	Prof. Ibrahim Metwally	
Steering Committee for Mechatronic Engineering Program (MCTE)	Prof. Mohamed Khaoua	Chair
	Dr. Ashraf Shikdar	Co-Chair/Coordinator
	Dr. Hamoud Al-Hadhrami	ADUS
	Prof. Hadj Bourdoucen	ECE
	Prof. Adel Gastli	ECE
	Dr. Faical Mnif	ECE
	Dr. Farid Touti	ECE
	Dr. Mohammed Shafiq	ECE
	Dr. Jamil Abdo	MIE
	Dr. Tasneem Pervez	MIE
	Dr. Riadh Zaier	MCTE
Agriculture-Engineering Program Committee	Dr. Hamoud Al-Hadhrami	ADUS
	Dr. Zahid Qamar	MIE
	Dr. Ahmed Sana	CAE

**UNIVERSITY COMMITTEES****Committees****Representatives**

Committees	Representatives
Academic Promotions Committee	Prof. Mohamed Ould Khaoua
Library Committee	Dr. Sabah Al-Sulaiman
Course & Instructor Evaluation	Dr. Hamoud Al-Hadhrani (ADUS)
PDO/SQU Liaison Committee	Dr. Khalifa Al-Jabri (ADGSR)
Student Grievances Committee	Dr. Abdullah Al-Badi
University Curriculum & Academic Policies Committee	Dr. Joseph Jervase
Safety and Security Committee	Dr. Khalifa Al-Jabri (ADGSR)
Technical Committee Earthquake Monitoring Centre	Dr. Khalifa Al-Jabri (ADGSR)
Coordination Committee for IT and Systems	Dr. A.W. Hago
Steering Committee for High Performance Computing (HPC)	Dr. Nabeel Al-Rawahi Dr. Ahmed Sana Dr. Tariq Jamil
Consultative Committee for Deanship of Student Affairs	Dr. Amer Al-Hinai

College of Engineering

SUMMARY OF STUDENTS ENROLMENT (2009-2010)

The College of Engineering has grown rapidly since its start in 1986 and currently the student population has increased to around 2600 students during the academic year 2009-2010, compared to only 92 students in 1986.

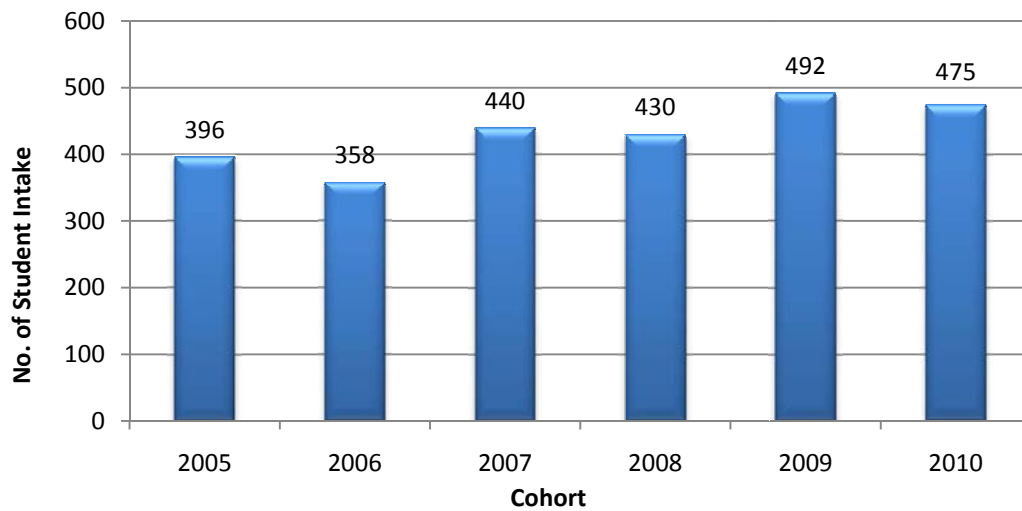


Figure A1: Annual College Intake

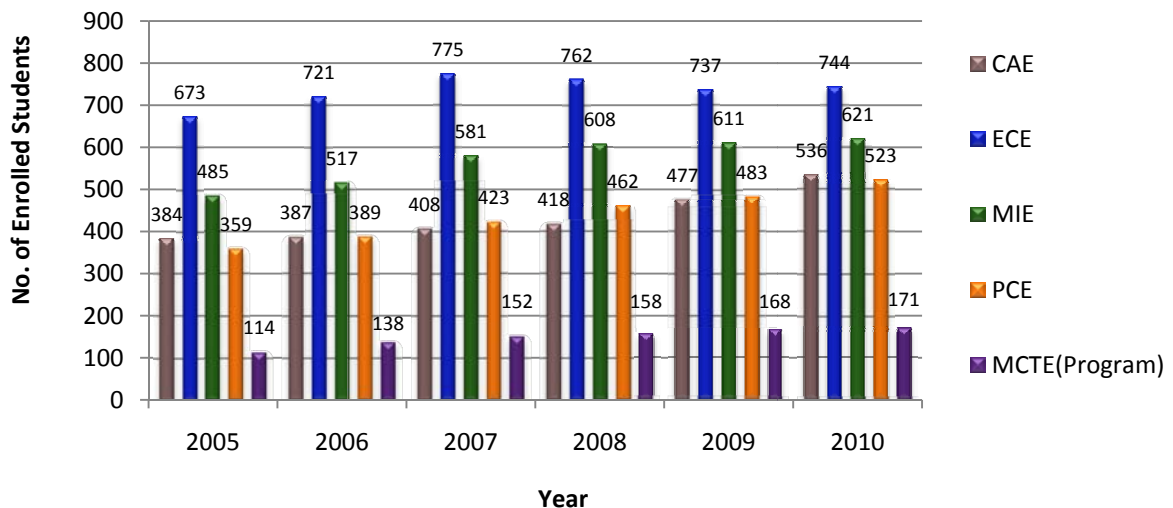


Figure A2: Enrolment in the Departments & Programs (Year 1-5)

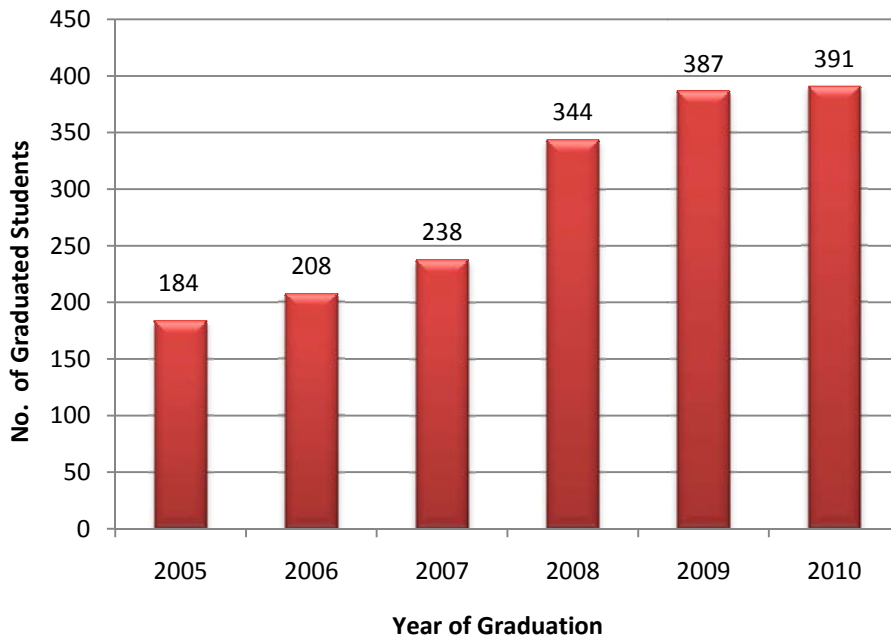


Figure A3: College's Graduates

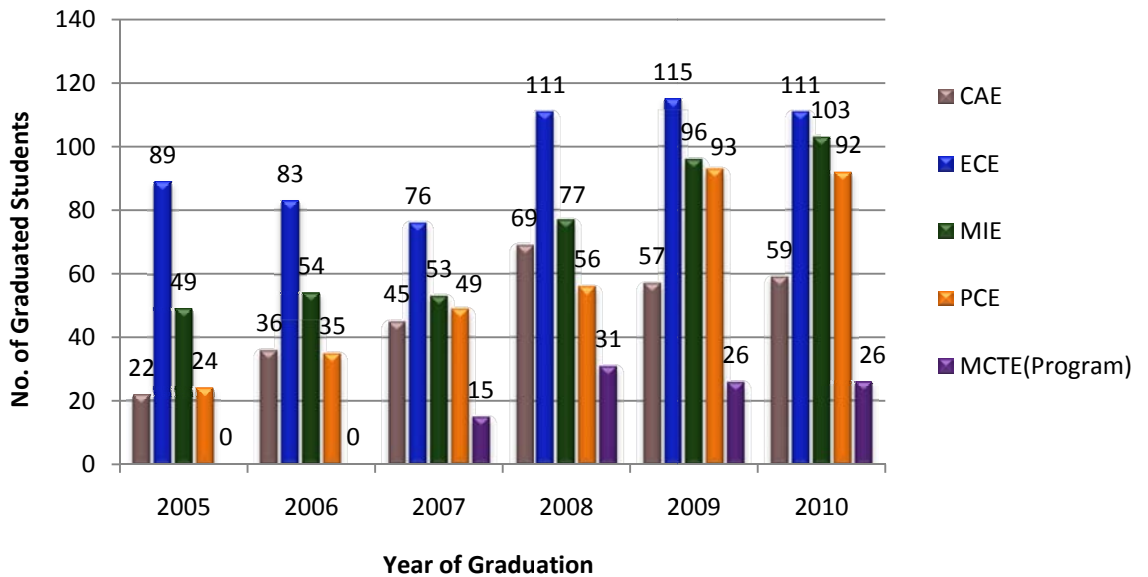


Figure A4: Graduates per Department

College of Engineering

SUMMARY OF INDUSTRIAL STUDENT TRAINING (2009-2010)

Every year, the College of Engineering provides an industrial student training for all level-4 students either locally in Oman or abroad. The period of the training varies from 2 to 3 months. Local trainings are monitored by Department advisors (8) who make regular sight visits to their students. During Summer 2009, several International exchanges with a total number of 12 countries within IAESTE and 3 countries outside IAESTE were made.

Statistics of Industrial Training, (Summer 2010)

Dept. Training		CAE	ECE	MIE	PCE	MCTE	Total
	Local	local	45	105	70	80	23
Abroad	IAESTE	8	11	7	6	4	36
	Other	-	5	6	1	4	16
Sub Total		53	121	83	87	31	375

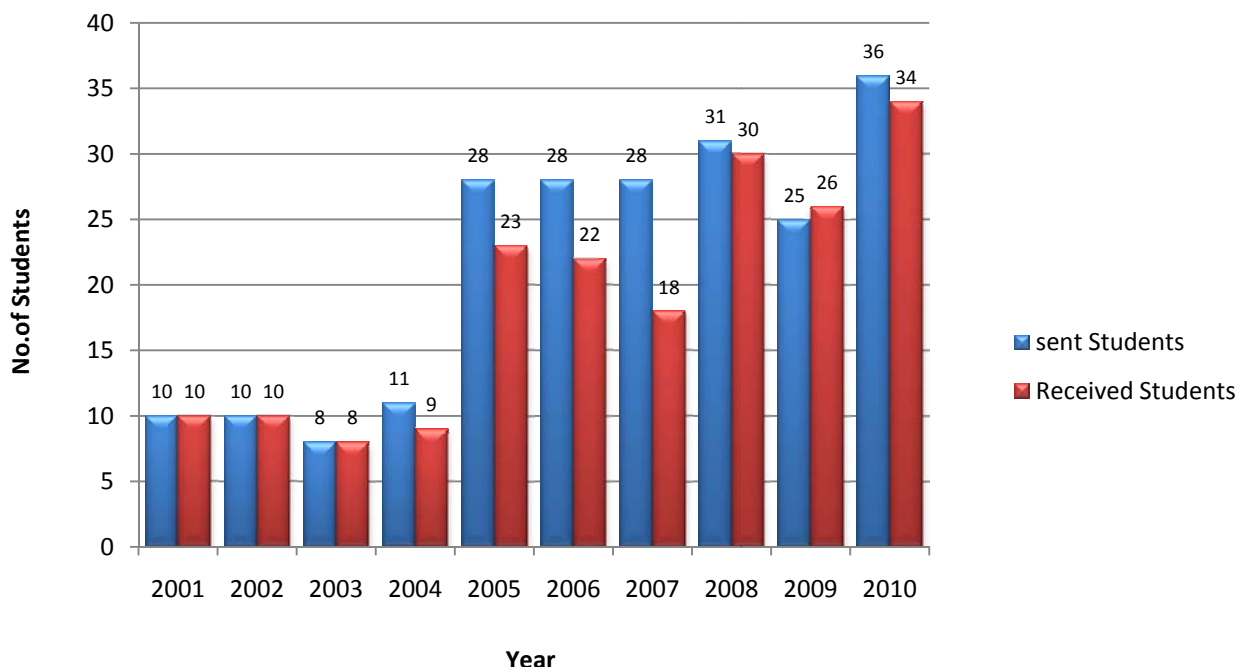


Figure A5: Number of students' exchange within IAESTE Program since 2001

Department of Civil & Architectural Engineering

Website :<http://www.squ.edu.om/dept-civil-arch/>



Department of Civil and Architectural Engineering



SUMMARY

The Department of Civil and Architectural Engineering (CAE) took its new name in 2002 to reflect its recent diversification. It has restructured its undergraduate programs to include Architectural Engineering Program. The Department offers programs leading to the degrees of Master of Science in Civil Engineering, Master of Science in Civil Engineering (Water Resources) [M.Sc. (WR)], Master of Science in Civil Engineering (Environmental Engineering), and Master of Science (Geomatics Engineering). Different areas of specializations including structural engineering, geotechnical engineering, environmental engineering and transportation engineering are emphasized in the M.Sc. offered in the Civil Engineering Program. During the academic year 2008-09, the Architectural Engineering Program received an official accreditation visit by ABET in November 2008, and the program has now been accredited by ABET. The department also offering PhD program.

Dr. Ghazi Al-Rawas finished his PhD from University of Calgary and joined the department in January, 2010. Eng. Ahmed Qatan also returned from his scholarship and joined the Department in 2010. The department also appointed Eng. Alya Al-Hashim as a demonstrator in the Architectural Engineering program. Eng. Mobarak Al-Alawi was sent on scholarship to Canada to do his M.Sc. (Construction Management) in university of Alberta.

Table B1: Summary

	<i>FL2008-SP2009</i>	<i>FL2009-FL2010</i>
Faculty	24	25
Support staff	15	16
Total	39	41
On-study leave	4	3
Undergraduate Program		
Enrolment (Y2-5)	358	491 FL09 449 FL10
Courses offered	82	123
Graduates	61	59
Graduate Program		
Enrolment	20	22
Courses offered		23
Theses completed	20	27
Research		
Grants	13	4
Contracts	-	1
Consulting	10	1
Publications		
Refereed	21	22
Journals		
Others	26	32

Faculty members of the Department were involved in various regional and international activities. Dr. Ali Al-Harthy, Dr. Yahya Zain and Dr. Ahmed Al-Futaisi were involved in Engineering Curriculum (March 2010) for the College of Engineering, Al Sharqiyah University, and in Engineering Curriculum (October 2010) for the College of Applied Science Sohar, Ministry of Higher Education.

The Department hosted the Second International Conference on Coastal Zone Engineering and Management (Arabian Coast 2010), November 1-3, 2010. The Department will organize an international workshop on Fire Safety Engineering and Management, March 7-9, 2011. A group of the Architectural Engineering Students: Alya Al Hashim, Haitham Bousafi, Ahmed Al Maqbal and Adi Al farei under the supervision of Dr. Mohammed Alaa Mandour have been awarded the First Prize with other four out of nineteen entries joined from all GCC universities in the International Students design Competition (Abu Dhabi).



DEPARTMENTAL PROFILE

Faculty

Academic Staff

Dr. Abdul Wahid Hago, *Assoc. Professor and Head*

Pozzolanic materials, Concrete properties. Shear walls, Computer aided design.

Prof. Amer Al-Rawas, *Professor and Deputy vice Chancellor for Postgraduate Studies and Research*

Expansive soils, Soil stabilization, Calcined pozzolanic materials, use of by-pass waste materials and oil-contaminated soils.

Prof. Awni Shaaban, *Professor, Architectural Eng. Program Coordinator*

Environmental Design, Sustainable Architecture, Architecture in Hot-Arid Regions.

Prof. Ramzi Taha, *Professor and Dean of Postgraduate Studies*

Highway materials; pavement design, maintenance and rehabilitation; recycling; soil stabilization.

Dr. Ali Al-Harthy, *Assoc. Professor and Dean*

Structural mechanics, Reliability and optimization, Concrete structures.

Dr. Ali Al-Nuaimi, *Assoc. Professor*

Structural design and analysis.

Dr. Ahmed Al-Futaisi, *Assoc. Professor*

Applied environmental geoscience, Physically-based pore-scale modelling, Multiphase flow in porous media, Hydrogeology and hydroinformatics, Contaminant fate and transport, Soil sorption to organics and heavy metals.

Dr. Ahmed Sana, *Assoc. Professor*

Wave boundary layers, Turbulence, Sediment transport, Hydroinformatics, Water resources management.

Dr. Hossam Hassan, *Assoc. Professor*

Pavement materials; mixtures evaluation and design; Recycling of waste and by product materials; Environmental effect on pavement performance; Maintenance and rehabilitation of pavements.

Dr. Khalifa Al-Jabri, *Assoc. Professor and Assistant Dean for Postgraduate Studies and Research*

Structures, Structural dynamics, Fire engineering, Construction materials.

Dr. Mohammed Al-Aghbari, *Assoc. Professor*

Seepage problems in soil and under dams, bearing capacity of foundations with structural skirts

Dr. Salim Al-Oraimi, *Assoc. Professor*

Fibre reinforced concrete, Fracture mechanics & high strength concrete, Durability.

Dr. Yahya Zain, *Assoc. Professor*

Soil-Structure interaction, Expansive soils, Earthquake engineering & soil dynamics, Finite element analysis.

Department of Civil and Architectural Engineering

Dr. Abdullah Al-Saidy, Asst. Professor

Rehabilitation of structures, Behaviour of RC, PC & composite structures, Application of Advanced Fibre Composites in Civil Engineering structures.

Dr. Alaa Mandour, Asst. Professor

Urban designer, theorist and place making professional.

Dr. Cemal Inceruh, Asst. Professor

Housing and environment design, urban and landscape design, and city beautification.

Dr. Ghazi Al-Rawas, Asst. Professor

Remote sensing and Geographical Information System (GIS), Hydrology.

Dr. Hesham Eissa, Asst. Professor

Total building performance, building integrated systems, computational visualization and simulation tools in lighting design.

Dr. Issa Al-Harthy, Asst. Professor

Sound characterization of urban environment, Survey on community noise, Human behaviour in architectural facilities.

Dr. Khalid Al-Shamsi, Asst. Professor

Characterization of bituminous materials. Pavement design and maintenance.

Dr. Maatouk Khokhi, Asst. Professor

Energy conservation in buildings, Building science, Solar energy, HVAC design, Sustainable architecture.

Dr. Mahad Bawaain, Asst. Professor

Environmental Engineering, Water and Wastewater Treatment Technologies and Fluid Mechanics.

Dr. Mohammed El-Kamash, Asst. Professor

Environmental fluid mechanics, Coastal environment, Water quality modelling, Risk management in environmental applications

Dr. M. Salim Ferwati, Asst. Professor

Architectural design, Spatial behavioural factors, Islamic history, urban design, building construction methods.

Dr. Shaibu Bala Garba, Asst. Professor

Housing and neighbourhood design, culture environment and behavioural studies, urban design, planning and management.

Eng. Ahmed Qatan, Lecturer

Traffic and Transportation Engineering, transportation planning, traffic safety, driver behaviour, and accident analysis.

Eng. Mohammed Al-Shahri, Lecturer

Engineering surveying and GPS applications.



Eng. Saleh Al-Saadi, Lecturer

Energy Conservation & Management in Buildings, HVAC Systems Design, Total Indoor Environmental Quality in Buildings and its impact on Occupants, Renewable & Sustainable Energy Applications in Buildings.

Eng. Aliya Abdul Sattar Al-Hashmi, Demonstrator

Eng. Mobarak Al-Alawi, Demonstrator
Construction Management

Technical and Support Staff

Mr. Suleiman Al-Kindi, Chief Technician, Engineer

Mr. Jamil Al-Yaqoobi, Technician, Engineer

Mr. Juma Al-Ruzaiqi, Technician, Engineer

Mr. Yaqoub Al-Alawi, Technician, Engineer

Mr. Sayed S. Rahman Zaini, Senior Technician

Mr. Salem Al-Ruzaiqi, Technician

Ms. Raya Al-Sharji, Technician

Mr. Taiseer Al-Riyami, Technician

Mr. Mohsen Ghanma, Technician Architectural Engineering

Mr. Fouzel Ameer Marikar, Technician

Mr. Nafeer Abu Alhuda, Technician

Mr. Induka Nilupul Halwalage, Technician

Mrs. Wafa Al-Nabhani, Coordinator

Department of Civil and Architectural Engineering

Committees

Table B2: Committee membership

Committee	Members
Accreditation (Civil Engineering Program)	HoD (Chair) Dr. Hossam Hassan (Coordinator) Dr. Khalifa Al-Jabri Dr. Mahad Bawain Dr. Yahya zain Dr. Ahmed Sana Dr. Mohammed El Kamash
Accreditation (Architectural Engineering Program)	HoD (Chair) Prof. Awni Shaaban (Coordinator) Dr. Abdullah Al-Saidy Dr. Hesham Issa Dr. Salim Ferwati Dr. Maatouk Khoukhi Dr. M. Alaa Mandour
College Board	HoD Prof. Awni Shaaban Dr. Mahad Baawain
Computer	Dr. Ahmed Al-Futaisi
Curriculum	HoD Dr. Yahya Zain Dr. Shaibu Garba
Laboratory	HoD (Chair) Dr. Khalifa Al-Jabri (Coordinator) Dr. Shuaibu Garba Dr. Yahya Zain Dr. Hossam Hassan Dr. Ahmed Al-Futaisi Eng. Sulieman Al-Kindi
Final Year Projects	Dr. Issa Al-Harthy
Postgraduate Studies & Research	Dr. Khalid Al-Shamsi (Chair) Dr. Mohamed Al-Aghbari Dr. Abdullah Al-Saidy Dr. Mahad Bawain



Department Academic Promotion	HoD (Chair) Prof. Ramzi Taha Prof. Awni Shaaban Dr. Khalifa Al-Jabri Dr. Hossam Hassan Dr. Ali Al-Nuaimi Dr. Yahya Zain Dr. Salim Al-Oraimi
College Academic Promotion Committee	HoD Prof. Ramzi Taha
Secretary	Dr. Hossam Hassan
Seminars	Eng. Ahmed Qatan
Student Societies & CAE Advisor	Dr. Ghazi Al-Rawas
College of Engineering Societies & Social Activities Committee	Dr. Ghazi Al-Rawas Dr. Mohammed Al-Aghbari Mr. Jamil Al-Yaqoubi
Social Activities	Dr. Mohammed Al-Aghbari Dr. Issa Al-Harthy Dr. Salim Ferwati
Staff-Student Liaison	HoD (Chair) Dr. Abdullah Al-Saidy (Coordinator) Dr. Salim Al-Oraimi Dr. Hesham Eissa +at least 6 student (two from each year selected by students)
Industrial Training	Dr. Issa Al-Harthy
Textbooks Order	Dr. Ahmed Sana
Timetabling	Dr. Shaibu Garba
Publication/Web	Dr. Ghazi Al-Rawas Mr. Jamil Al-Yaqoubi
College E- learning Committee	Dr. Mohamed ElKamash
Engineering Journal	Dr. Ali Al-Harthy Dr. Yahya Zain Dr. Hossam Hassan Dr. Abdullah Al-Saidy
Executive Committee	HoD

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Strategic Planning	HoD (Chair) Dr. Issa Al-Harthy (Coordinator) Prof. Awni Shaaban Dr. Salim Al-Oraimi Dr. Ali Al-Nuaimi Dr. Ahmed Sana Dr. Mahad Bawain
HSE	Dr. Khalifa Al-Jabri (Chair) Mr. Juma Al-Ruzaiqi
Industrial Advisory Board	HoD (Chair) Dr. Ali Alnuaimi (Coordinator) Prof. Awni Shaaban Dr. Salim Al-Oraimi
Staff-Recruitment	HoD (Chair) Dr. Ali Al-Nuaimi (Coordinator) Dr. Shuaibu Garba Dr. Salim Al-Oraimi Dr. Mohammed Al-Aghbari Dr. Ahmed Al-Futaisi
Iwan Publication	Dr. Salim Ferwati (chair) Dr. Hesham Eissa Dr. Shaibu Garba Eng. Hanan Al-Khatiri
Undergraduate Curriculum	HoD (Chair) Dr. Yahiya Mohamedzein (Coordinator) Dr. Khalid Al-Shamsi Dr. Abdullah Al-Saidy Dr. Mohammed Elkamsh Dr. Shaibu Garba
	HoD (Chair) Dr. Hossam Dr. M.Alaa Mandour Dr. Khalifa Al-Jabri) Dr. Ahmed Sana
Agriculture-Engineering Program Committee	Dr. Ahmed Sana
Cohort 2008 Applications (Architectural Engineering Program)	Dr. Cemal Dr. Alaa Prof. Awni
Master Degree Proposal (Architectural Engineering Program)	Dr. Hisham Dr. Shaibu Dr. Maatouk

AREN meeting secretary (Architectural Engineering Program)	Dr. Maatouk
Alumni & Employers Survey (Architectural Engineering Program)	Dr. Cemal Dr. Alaa Prof. Awni
Construction laboratory (Architectural Engineering Program)	Dr. Salim Ferwati
Artificial sky laboratory (Architectural Engineering Program)	Prof. Awni Eng. Mohsen



Department of Civil and Architectural Engineering

UNDERGRADUATE STUDIES

Courses

Table B3: Courses offered in Fall 2009

Code	Title	Instructor
CIVL5993	Research Project I Only Cohort 2005 and after)	All Faculty
CIVL5997	Research Project (Only Cohorts 02, 03 & 04)	All Faculty
AREN3102	Architectural Design II	Dr. Mohammed Mandour + Dr. Cemal Inceruh
AREN3201	Architectural Design Theory	Dr. Shuaibu Garba
AREN3302	Architectural Drawing II	Dr. Shuaibu Garba
AREN3801	Building Construction Methods	Dr. Salim Ferwati
AREN3804	Environ II: Climatic Design	Prof. Awni Shaaban
AREN3805	Environ III: Hot Arid Design	Dr. Cemal Inceruh
AREN3807	Services II: Mechanical Design	Dr. Maatouk Khouki
AREN4104	Architectural Design IV	Dr. Salim Ferwati + Dr. Shuaibu Garba+(services)
AREN4202	Professional Practice and Regulation (Elective III)	Dr. Cemal Inceruh
AREN4802	Specifications & Contracts	Dr. Mohammed Mandour
AREN4808	Services III: Electrical Design	Dr. Maatouk Khouki
AREN4809	Conservation Techniques	Dr. Hesham Eissa
AREN5106	Architectural Design VI	Prof. Awni Shaaban+Dr. H. Eissa+Dr. Mandour+Dr. Qamaruddin+Dr. Maatouk
CIVL2400	Professional Practice & Ethics	Prof. Ramzi Taha
CIVL3002	Drawing I	Dr. Issa Al-Harthy, Eng. Hanan Al-Khatri
CIVL3036	Structures I	Dr. Salem Al-Oraimi
CIVL3056	Surveying	Dr. Abdulwahid Hago, Dr. Hossam Hassan
CIVL3086	Mechanics of Materials	Dr. Ali Al-Harthy, Dr. Abdullah Al-Saidy
CIVL3096	Construction Materials	Dr. Salem Al-Oraimi
CIVL4036	Highway Engineering	Dr. Khalid Al-Shamsi
CIVL4136	Environmental Engineering I	Dr. Mahad Baawain
CIVL4146	Hydraulics	Dr. Mohamed ElKamash
CIVL4206	Concrete Design	Dr. Ali Al-Nuaimi
CIVL4216	Steelwork Design	Dr. Khalifa Al-Jabri
CIVL4226	Foundation Engineering	Dr. Mohammed Al-Aghabri
CIVL5076	Coastal Engineering	Dr. Ahmed Sana



CIVL5096	Concrete Structures	Dr. Abdullah Al-Saidy
CIVL5106	Slope Stability	Dr. Mohammed Al-Aghabri
CIVL5132	Environmental Geotechnics	Dr. Yahya Zain
CIVL5146	Numerical Methods	Dr. Ahmed Al-Futaisi, Dr. Yahya Zain
CIVL5216	Pavement Design and Maintenance	Dr. Khalid Al-Shamsi
CIVL5326	Environmental Engineering II	Dr. Mahad Baawain
CIVL5336	Construction Management	Prof. Ramzi Taha
CIVL5995	Project I (Design-Cohort 2002 and after)	Dr. Ali Al-Nuaimi, Dr. Mohamed ElKamash, Dr. Hossam Hassan
CIVL6110	Advanced Concrete Structures	Dr. Qamaruddin
CIVL6170	Dynamics of Structures	Dr. Qamaruddin
CIVL6925	Groundwater Hydraulics	Dr. Ahmed Al-Futaisi
CIVL7000	M.Sc. Thesis	
CIVL7002	M.Sc. Thesis II	
ENGR1500	Introduction to Engineering	Dr. Issa Al-Harthy
ENGR6913	Advanced Engineering Mathematics	Dr. Ahmed Sana

Table B4: Courses offered in Spring 2010

Code	Title	Instructor
AREN 2111	Architectural Design I	Dr. Cemal Inceruh, Dr. Mohammed Salim Ferwati
AREN 2311	Architectural Drawing	Prof. Awni Shaaban, Eng. Hanan Al-Khatri
AREN 2411	History I: Modern & Contemporary	Dr. Shaibu Garba
AREN 3303	Architectural Drawing III	Dr. Mohammed Alaa Mandour
AREN 3401	History of Arch. I	Dr. Shaibu Garba
AREN 3402	History II: Islamic & Vernacular	Dr. Mohammed Salim Ferwati
AREN 3601	Settlement I	Dr. Cemal Inceruh
AREN 3803	Environ. I: Acoustics & Illumination	Dr. Hesham Eissa
AREN 3806	Services I: Sanitary & Plumbing	Dr. Maatouk Khokhi
AREN 4103	Architectural Design III	Dr. Hesham Eissa, Dr. Shaibu Garba
AREN 4105	Architectural Design V	Prof. Awni Shaaban, Dr. Hesham Eissa
CIVL 2400	Professional Practice and Ethics	Prof. Ramzi Taha
CIVL 3036	Structures I	Dr. Abdullah Al-Saidy, Dr. Khalifa Al-Jabri

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CIVL 3046	Drawing II	Dr. Mohammed Alaa Mandour, Dr. Hossam Hassan
CIVL 3066	Engineering Hydrology	Dr. Mohammed Elkamash
CIVL 3076	Transportation Engineering	Prof. Ramzi Taha
CIVL 3096	Construction Materials	Dr. Salim Al-Oraimi
CIVL 3106	Geotechnical Engineering I	Dr. Mohammed Al-Aghbari
CIVL 3216	Basic Mechanics	Dr. A.W.Hago, Dr. Issa Al-Harthy
CIVL 4006	Prob. & Statistics for Engineers	Dr. Yahya Zain
CIVL 4016	Structures II	Dr. Salim Al-Oraimi
CIVL 4046	Fluid Mechanics	Dr. Ahmed Sana
CIVL 4206	Concrete Design	Dr. Ali Al-Nuaimi
CIVL 5133	Soil Improvement	Dr. Mohammed Al-Aghbari
CIVL 5156	Estimating Construction Cost	Dr. Ali Al-Nuaimi
CIVL 5186	Water and Wastewater Management	Dr. Mahad Baawain
CIVL 5204	Engineering Economics	Dr. Khalid Al-Shamsi, Dr. Issa Al-Harthy
CIVL 5206	Traffic Engineering	Dr. Khalid Al-Shamsi
CIVL 5254	Environmental Pollution	Dr. Ahmed Al-Futiaisi
CIVL 5996	Project II	Dr. Ali Al-Nuaimi, Dr. Hossam Hassan, Dr. Mohammed Elkamash
CIVL 6150	Finite Element Methods	Dr. Ahmed Al-Futiaisi
CIVL 6165	Rehabilitation of Structures	Dr. Abdullah Al-Saidy
CIVL 6380	Geoenvironmental Engineering	Dr. Yahya Zain
CIVL 6725	Physical-Chemical Treatment Processes	Dr. Mahad Baawain
CIVL4006	Prob. & Stat. for Eng.	Dr. Ahmed Al-Futiaisi
ENGR 1500	Introduction to Engineering	Mr. Mubarak Al-Alawi
ENGR 2216	Programming in Fortran	Dr. Ahmed Sana
PETM 3006	Engineering Geology	(PCE Dept.)

Table B5: Courses offered in Fall 2010

Code	Title	Instructor
AREN3112	Arch. Design II	Dr. Alaa Mandour
AREN3211	Arch. Design Theory	Dr. Shaibo
AREN3312	Introduction to CAAD	Dr. Shaibo
AREN3804	Environment II	Prof. Awani



AREN3805	Environment III	Dr. Cemal
AREN3807	Services II	Dr. Maatouk
AREN3811	Bldg Const. Methods	Dr. Ferwati
AREN4104	Arch. Design IV	Dr. Shaibo, Dr. Ferwati
AREN4802	Specifications	Dr. Alaa Mandour
AREN4808	Services III	Dr. Maatouk
AREN4809	Conservation	Dr. Hesham
AREN5106	Graduation ProjectII	Dr. Awni, Dr. Hesham, Dr. Maatouk, Dr. Al-Jabri
CIVL2400	Practice& Ethics	Dr. Alaa Mandour
CIVL3002	Drawing I	Dr. Elssa Al-Harthy, Dr. Alaa Mandour
CIVL3036	Structures I	Dr. Al-Araimi
CIVL3056	Surveying	Dr. Hossam Hassan, Dr. Ghazi Al-Rawas
CIVL3086	Mech of Materials	Dr. AlSaidi, Dr. Issa Al-Harthy
CIVL3096	Constrn Materials	Dr. Al-Araimi
CIVL4036	Highway Engineering	Dr. Al-Shamsi
CIVL4046	Fluid Mechanics	Dr. Sana
CIVL4136	Environmental Eng I	Dr. Al-Futaisi, Dr. Mahad Baawain
CIVL4146	Hydraulics	Dr. Elkamash
CIVL4206	Concrete Design	Dr. Hago
CIVL4216	Steelwork Design	Dr. Al-Jabri
CIVL4226	Foundation Engrg.	Dr. Al-Aghbari
CIVL5076	Coastal Engineering	Dr. Sana
CIVL5106	Slope Stability	Dr. Al-Aghbari
CIVL5146	Numerical Methods	Dr. Al-Futaisi
CIVL5150	Remote Sensing	Dr. Ghazi Al-Rawas
CIVL5156	Cost Estimating	Dr. Al-Nuaimi
CIVL5226	Airport Design	Dr. Hossam Hassan
CIVL5336	Constr Management	Prof. Ramzi Taha
CIVL5993	Research Project I	Dr. Issa Al-Harthy
CIVL5995	Project I	Dr. Al-Nuaimi, Dr. Hossam Hassan, Dr. Elkamash

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CIVL5997	Research Project	Dr. Issa Al-Harthy
CIVL6160	Advanced Steel Desin	Dr. Al-Saidi
CIVL6380	Geoenvironmental	Dr. Yahya Zain
CIVL6715	Chem. of Water	Dr. Mahad Baawain
CIVL7000	M.Sc.Thesis	Dr. Al-Shamsi
CIVL7002	M.Sc.Thesis II	Dr. Al-Shamsi
ENGR2216	Fortran Programming	Dr. Yahya Zain

Employment Status

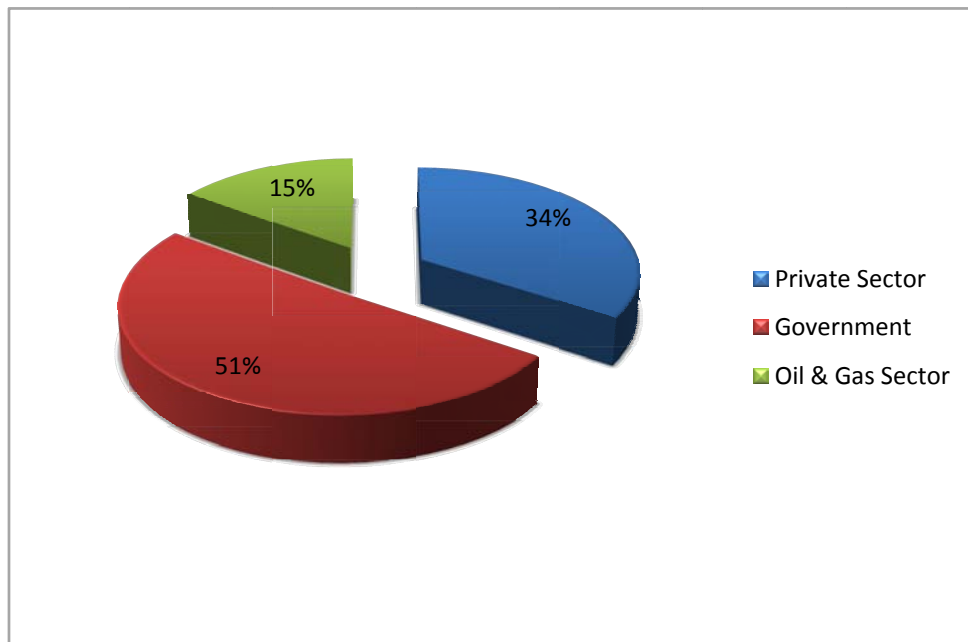


Figure B1: Job placement for the graduates of the last 10 years

POSTGRADUATE STUDIES

Student Enrolment

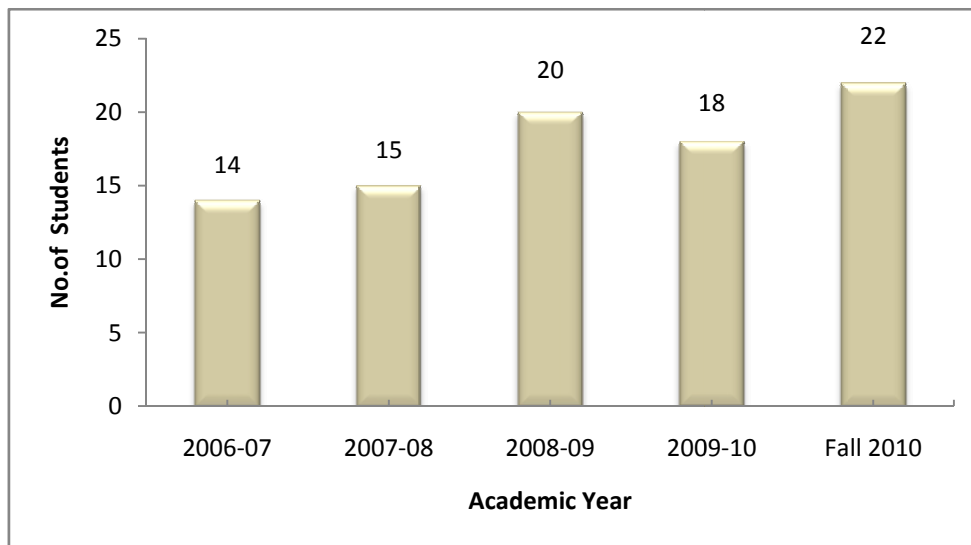


Figure B2: MSc. Students' enrolment for the past five years



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Courses

Table B6: Postgraduate courses offered in year 2010.

Semester	Code	Title	Instructor
Fall 2009	CIVL6110	Advanced Concrete Structures	Dr. Qamaruddin
	CIVL6190	Prestressed Structures	Dr. Ali Al-Harthy
	CIVL6760	Solid Waste Management	Dr. Mahad Baawain
	CIVL6925	Groundwater Hydraulics	Dr. A. Al-Futaisi
	CIVL 7000	M.Sc. Thesis	
	CIVL 7002	M.Sc. Thesis II	
	ENGR6913	Advanced Engineering Mathematics	Dr. A. Sana
Spring 2010	CIVL 6150	Finite Element Methods	Dr. A. Al-Futaisi
	CIVL 6165	Rehabilitation of Structures	Dr. A. Al-Saidy
	CIVL 6380	Geoenvironmental Engineering	Dr. Yahya Zain
	CIVL6750	Air Pollution Engineering	Dr. Mahad Baawain
	CIVL6380	Geoenvironmental Engineering	Dr. Yahya Zain
	CIVL 7000	M.Sc. Thesis	
	CIVL 7002	M.Sc. Thesis II	
Fall 2010	CIVL6160	Advanced Steel Design	Dr. A. Al-Saidy
	CIVL6380	Geoenvironmental Engineering	Dr. Yahya Zain
	CIVL6715	Chemistry and Microbiology of Water and Wastewater	Dr. Mahad Baawain
	CIVL 7000	M.Sc. Thesis	
	CIVL 7002	M.Sc. Thesis II	



MSc. Students' Projects

Table B7: Students' projects

Project Title	Supervisor	Student Name
Domestic Wastewater from Three Regions in the Sultanate of Oman: Characterization and Applications	Dr. Mahad Baawain	AbdulRahim Al-Omairi
Compliance of Reinforced Concrete Villa Designs In Muscat Area (during the period 1996-2005) With Some Of the Existing International Codes of practice –Part-III	Dr. Ali Alnuaimi	Khuola Al-Mazroui
Comparative study on design results of RC members subjected to Bending, Shear and Torsion using BS 8110-1997 and ACI 318-2008 Codes	Dr. Ali Alnuaimi	Iqbal Yakub Patel
Performance of Plastic Pipes Installed in Dune Sands.	Dr. Yahya Zain	Daoud Suleiman Ali Al-Abri
Investigation of Seepage in Al-Fullaj Dam	Dr. Yahya Zain Prof. Amer Al-Rawas.	Salem Al-Hashmi
Improvement of Sabkha Soil Using a Combination of Geogrids and Geotextiles	Dr. Khalifa Al-Jabri Dr. Yahya Zain.	Ibrahim Al-Balushi
Finite Element Analysis of Plastic Pipes in Dune Sands	Dr. Yahya Zain	Sabria Sulaiyam Said Al Aamri
Experimental Study of Plastic Pipes in Dune Sands	Dr. Yahya Zain	Al Yaqdhan Abdullah Ahmed Al Harthy
Estimating efficiency factor and durability for some supplementary cementing materials (SCMs)	Dr. Abdul Wahid Hago	Juma Sultan Al-Rezaiqi
Potential use of cement kiln dust as nano-material in cement mortars	Professor Ramzi Taha	Hammad Abdullah Al-Nasri

Department of Civil and Architectural Engineering

RESEARCH

Grants

Table B8: Internal Grants held by faculty members in year 2010

Research Title	Principal Investigator	Budget (R.O.)	Funded By
Evaluation of Warm Asphalt Mixtures Using Local Materials from Oman	Dr. Khalid Alshamsi	5774	SQU
Synthesis of Nano-Particles from Cement Kiln Dust and Copper Slag for Use in Cement Mortars and Concrete	Dr. Ramzi Taha	9,121 October 2009	SQU
Investigating the Daylight Adequacy of the Functional Needs in Old Oman Citadels and Forts	Dr. Hisham Taufik Eissa	2263	SQU

Table B9: External grants held by faculty members in year 2010

Research Title	Principal Investigator	Budget R.O.	Funded By
Beneficial Applications of Spent Catalysts and Charcoal Generated by Mina Al-Fahl and Sohar Refineries	Dr. Ramzi Taha	110,400	Oman Refineries and Petrochemicals Company, LLC, October 2009

Contracts

Table B10: Contracts held by faculty members in year 2010

Research Title	Principal Investigator(s)	Budget R.O.	Funded By
Three-Dimensional Modeling of Effluent Disposal by Marine Outfall at MaF	Dr. Mahad Baawain	18,220	PDO



Publications

Refereed Journal Papers

1. **Al-Aghbari MY, Mohamedzein YE-A, Taha R.** (2009) Stabilization of desert sands using Portland cement and cement-by-pass dust. *Journal of Ground improvement*, Thomas Telford, 162(G13):145-151.
2. **Al-Saidy AH, Al-Harthy AS, Al-Jabri KS,** Abdul-Halim M, Al-Shidi NM (2010) Structural Performance of Corroded RC Beams Repaired with CFRP Sheets. *Journal of Composite Structures*, 92:1931–1938.
3. **Al-Shamsi K,** Mohammad LN (2010) Estimating Optimum Compaction Level for Dense-Graded Hot-Mix Asphalt Mixtures. *The Journal of Engineering Research (TJER)*, Sultan Qaboos University, 7(1), 2010
4. **Al-Jabri KS, Hago AW, Taha R., Alnuaimi AS, Al-Saidy, AH** (2009) Strength and Insulating Properties of Building Blocks Made from Waste Materials. *Journal of Materials in Civil Engineering*, 21(5):191-197.
5. **Al-Jabri KS,** Hisada M, **Al-Saidy AH, Al-Oraimi SK** (2009) Performance of High Strength Concrete Made with Copper Slag as a Fine Aggregate. *Construction and Building Materials* 2009, 23:2132-2140.
6. **Al-Jabri KS,** Hisada M, **Al-Oraimi SK, Al-Saidy AH** (2009) Copper Slag as Sand Replacement for High Performance Concrete. *Cement and Concrete Composites* 2009; 31:483-488.
7. **Al-Jabri KS,** Al-Alawi SM, **Al-Nuaimi AS, Al-Saidy AH** (2009). An Artificial Network Model For Semi-Rigid Joints Behaviour in Fire. *Advanced Steel Construction* 2009, 5(4):452-464.
8. **Al-Jabri M, Baawain MS** (2010) Petrochemicals, *Water Environment Research*, 82(10):1534-1552.
9. **Al-Rawas G,** Valeo C (2010) Relationship between wadi drainage characteristics and peak flood flows in northern Oman, *Hydrological Sciences Journal*, 55(3):377-393.
10. **Alnuaimi AS, Taha RA,** Almohsin M, **Al-Harthy A** (2010) Causes, Effects, Benefits and Remedies of Change Orders on Public Construction Projects in Oman, *Journal of Construction Engineering and Management*, ASCE, 136(5):615-622.
11. **Alnuaimi, AS, Hago AW, Al-Jabri KS, Al-Saidy AH** (2009) Investigation on the Flexural Behaviour of Ferrocement Pipes and Roof Panels Subjected to Bending Moment, *Structural Engineering and Mechanics* 2009, 33(4):503-527.
12. **Baawain MS,** Gamal El-Din M, Smith DW (2010) PIV/PLIF Study of Impinging Jet Ozone Bubble Column with Mixing Nozzles, *Ozone: Science & Engineering*, 32(2):99-112.
13. **Baawain MS, Al-Jabri M** (2010) Power Production Waste, *Water Environment Research*, 82(10):1553-1559.
14. **Ferwati MS** (2010) Streets' Controllability: A Comparative Study between a Traditional Arab Neighborhood and its Simplified Layout, *IJAR* 4(1), March 2010.
15. Fezzioui N, **Khoukhi M,** Dahou Z, Ait-Mokhtar K, Larbi S (2009) Bioclimatic Architectural Design of Ksar de Kenadsa: South-west Area of Algeria Hot and Dry Climate, *Architectural Science Review*, 52.3: 183-190.
16. **Hassan HF, Al-Shamsi KS** (2010) Characterization of Asphalt Mixes Containing MSW Ash using the Dynamic Modulus $|E^*|$ test, *International Journal of Pavement Engineering*, 11(6), December 2010.
17. **Khoukhi M, Eissa H,** Maruyama S (2010) Thermal Performance of a Solar Heating System Under Japanese Climate Conditions, *International Journal of Energy & Technology*, 2(15):1–10.
18. **Khoukhi M** (2009) Investigation of Airflow Patterns in Tall Building, *Recent Patents on Engineering*, 3(1):65-70.

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19. **Mandour** (2010) Inside Outside. Journal of Architectural and Planning Research JAPR, Locke Science Publishing, 27(4),
20. **Sana A, Tanaka H** (2010) Two-Equation turbulence modeling of an oscillatory boundary layer under steep pressure gradient, Canadian Journal of Civil Engineering, 37(4):648-656.
21. **Shirh A, Adeeb R, Al-Jabri KS** (2009) Finite Element Analysis of Flush End-plate Bare Steel Connection at Elevated Temperature, Advances in Structural Engineering 2009,12(3):311-324.
22. **Taha RA, Mohamedzein Y, Al-Rawas A, Al-Suleimani Y** (2010) Solidification of Tank Bottom Sludge. Geotechnical and Geological Engineering 28:15-25.

Books

1. **Ferwati MS** (2010) Urban Semiotic Analysis: spatial Design and Behavioural Relations. USA & UK: Publisher VDM the Verlag Dr. Muller (2010).
2. **Mandour M** (2010) Architecture and Urban Spaces of Low Income Communities. ISBN-10:363927055X, ISBN-13: 978-3639270556 , VDM Verlag Dr. Muller Aktiengesellschaft & Co. KG.
3. **Mandour M.** E-urban: Virtual urban Spaces Communities. ISBN-10: 3639280946 ,ISBN-13: 978-3639280944 VDM Verlag Dr. Muller Aktiengesellschaft & Co. KG.

Chapters in Books

1. **Al-Jabri KS** (2010). The Use of Industrial Wastes Materials and By-products on Cement Production, Chapter 9, In: High Temperature Processes in Chemical Engineering, Lackner, M. (Editor.), ProcessEng Engineering GmbH, Vienna, May 2010.
2. **Garba SB** (2010). Change in the public Space of Traditional Cities, Zaria Nigeria. Book Chapter in Madanipour A (ed) Whose Public Space? International Practices in Urban Design and Development, Routledge.
3. **Mandour M.** "العمران بين العولمة والمحلية" "Urbanism between Contemporary and Globalization" Book Chapter "قراءات فى الفكر المعاصر" Hadad, E. and Qwasmi, G (eds).
4. **Mandour M.** "التغريب و الإغتراب فى العمران العربى المعاصر" "Westernization and Alienation in Contemporary Arab Architecture" Book Chapter "المدينة العربية المعاصرة" by Hadad, E. and Qwasmi, G (eds).
5. Augmented Heritage: New Era for Architectural Design, Civil Engineering and Urban Planning Khaldoun Zreik, Reza Beheshti & Oqba Fakoush (eds).Europa Productions, Paris, France -ISBN 2-909285-32-4

Conference Papers

1. **Al-Abri D, Mohamedzein Y. E-A.** (2010). Performance of Plastic Pipes Installed in Dune Sand. The Pipelines Conference 2010, ASCE, USA, August 2010.
2. **Al-Aghbary M** (2010). International Conferences in Geotechnical and Geo-Environmental Engineering in Seoul, Republic of Korea., summer 2010.
3. **Al-Harthy AS** (2010). Engineering Education at Sultan Qaboos University and Program Accreditation Lessons learned, INTED Conference Valencia Spain, 6-8 March 2010.



4. **Al-Jabri K**, Al-Jahwari F (2010). Finite Element Analyses of Flexible End-plate Connections between Steel Beams and Columns at Elevated Temperatures. In: Sixth International Conference on Structures in Fire (SiF'10), Kodur, V., and Franssen J-M (Editors), pp. 687-693, Michigan USA, 2-4 June 2010.
5. **Al-Jabri K, Al-Saidy A, Taha RT**, Al-Kemuyani A (2010). Effect of Using Wastewater on the Properties of High Strength Concrete. 12th East Asia-Pacific Conference on Structural Engineering and Construction, Hong Kong, 2010.
6. **Al-Jabri K, Taha RA, Al-Saidy A** (2010). Effects of Using Non-Fresh Water on the Mechanical Properties of Cement Mortars and Concrete. Proceedings, 3rd fib International Congress-2010, Paper No. 55 (paper on CD), Washington D.C, USA, May-June 2010.
7. **Al-Jabri KS**, Cevik A (2010). A New Formulation for Rotation of Bare-steel Joints at Elevated Temperatures Using Genetic Programming. In: Proceedings of the International Conference on Computing in Civil and Building Engineering, W. Tizani (Editor), Nottingham University Press, Nottingham, UK, 30 June-2 July 2010
8. **Alnuaimi AS, Taha RA** (2010). Change Orders in Public Construction Projects in Oman-Case Studies. Proceedings, 1st International Conference on Sustainable Building and Infrastructure, ICSBI 2010, Kuala Lumpur, Malaysia, June 2010.
9. **Al-Rawas G**, Valeo C (2010). Spatial Assessment of Water Quality Data in A'Seeb Area, Oman Using GIS. The use of GIS and remote sensing for sustainable development, The International Congress Geotunis 2010, Tunis, 29 Nov.– 3 Dec 2010.
10. **Baawain MS**, Ahmed M (2010). Feasibility Study to Upgrade Effluent Water Treatment Facility and Water Disposal System at Marine Outfall, Third SQU-JCCP Joint Symposium, Environmental Challenges & Mitigation Approaches for Sustainable Development in the Oil & Gas Industry", Muscat, Oman, December 2010.
11. **Baawain MS, Al-Futaisi AM, Al-Omairi A, Al-Jabri M** (2010). Investigating Municipal Wastewater Treatment in the Sultanate of Oman, Tenth International Conference on Modelling, Monitoring and Management of Water Pollution (Water Pollution 2010), Bucharest, Romania, June 2010.
12. **Baawain MS, Al-Futaisi AM**, Ashour I, **Al-Omairi A, Al-Jabri M** (2010). Characterization of Industrial Wastewater in the Sultanate of Oman, 4th International Conference on Healthy Water in Arab World, Cairo, Egypt, June 2010.
13. **Elkamash MK, Baawain MS** (2010). Proposed Protection System against Jellyfish Ingress in Power and Desalination Plants, Second International Conference on Coastal Zone Engineering and Management (Arabian Coast 2010), Muscat, Oman, November 2010.
14. **Garba SB** (2010). Architecture and Urban Heritage in the Islamic City States of Northern Nigeria, Proceeding of the First International Conference for Urban Heritage in the Islamic Countries, Riyadh, 23-28 May 2010.
15. Jowers I, Prats M, **Eissa H**, Lee J (2010). A study of emergence in the generation of Islamic geometric patterns, pp. 39-48, CAADRIA Conference, Hong Kong, 7-10 April 2010.
16. **Mandour M** (2009). Architecture of Politics. 11th International Bauhaus-Colloquium 2009-Weimer-Germany Workshop with Professor Christine Boyer, Princeton University.
17. **Mandour M** (2009). Spatial Politics, Centre for Applied Philosophy, Politics and Ethics (CAPPE), University of Brighton Fourth Annual International, Interdisciplinary 2009.
18. **Mandour M** (2010). Istanbul: East and West. Sinan & His Age International Symposium, Turkey, 2010.
19. Purnama A, **Baawain MS**, Al-Barwani H (2010). Design Recommendations for a Submerged Marine Outfall Using CORMIX Simulations, Third SQU-JCCP Joint Symposium, Environmental Challenges &

Department of Civil and Architectural Engineering

Mitigation Approaches for Sustainable Development in the Oil & Gas Industry, Muscat, Oman, December 2010.

20. Purnama A, **Baawain MS**, Sarma YVB (2010). A CORMIX Model Study of an Effluent Plume from a Marine Outfall at Minal Al Fahal, Oman, 2nd International Conference on Coastal Zone Engineering and Management, Muscat, Oman, November 2010.
21. **Sana A** (2010). Prediction of transition in wave boundary layers by $k-\varepsilon$ Model, Proceedings of the 15th Physics of Estuaries and Coastal Seas (PECS) conference, pp.194-197, Colombo, Sri Lanka, 14-17 September 2010.
22. **Shaaban A** (2010). Solar Shadow Tracking Charts for the Optimization of Shading Devices for Sustainable Architecture in Oman. Eleventh World Renewable Energy Congress and Exhibition, Abu Dhabi – United Arab Emirates, 25 – 30 September 2010.
23. **Shaaban A** (2010). Total Shading System for Sustainable Architecture in Oman. Omani-French Workshop on Green Architecture and Eco Tourism, 15-16 May 2010.
24. **Taha R, Al-Harthy AS, Al-Jabri KS** (2010). Use of Production and Brackish Water in Concrete, In: International Engineering conference on Hot Arid Regions (IECHAR 2010), Akash BA, Abu Abdo AM (Editors), pp. 127-132, Al-Ahsa, Kingdom of Saudi Arabia, 1-2 March 2010,
25. **Taha RA**, Al-Wahaibi T (2010) Development of Cementitious Materials from Wastes and By-Products Generated in Oman. Proceedings, 1st International Conference on Sustainable Building and Infrastructure, ICSBI 2010, Kuala Lumpur, Malaysia, June 2010.

Technical Reports

1. **Baawain MS**, Purnama A, Sarma YVB, Al-Hashmi K, Al-Haddabi M, Mothershaw DS (2010). Three-Dimensional Modelling of Effluent Disposal by Marine Outfall at MAF, Final Report, Petroleum Development of Oman Company, March 2010.
2. **Garba SB** (2010). Final Report, Project for the Master Plan of the Research and Innovation Precinct at Al-Khoudh, Report submitted to the Research Council, Sultanate of Oman.
3. **Taha RA, Al-Jabri K, Al-Aghbari M, Hassan H** (2010). Use of Palm Fibers in Civil Engineering Construction. Final Report, IG/ENG/CAED/04/08, Sultan Qaboos University, January 2010.
4. **Taha RA, Baawain M, Al-Futeisi A, Al-Jabri K, Al-Shamsi K** (2010). Beneficial Applications of Spent Catalysts and Charcoal Generated by Mina Al-Fahl and Sohar Refineries. 3rd Progress Report, Oman Refineries and Petrochemicals Company LLC, November 2010.
5. **Taha RA, Baawain M, Al-Futeisi A, Al-Jabri K, Al-Shamsi K** (2010). Beneficial Applications of Spent Catalysts and Charcoal Generated by Mina Al-Fahl and Sohar Refineries. 2nd Progress Report, Oman Refineries and Petrochemicals Company LLC, May 2010.
6. **Taha RA, Baawain M, Al-Futeisi A, Al-Jabri K, Al-Shamsi K** (2010). Beneficial Applications of Spent Catalysts and Charcoal Generated by Mina Al-Fahl and Sohar Refineries. 1st Progress Report, Oman Refineries and Petrochemicals Company LLC, February 2010.



OTHER ACTIVITIES

Seminars

1. Mocke G (2009). Coastal Processes and Case Studies. 12 July 2009.
2. Al-Nassri H (2009). Potential Use of Cement Kiln Dust As a Nano-Material in Cement Mortars. 29 September 2009.
3. Totoev Y (2009). Bricks with built-in passive solar efficiency. University of Newcastle, 3 October.
4. Khoukhi M (2009). Airflow and Stack Effect in High Rise Buildings, Department of Civil and Architectural Engineering, SQU, 10 November 2009.
5. AL-Rawahi K (2009). Anger management. 22 November 2009.
6. Al-Ruzaiqi JS (2009). Estimating efficiency dfactor and durability for some supplementary cementing materials (SCM), 6 December.
7. Mocke G (2009). Coastal Processes and Case Studies. WorleyParsons Infrastructure & Environment, Muscat, 7 December 2009.
8. Shami M (2009). Construction Planning and Scheduling. Consolidated Contractors Company, 12 December 2009.
9. Shami M (2009). Sustainability (Green Buildings, LEED/AP issues). Consolidated Contractors Company, 14 December 2009.
10. Al-Abri AZ (2010). The effect of aggregate minerology on the strength of high performance concreter in Oman, 6 Janauary 2010.
11. Al-Zadjali SM (2010). Strengthening of RC beams using textile reinforced mortar, 3 January 2010.
12. Tcheco M (2010). Effect of waste cellulose fibres on thermal and mecjanical properties of a composite with cementitious matrix. Algeria, 4 April 2010.
13. Inuwa IM (2010). How should we assess students in professional programmes? Dept of Human & Clinical Anatomy, Sultan Qaboos University, 12 April 2010.
14. Banan MR (2010). Damage-Index-Based Seismic Design and Assessment of RC Frames Designed According to Code. American University of Sharjah, 26 April 2010.
15. Garba SB (2010). Teaching for Effective Learning in College Education- The paradigm shift. Department of Civil and Architectural Engineering, SQU, 3 May 2010.
16. Alomairi A (2010). Domestic Wastewater from Three Regions in the Sultanate of Oman: Characterization and Applications, 1 June 2010.
17. Al-Zadjali IA (2010). Efgfects of Geogrid membrane on the performance of Sabkha Soil. 24 August 2010.

Department of Civil and Architectural Engineering

Cooperation with Local and Foreign Organizations

1. The Department organized with the help of TRC, Ministry of Environment & Climatic Affairs, Ministry of Transport, Ministry of Fisheries, and the International Association for Hydraulic Research (IAHR) the Second International Conference on Coastal Zone Engineering and Management in SQU, 1-3 November 2010.
2. First joint German-Omani Architecture Workshop, organized by DAAD in cooperation with the German Embassy & the German Language Center and Civil & Architectural Engineering in SQU. 7 November 2009.

Short Courses

1. Victor R, **Al-Rawas G**, Kotagama H (2010). Environment Impact Assessment (EIA), Centre for Environmental Studies and Research (CESAR), Sultan Qaboos University, June 13-16.
2. **Alnuaimi A.** (2010). Design of reinforced concrete structures, 30th Jan – 3rd Feb 2010, Sultan Qaboos University.
3. **Alnuaimi A.** (2010). Estimating construction cost, 5 – 9 June 2010, Sultan Qaboos University.

Invited Talk

1. Al-Jabri K. (2010). Optical Communications and Sensing Workshop, January 17, 2010, SQU, Sultanate of Oman.
2. Al-Rawas G (2010). Regional Training Workshop on Application of GIS and Remote Sensing in Water Resources Management, December 19-22, 2010, Muscat, Sultanate of Oman.
3. Al-Rawas G (2010). GCOE-ARS Seminar, October 18-22, 2010, Kyoto University, Japan.
4. Baawain M.S. (2010). Environmental and Climatic Research at SQU and Proposed Common Areas of Cooperation. Workshop on Fog Collection, Ministry of Environment and Climatic Affairs. January 31, 2010, Muscat, Sultanate of Oman.
5. Baawain M.S. (2010). Civil and Architectural Engineering Department Facilities and Areas of Collaboration. College of Engineering/College of Science Open Day. April 3, 2010, Muscat, Sultanate of Oman.
6. Baawain M.S. (2010). Wastewater Characterization in Three Regions in the Sultanate of Oman. Engineering Open Day. May 2, 2010, Muscat, Sultanate of Oman..
7. Baawain M.S. (2010). Assessment study of the quality and applications of treated wastewater in Oman. Scientific meeting at the Ministry of Agriculture. May 25, 2010, Muscat, Sultanate of Oman.

Students' Activities

1. Students Workshop visit to Iran: 3-13 June 2010, under supervision of Dr. Salim Ferwati.
2. Oman Vision Exhibition, organized by the students of the Architectural Engineering Program.
3. VECSiD (Visual Exploration of Culture Style in Design), joint international collaborative project funded by GSCT-KAIST-Korea. Directed by Professor Jihyn Lee (KAIST-South Korea) and Dr. Hesham Eissa, Sultan Qaboos University. One student was sent to South Korea on the project.
4. The students participated in the Agha Khan Award for Architecture, Geneva 21/4/2010, under supervision of Dr. Alaa Mandour.
5. A group of Students in Architectural Engineering won the first prize (with other 4) of RIBA competition. The competition was held in Dubai in 2010, and was participated into by 19 students from GCC universities.



Department of Electrical & Computer Engineering

Website :<http://www.squ.edu.om/Electrical/>



Department of Electrical and Computer Engineering



SUMMARY

The Department of Electrical and Computer Engineering is the largest department in the College of Engineering with over 780 undergraduate students, over 60 MSc and 1 PhD postgraduate students, and 29 faculty members. The Department offers BSc, MSc, and PhD degrees in Electrical and Computer Engineering, and, in collaboration with the Mechanical and Industrial Engineering Department, offers BSc degree in Mechatronics Engineering. All programs offered by the Department are fully accredited by the American Board for Engineering and Technology (ABET).

Table C1: Summary

	<i>FL2008-SP2009</i>	<i>FL2009-FL2010</i>
Faculty	29	29
Support staff	13	13
Total	42	42
On-study leave	9	6
Undergraduate Program		
Enrolment (Y2-5)	949	780
Courses offered	84	121
Graduates	79	111
Graduate Program		
Enrolment	41	60
Courses offered	12	8
Theses completed	3	4
Research		
Grants	18	9
Contracts	6	12
Consulting	4	5
Publications		
Refereed Journals	52	54
Conference Proceedings	66	32

The faculty of the Department is not only engaged in teaching and academic advising of a fairly large student population but is also quite active in all types of research and administrative activities. Our contribution in publication of scientific knowledge in international journals and conferences is quite significant and we are also working on several internal and external research grants and contracts in collaboration with the local industries and organizations.

Our students, along with our staff, are the backbone of our department's achievements and are also engaged in professional activities under the auspices of Institute of Electrical and Electronics Engineers (IEEE) student branch.



DEPARTMENTAL PROFILE

Faculty

The period September 2009- December 2010, covered by this report, was a period of marked progress of the Department of Electrical and Computer Engineering in enhancing its faculty profile. Dr. Adel Gastli and Dr. Hadj Bourdoucen, both past Head of the ECE Department, were promoted to the rank of professor and given responsibilities of being the Director of University Quality Assurance Office and the Director of Communication and Information Research Centre respectively. Dr. Abdullah Al-Badi was made the Dean of Admissions and Registration and Dr. Abdulnasir Hossen was given the charge as Assistant Dean for Undergraduate Studies. Two new faculty members joined the Department: Dr. Mohammed Shafiq and Dr. Hassan Yousef as associate professors in the Industrial Electronics and Control track of the Department. Three of our colleagues rejoined the department as assistant professors after completion of their PhD studies overseas: Dr. Mohammad Al-Badi in the Power Systems and Energy track, Dr. Ali Al-Shidhani in the Computer Systems and Networks track, and Dr. Muhammad Al-Nadabi in the Communications and Signal Processing track.

Academic Staff

Dr. Mohamed Ould-Khaoua, *Professor, Head of the Department*

Computer Networking, Wireless Mobile Networks, Parallel Architectures, Performance Modelling and Evaluation.

Dr. Adel R. Gastli, *Professor, Director University Quality Assurance Office*

Power electronics, electric drives, renewable energy, and power system analysis

Dr. Hadj Bourdoucen, *Professor, Director Communication and Information Research Centre*

Fiber optic communication & optical networking, integrated electronics, computerized instrumentation and measurement.

Dr. Ibrahim Metwally, *Professor*

Electromagnetic fields, coronas, transients in power systems, power quality, overvoltage protection, gas-insulated switchgear and lines, stray-current corrosion, hazards of lightning strikes.

Dr. Saleh M. Al-Alawi, *Professor*

Forecasting, prediction, optimization & application of artificial intelligence techniques.

Dr. Afaq Ahmad, *Associate Professor, Assistant Head of the Department*

Digital system design & test, fault-tolerant computing, system modelling & analysis, coding theory & error detection.

Dr. Abdullah H. Al-Badi, *Associate Professor, Dean of Admissions and Registration*

Electrical machines, drives, power electronics, power quality, interference and high voltage.

Department of Electrical and Computer Engineering

Dr. Abdulnasir Y. Hossen, *Associate Professor, Assistant Dean for Undergraduate Studies*

Digital signal processing, biomedical signal processing, digital communication, artificial intelligence and neural networks.

Dr. Arif S. Malik, *Associate Professor*

Energy policy and planning.

Dr. Eyad Feilat, *Associate Professor*

High voltage engineering, power quality, application of signal processing to power systems.

Dr. Faical Mnif, *Associate Professor*

Control systems and robotics.

Dr. Hassan Yousef, *Associate Professor*

Intelligent and adaptive control, fuzzy control applications to electric machine drives and power systems, large-scale systems, nonlinear control and biologically-inspired algorithms in control, high performance motion control of electric machines.

Dr. Joseph A. Jervase, *Associate Professor*

Microwave antennas & propagation.

Dr. Lazhar Khriji, *Associate Professor*

Signal and image processing and analysis, nonlinear filtering, adaptive filtering, image coding, artificial intelligence, hardware implementation of DSP algorithms.

Dr. Mohammed Shafiq, *Associate Professor*

Tracking of non-linear dynamic systems, adaptive control, tracking and control of robotics.

Dr. Mounir Bouzguenda, *Associate Professor*

Renewable energy, power systems planning, power systems production, energy management.

Dr. Ali M. Al-Lawati, *Assistant Professor*

Fiber optic sensors & communication, renewable energy.

Dr. Ali Al-Shidhani, *Assistant Professor*

Network security.

Dr. Amer Al-Habsi, *Assistant Professor*

Computer architecture, statistical signal processing, adaptive signal processing

Dr. Amer Al-Hinai, *Assistant Professor*

Power systems: control and operation, multi-agent systems: application of control to power systems, optimization techniques and applications to power systems.

Dr. Dawood Al-Abri, *Assistant Professor*

Communication and computer networks.



Dr. Fahad Bait-Shiginah, Assistant Professor

Modelling and simulation, discrete event system specification (DEVS), cellular space modelling, artificial intelligence, database and software engineering.

Dr. Nasser Jumaa Tarhuni, Assistant Professor

Wireless communication, digital signal processing, optical CDMA, wireless sensor networks, applications of signal processing.

Dr. Mohammed H. Al-Badi, Assistant Professor

Renewable energy and distributed generation, distribution systems, demand-side management, power system operation and planning, power system economics.

Dr. Muhammad S. Al-Nadabi, Assistant Professor

Signals and systems, communications, signal processing, speech processing, image processing.

Dr. Tariq Jamil, Assistant Professor

Computer architecture, parallel processing, digital systems, computer arithmetic, data encryption, information technology.

Dr. Zia Nadir, Assistant Professor

Electromagnetic compatibility and RF communications system.

Mr. Ahmed Al-Maashari, Lecturer (on study leave)

Computer networking, microprocessors and software developments.

Mr. Amir M. AbdulGhani, Lecturer (on study leave)

Wireless and mobile communication, signal processing and information technology.

Mr. Hassan Al-Lawati, Lecturer (on study leave)

Antennas and propagation, wireless communication.

Mr. Mohammed Bait-Suwailem, Lecturer (on study leave)

Communication systems and antennas.

Mr. Rashid Al-Abri, Lecturer (on study leave)

Power electronics.

Mr. Samir Al-Busaidi, Lecturer (on study leave)

Telecommunications.

Mr. Salem Al-Hinai, Lecturer

Control.

Mr. Said Al-Abri, Demonstrator

Communication and control systems

Department of Electrical and Computer Engineering

Technical and Support Staff

Engr. Saleem S. Al-Rashdi, *Department Technician Superintendant*

Engr. Khalaf Al-Ufi, *Senior Engineer A*

Engr. Jaber M. Al-Balushi, *Senior Engineer B*

Engr. Saleh Al-Yazidi, *Senior Engineer B*

Engr. Yousef Al-Shuaili, *Senior Engineer B*

Engr. Suleiman Al-Sinani, *Engineer A*

Engr. Abbas Eissa Teirab, *Engineer B*

Engr. Rona George, *Engineer B*

Mr. Daniel Adutwun, *Chief Technician A*

Mr. Suleiman Al-Kalbani, *Lab Supervisor A*

Mr. Mohammed H. Al-Harrasi, *Lab Supervisor B*

Mr. Nabil Al Bachir Hamza, *Lab Supervisor C*

Mr. Iftaquaruddin Mohammed, *Technician*

Mrs. Fakhriya Al-Rahbi, *Department Coordinator*

Mrs. Laila Al-Hasani, *Department Coordinator*





Committees

Table C2: Committee membership

Committees	Members
Accreditation, Curriculum & Timetabling	Prof. I. Metwally (<i>chair</i>) Dr. J. Jervase, Dr. A. Ahmad, Dr. E. Feilat, Dr. A. Malik, Dr. F. Mnif, Dr. T. Jamil, Dr. Z. Nadir, Dr. A. Al-Habsi, Dr. D. Al-Abri, Mr. S. Al-Abri, Mr. S. Al-Rashdi, Dr. L. Khriji (invited), Prof. A. Gastli (invited)
Final Year Projects	Dr. L. Khriji (<i>chair</i>) Dr. H. Yousef, Dr. M. Al-Badi, Dr. D. Al-Abri, Mr. S. Al-Hinai, Mr. J. Al-Balushi, Mr. K-Al-Oufi
HSE & Teaching Facilities	Dr. M. Shafiq (<i>chair</i>) Dr. M. Al-Nadabi, Dr. H. Yousef Mr. S. Al-Rashdi, Mr. A. Tirab, Mr. S. Al-Kalbani
Human Resources	Dr. A. Al-Lawati (<i>chair</i>) Prof. M. Ould-Khaoua, Prof. S. Al-Alawi, Prof. H. Bourdoucen, Dr. H. Yousef, Dr. A. Al-Habsi, Dr. A. Al-Hinai, Dr. F. Bait-Shiginah
Industrial Advisory Board	Prof. M. Ould-Khaoua (<i>chair</i>) Prof. A. Gastli, Dr. A. Al-Hinai
Industrial Outreach & Community	Dr. M. Bouzguenda (<i>chair</i>) Dr. A. Al-Shidhani, Dr. M-Al-Badi, Mr. S. Al-Hinai, Mr. S. Al-Sinani
Publications & Web	Dr. T. Jamil (<i>chair</i>) Dr. F. Bait-Shiginah, Dr. M. Al-Badi, Mr. S. Al-Abri, Mr. I. Mohammad, Mr. D. Adutwum, Mrs. R. George
Research & Postgraduate Studies	Dr. E. Feilat (<i>chair</i>) Prof. S. Al-Alawi, Prof. H. Bourdoucen, Dr. H. Yousef, Dr. F. Bait-Shiginah

Department of Electrical and Computer Engineering

Student Advising

Dr. A. Ahmad (*chair*)
Prof. S. Al-Alawi, Prof. H. Bourdoucen,
Dr. A. Al-Habsi, Dr. D. Al-Abri, Dr. N. Tarhuni,
Dr. A. Malik, Dr. Z. Nadir, Dr. A. Al-Hinai,
Dr. J. Jervase

Student Society & Social Activities

Dr. N. Tarhuni (*chair*)
Dr. A. Al-Hinai, Dr. A. Al-Shidhani,
Mr. Y. Al-Shueili, Mr. N. Hamza

Student Staff Liaison

Dr. A. Ahmad (*chair*)
Prof. M. Ould-Khaoua
2 students from each cohort

Strategic planning

Prof. M. Ould-Khaoua (*chair*)
Dr. A. Ahmad
All Committee Chairs
Mr. S. Al-Rashdi





UNDERGRADUATE STUDIES

Courses

Table C3: Courses offered in Fall 2009

Code	Title	Instructor	Student Number
ECCE2016	Circuit Analysis I	Arif Malik	25
ECCE2016	Circuit Analysis I	Mohammed Shafiq	24
ECCE3015	Electrical Eng. Fundamentals	Mohammed Majdi	36
ECCE3015	Electrical Eng. Fundamentals	Mohammed Majdi	40
ECCE3015	Electrical Eng. Fundamentals	Eyad Feilat	41
ECCE3016	Circuit Analysis II	Tariq Jamil	47
ECCE3016	Circuit Analysis II	Mounir Bouzguenda	43
ECCE3022	Electromagnetics I	Joseph Jervase Yak	30
ECCE3022	Electromagnetics I	Zia Nadir	34
ECCE3036	Measurements & Instrumentation	Mounir Bouzguenda	35
ECCE3036	Measurements & Instrumentation	Hassan Yousuf	45
ECCE3142	Signals & Systems	Medhat Ahmed	17
ECCE3142	Signals & Systems	Abdulnasir Hossen	30
ECCE3152	Electronics I	Farid Altouati	12
ECCE3152	Electronics I	Farid Altouati	30
ECCE3152	Electronics I	Ali Jawad Al Lawati	24
ECCE3206	Digital Logic Design	Afaq Ahmad	29
ECCE3206	Digital Logic Design	Tariq Jamil	34
ECCE3206	Digital Logic Design	Ayman Elnaggar	29
ECCE3206	Digital Logic Design	Medhat Ahmed	25
ECCE3352	Electrical Technology	Adel Gastli	29
ECCE4022	Electromagnetics II	Ibrahim Metwally	30
ECCE4080	Seminar & Field work	Salim Al-Hinai	31
ECCE4080	Seminar & Field work	Salim Al-Hinai	2
ECCE4122	Analogue & Digital Communication	Nasser Tarhuni	33
ECCE4122	Analogue & Digital Communication	Nasser Tarhuni	38
ECCE4157	Electronics II	Zia Nadir	47
ECCE4227	Embedded Systems.	Ayman Elnaggar	28
ECCE4227	Embedded Systems.	Amur Al-Habsi	35
ECCE4227	Embedded Systems.	Amur Al-Habsi	38
ECCE4242	Computer Networks I	Dawood Al-Abri	10
ECCE4242	Computer Networks I	Dawood Al-Abri	18
ECCE4254	Operating Systems	Medhat Ahmed	17
ECCE4263	Database Systems	Fahad Bait Shiginah	10

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ECCE4272	Artificial Intelligence	Abdulnasir Hossen	37
ECCE4312	Power I	Amer Al-Hinai	22
ECCE4316	Power II	Amer Al-Hinai	28
ECCE4356	Electrical Machine I	Asaad El-Moudi	29
ECCE4357	Electrical Machines II	Mohammed Majdi	31
ECCE4416	Linear Control Systems	Mohammed Shafiq	38
ECCE4436	Industrial Control	Hassan Yousuf	27
ECCE4466	Power Electronics	Adel Gastli	30
ECCE5004	Eng. Management & Econ. I	Saleh Al-Alawi	34
ECCE5004	Eng. Management & Econ. I	Arif Malik	25
ECCE5004	Eng. Management & Econ. I	Saleh Al-Alawi	34
ECCE5009	Project I		98
ECCE5099	Project II		43
ECCE5112	Antennas	Joseph Jervase Yak	26
ECCE5123	Optical Communicate	Ali Al Lawati	26
ECCE5143	Advanced DSP	Lazhar Kheriji	28
ECCE5242	Adv. Computer Networks	Mohamed Ould-Khaoua	27
ECCE5245	Computer Lab	Dawood Al-Abri	15
ECCE5302	Power Systems Protection	Ali Al-Maqrashi	9
ECCE5332	High Voltage Eng.	Ibrahim Metwally	30
ECCE5332	High Voltage Eng.	Eyad Feilat	12
ECCE5333	Power System Economic	Ali Al-Maqrashi	27
ECCE5433	Modern Control Systems	Faical Mnif	26
ECCE5452	Comp. Aided Instrumentation	Hadj Bourdoucen	26
MCTE3110	Electronics	Lazhar Kheriji	30
MCTE3210	Electromechanical Sys. & Actuators	Asaad El-Moudi	16
MCTE3261	Object Oriented Programming	Fahad Bait Shiginah	27
MCTE4250	Linear Control Systems	Faical Mnif	16



Table C4: Courses offered in Spring 2010

Code	Title	Instructor	Student Number
ECCE2016	Circuit Analysis I	Mohammed Shafiq	31
ECCE2016	Circuit Analysis I	Arif Malik	26
ECCE3015	Electrical Eng. Fundamentals	Adel Mohamedein	38
ECCE3015	Electrical Eng. Fundamentals	Eyad Feilat	30
ECCE3015	Electrical Eng. Fundamentals	Adel Mohamedein	33
ECCE3016	Circuit Analysis II	Tariq Jamil	35
ECCE3016	Circuit Analysis II	Arif Malik	35
ECCE3022	Electromagnetics I	Joseph Jervase Yak	39
ECCE3022	Electromagnetics I	Ibrahim Metwally	28
ECCE3036	Measurements & Instrumentation	Hassan Yousuf	34
ECCE3036	Measurements & Instrumentation	Mounir Bouzguenda	35
ECCE3142	Signals & Systems	Lazhar Kheriji	31
ECCE3152	Electronics I	Ali Al Lawati	16
ECCE3152	Electronics I	Ali Al Lawati	27
ECCE3206	Digital Logic Design	Tariq Jamil	36
ECCE3206	Digital Logic Design	Afaq Ahmad	35
ECCE3206	Digital Logic Design	Afaq Ahmad	42
ECCE3352	Electrical Technology	Adel Gastli	29
ECCE4022	Electromagnetics II	Ibrahim Metwally	32
ECCE4080	Seminar & Field work	Salim Al-Hinai	32
ECCE4080	Seminar & Field work	Salim Al-Hinai	40
ECCE4122	Analogue & Digital Communication	Dawood Al-Abri	31
ECCE4122	Analogue & Digital Communication	Lazhar Kheriji	26
ECCE4124	Digital Communication	Nasser Tarhuni	20
ECCE4142	Digital Signal Processing	Abdulnasir Hossen	37
ECCE4142	Digital Signal Processing	Abdulnasir Hossen	40
ECCE4157	Electronics II	Zia Nadir	44
ECCE4157	Electronics II	Hadj Bourdoucen	32
ECCE4157	Electronics II	Zia Nadir	11
ECCE4227	Embedded Systems	Amur Al-Habsi	30
ECCE4227	Embedded Systems	Amur Al-Habsi	33
ECCE4242	Computer Networks I	Mohamed Ould-Khaoua	30
ECCE4242	Computer Networks I	Arabi Keshk	25
ECCE4252	Data Structure	Arabi Keshk	21
ECCE4312	Power I	Amer Al-Hinai	34
ECCE4316	Power II	Amer Al-Hinai	18
ECCE4356	Electrical Machine I	Asaad El-Moudi	41
ECCE4357	Electrical Machines II	Asaad El-Moudi	18

Department of Electrical and Computer Engineering

ECCE4416	Linear Control System	Mohammed Shafiq	35
ECCE4416	Linear Control System	Hassan Yousuf	36
ECCE4422	Digital Control System	Faical Mnif	30
ECCE4456	Sensors & Sen. Systems	Farid Altouati	33
ECCE4456	Sensors & Sen. Systems	Farid Altouati	15
ECCE5004	Eng. Management & Econ. I	Saleh Al-Alawi	33
ECCE5004	Eng. Management & Econ. I	Saleh Al-Alawi	29
ECCE5008	Project Management	Ali Al-Maqrashi	31
ECCE5009	Project I		9
ECCE5099	Project II		98
ECCE5124	Wireless Communications	Nasser Tarhuni	22
ECCE5125	Adv. Comm. Lab	Nasser Tarhuni	19
ECCE5125	Adv. Comm. Lab	Nasser Tarhuni	2
ECCE5152	Communications Circuits	Farid Altouati	28
ECCE5162	Microwave Engineering	Joseph Jervase Yak	15
ECCE5223	Adv. Embedded Systems	Amur Al-Habsi	33
ECCE5232	Computer Architecture I	Arabi Keshk	15
ECCE5235	Adv. Computer Lab	Dawood Al-Abri	19
ECCE5252	Software Engineering	Fahad Bait Shiginah	17
ECCE5282	Network Security	Dawood Al-Abri	10
ECCE5302	Power Systems Protection	Ali Al-Maqrashi	31
ECCE5303	Power Distribution Sys. Eng.	Eyad Feilat	45
ECCE5422	Select Topic in Cont	Faical Mnif	22
ECCE5464	Advance Power Electronics	Mounir Bouzguenda	22
MCTE4210	Power Electronics & Drives	Adel Mohamedein	24

Table C5: Courses offered in Fall 2010

Code	Title	Instructor	Student Number
ECCE2016	Circuit Analysis I	Arif Malik	36
ECCE2016	Circuit Analysis I	Dawood Al-Abri	36
ECCE3015	Electrical Eng. Fundamentals	Eyad Feilat	35
ECCE3015	Electrical Eng. Fundamentals	Mohammed Al-Badi	36
ECCE3015	Electrical Eng. Fundamentals	Mohammed Shafiq	32
ECCE3016	Circuit Analysis II	Tariq Jamil	45
ECCE3016	Circuit Analysis II	Mounir Bouzguenda	36
ECCE3022	Electromagnetics I	Ibrahim Metwally	41
ECCE3036	Measurements & Instrumentation	Mounir Bouzguenda	31
ECCE3036	Measurements & Instrumentation	Hassan Yousuf	48
ECCE3142	Signals & Systems	Muhammed Al-Nadabi	19



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ECCE3152	Electronics I	Zia Nadir	33
ECCE3152	Electronics I	Ali Jawad Al Lawati	31
ECCE3206	Digital Logic Design	Afaq Ahmad	36
ECCE3206	Digital Logic Design	Tariq Jamil	43
ECCE3206	Digital Logic Design	Ali Al-Shidhani	46
ECCE3352	Electrical Technology	Mohammed Al-Badi	22
ECCE4022	Electromagnetics II	Joseph Jervase Yak	43
ECCE4080	Seminar & Field work	Salim Al-Hinai	34
ECCE4080	Seminar & Field work	Salim Al-Hinai	6
ECCE4122	Analogue & Digital Communication	Nasser Tarhuni	37
ECCE4122	Analogue & Digital Communication	Nasser Tarhuni	34
ECCE4122	Analogue & Digital Communication	Muhammed Al-Nadabi	26
ECCE4157	Electronics II	Zia Nadir	42
ECCE4227	Embedded Systems	Amur Al-Habsi	42
ECCE4227	Embedded Systems	Amur Al-Habsi	36
ECCE4227	Embedded Systems	Amur Al-Habsi	22
ECCE4242	Computer Networks I	Dawood Al-Abri	31
ECCE4254	Operating Systems	Mohamed Ould-Khaoua	26
ECCE4263	Database Systems	Fahad Bait Shiginah	8
ECCE4312	Power I	Amer Al-Hinai	31
ECCE4316	Power II	Amer Al-Hinai	29
ECCE4356	Electrical Machine I	Mohammed Majdi	35
ECCE4357	Electrical Machines II	Mohammed Majdi	36
ECCE4416	Linear Control Systems	Mohammed Shafiq	31
ECCE4416	Linear Control Systems	Faical Mnif	26
ECCE4436	Industrial Control	Hassan Yousuf	35
ECCE4466	Power Electronics	Adel Gastli	43
ECCE5004	Eng. Management & Econ. I	Saleh Al-Alawi	34
ECCE5004	Eng. Management & Econ. I	Saleh Al-Alawi	31
ECCE5004	Eng. Management & Econ. I	Arif Malik	26
ECCE5009	Project I		246
ECCE5099	Project II		15
ECCE5112	Antennas	Joseph Jervase Yak	24
ECCE5123	Optical Communicate	Ali Jawad Al Lawati	19
ECCE5143	Advanced DSP	Lazhar Kheriji	24
ECCE5242	Adv. Computer Networks	Mohamed Ould-Khaoua	18
ECCE5245	Computer Lab	Ali Al-Shidhani	16
ECCE5282	Network Security	Dawood Al-Abri	20
ECCE5302	Power Systems Protection	Eyad Feilat	16
ECCE5322	Power Sys. Quality	Eyad Feilat	34
ECCE5332	High Voltage Eng.	Ibrahim Metwally	36

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ECCE5433	Modern Control Systems	Faical Mnif	29
ECCE5452	Comp. Aided Instrumentation	Hadj Bourdoucen	31
ENGR2216	Fortran Programming	Fahad Bait Shiginah	36
MCTE3110	Electronics	Lazhar Kheriji	42
MCTE3210	Electromechanical Sys. & Actuators	Mohammed Majdi	29
MCTE3261	Object Oriented Programming	Fahad Bait Shiginah	32

Employment Status

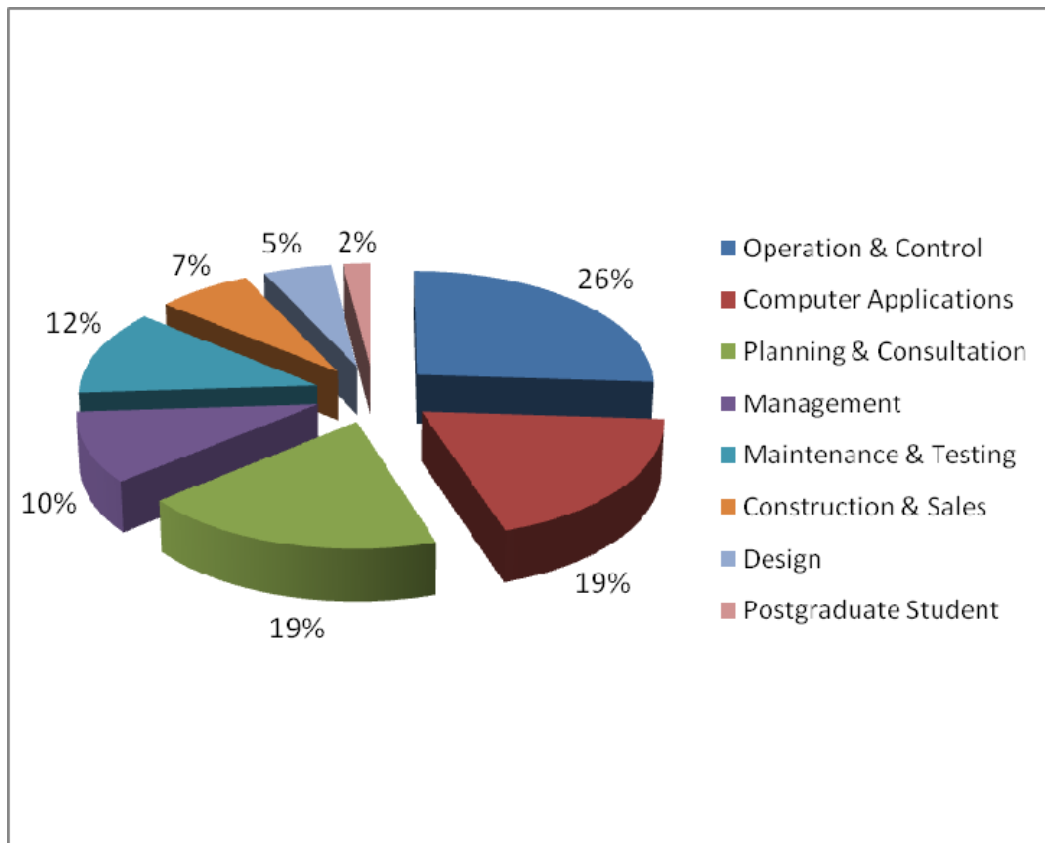


Figure C1: Job placements for the graduates of last 5 years



POSTGRADUATE STUDIES

Student Enrolment

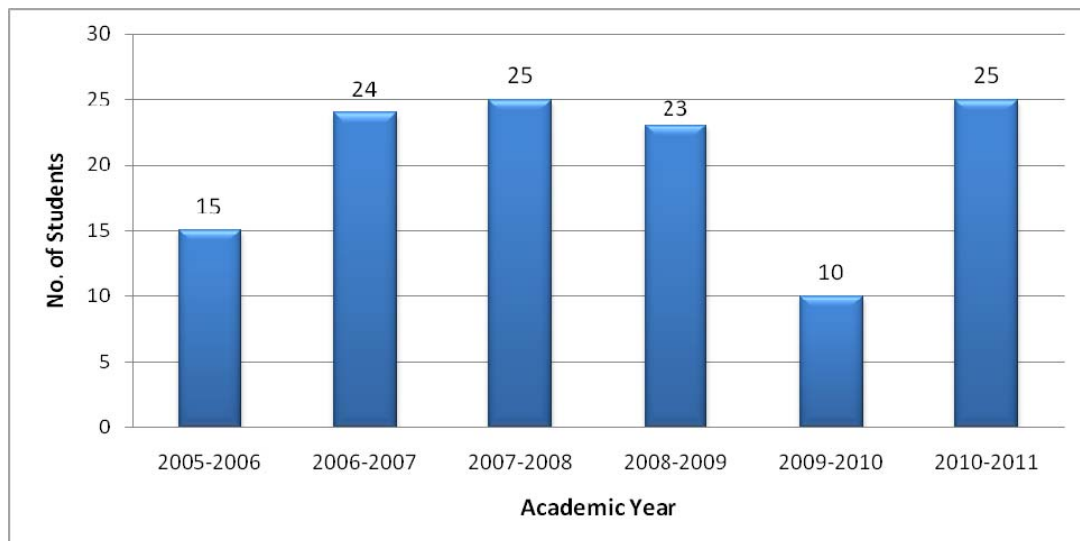


Figure C2: MSc. Students' enrolment for the past six years

Courses

Table C6: Postgraduate courses offered in year 2010

Semester	Code	Title	Instructor
Fall 2009	ECCE6132	Linear Systems Theory	Mohammed Shafiq
	ECCE6284	Reliability & Fault-Tolerant Sys.	Afaq Ahmad
	ECCE6335	Special Topic in Power	Eyad Feilat
Spring 2010	ECCE6261	Adv. Modelling & Simulation	Fahad Bait Shiginah
	ECCE6292	Topics in Computer Eng.	Dawood Al-Abri
	ECCE6492	Select Topics in Control	Faical Mnif
Fall 2010	ECCE6122	Digital Signal Processing	Abdulnasir Hossen
	ECCE6124	Digital Transmission	Nasser Tarhuni

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MSc. Students' Projects

Table C7: Students' projects

Project Title	Supervisor	Student Name
Performance Analysis and Enhancements of IEEE 802.11e EDCA Protocols	Prof. Mohamed Ould Khaoua	Rami Ali Mohammed Abudayyeh
The Impact of Radio Propagation Models on MANETs Performance	Prof. Mohamed Ould Khaoua	Ahmed Al-Riyami
Performance Comparison of MANET Routing Protocols Under UDP & TCP Traffic	Prof. Mohamed Ould Khaoua	Zahra Shannan AL Balushi
A Performance Study of QoS Architectures for MPLS Network	Prof. Mohamed Ould Khaoua	Ismail Mubarak AL Shaqsi
A Study of Fuzzy Logic-Based Controller for Diff-Serv Bandwidth Broking	Prof. Hadj Bourdoucen	Fatma Abdullah AL Azzani
Spectrum sensing in radio cognitive networks	Prof. Hadj Bourdoucen	S. S. Al-Mazrouei
Power-System Stability Study of Interconnecting Salalah Grid with Oman Main Interconnected Transmission System	Prof. Ibrahim Metwally	M.S.A. Al-Ismaili
Reduction of Distribution system Losses in Mazoon Electricity Company	Prof. Ibrahim Metwally	Y.M. Al-Mahroqi
Modeling and Design of the Unified Power Flow Controller	Prof. Ibrahim Metwally	K.M. Al-Wahaibi
Design and Characterization of Spacers used in High-Voltage Gas-Insulated Lines and Switchgear	Prof. Ibrahim Metwally	S.S. Al-Sinani
Forecasting of Cement Sales Demand for Oman Cement Company by Using Linear Regression and Artificial Neural Network (ANN)	Prof. Saleh Al-Alawi	Emad Humood Salim Al-Abri
A Study on the Causes of Cost Overrun in Telecommunication Projects in Sultanate of Oman	Dr. Afaq Ahmad	Zahra Ahmed Essa Al-Zadjali



Response Data Compression Techniques Evaluation for BIST Environment	Dr. Afaq Ahmad	Talal Hamed Said Al Bahlani
Modeling of Impulse UWB antennas for Radar & Communication Applications	Dr. Joseph Jervase	Abbas Teirab
Lyapunov Function Based Stable Attitude Tracking of Spacecraft	Dr. Mohammad Shafiq	Ahmed Al-Mashani
Lyapunov Function Based Trajectory Tracking of Mobile Robot	Dr. Mohammad Shafiq	Ahmed Al-Hinai
Power-System Stability Study of Interconnecting Salalah Grid with Oman Main Interconnected Transmission System (MITS)	Dr. Amer Al-Hinai	Mahmood Said Abdullah Al-Ismaili
An Investigation of the Interconnection of OXY Electrical Power System Grid with the National Power System Grid	Dr. Amer Al-Hinai	Mohammed Al-Nabhani
Analysis and Mitigation of Power Quality Disturbances at SQU-CIS Machines Room	Dr. Amer Al-Hinai	Mohsin Al-Hinai
Peak-to-Average Power Ratio Reduction Techniques	Dr. Nasser Tarhuni	Mohammed Masoud Ali Kashoub
Radio Resource Management for Wireless Networks	Dr. Nasser Tarhuni	Daud Al Brashdi
Real time Automatic Speech Recognition System	Dr. Tariq Jamil	Ali Zahran Salim Al-Bimani
Empirical M.P.L. (Maximum Permissible Loss) modeling for outdoor wireless links	Dr. Zia Nadir	Mahmood Al-Rashdi
Characterization of Propagation Pathloss- A Case study of Muscat, The City of Oman	Dr. Zia Nadir	Asaad Saoud Ahmed Al Ruqeshi

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RESEARCH

Grants

Table C8: Internal Grants held by faculty members in year 2010

Research Title	Principal Investigator(s)	Budget (R.O.)	Funded By
Design and Testing of a Sand Detector	Prof. Hadj Bourdoucen	5178	SQU
Design for Testability Approach and Process Diagnostics for Digital and Embedded Systems	Dr. Afaq Ahmad	3994	SQU
DSP/Microcontroller Based Efficiency Optimization of Induction Motor	Dr. Abdullah Al-Badi	5225	SQU
Wireless Bio Telemetry System for Real time Healthcare Monitoring	Dr. Lazhar Khriji	3943	SQU
Early warning flood system using wireless sensors network	Dr. Amer Al-Habsi	4000	SQU
Optimal VAR Compensation for Electrical Distribution Systems Using Particle Swarm Optimization , Application to SQUH Distribution Network	Dr. Amer Al-Hinai	5706	SQU
Study and Evaluation of Wireless Automation	Dr. Nasser Tarhuni	5648	SQU
Transcription of Algorithms Used for Fault-Diagnosis of Systems into Computer Programs	Dr. Tariq Jamil	1210	SQU
Designing of Highly Efficient Power Amplifiers for Communication Industry	Dr. Zia Nadir	4905	SQU

Table C9: External grants held by faculty members in year 2010

Research Title	Principal Investigator	Budget R.O.	Funding Agency
Design and Optimization of High-speed Optical Modulators and Systems	Prof. Hadj Bourdoucen Dr. Ali Al-Lawati	29,000	The British Council
Study of Electromagnetic Radiation Levels as Practiced by EM Radiating Equipment Installers in Oman	Prof. Hadj Bourdoucen	50,000	Nawras Telecom
Arabic Speech Data Collection	Prof. Hadj Bourdoucen	772	Language Technology and Data, USA



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Free Software Initiative with the Information Technology Authority for establishing an FOSS Lab	Prof. Hadj Bourdoucen	55,000	Information Technology Authority
Electromagnetic Field Measurements	Dr. Abdullah Al-Badi	9950	Authority for Electricity Regulation
Short Circuit Calculation of Volt Amp 10 MVA Power Transformer	Dr. Eyad Fielat	2800	Voltamp
The Development of an ICT Literacy Program for Children with Chronic Disease During Their Hospitalization	Dr. Ali Al-Lawati	3500	Petrogas LLC
Energy Saving Distribution Board	Dr. Amer Al-Habsi Dr. Amer Al-Hinai	14,700	Industrial Innovation Center
Power System Study for Block9 Electrical Power Network	Dr. Amer Al-Hinai	66,500	Occidental of Oman
Analysis & Setting of Protective Devices at Selected Distribution Feeders in Muscat Electricity Distribution Company Network	Dr. Amer Al-Hinai	15,950	Muscat Electricity Distribution Company
Provision of technical support during harmonic field measurement at Kauther field	Dr. Amer Al-Hinai	5000	Petrofac E & C Oman LLC
Under Frequency Load Shedding Settings For OXY Block9 Electrical Power Network	Dr. Amer Al-Hinai	15,000	Occidental of Oman

Contracts

Table C10: Contracts held by faculty members in year 2010

Research Title	Principal Investigator(s)	Budget R.O.	Funded By
Technical Evaluation of Power System Analysis Software for PDO Applications	Dr. Eyad Fielat	9612	PDO
Harmonic Measurements	Dr. Amer Al-Hinai	9625	PDO
Qarn Alarm Steam Project Electrical System and Harmonic	Dr. Amer Al-Hinai	21,148	PDO
Harmonic Measurement At Mina AL Fahal Computer Building.	Dr. Amer Al-Hinai	4000	PDO
Evaluation of Kauther Phase II Harmonic Model/Study	Dr. Amer Al-Hinai	4500	PDO

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Publications

Refereed Journal Papers

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2. Abdullai J, **Ould-Khaoua M**, Mackenzie L, Mohammed A (2010) A dynamic probabilistic route discovery for mobile ad hoc networks. *International Journal of Communication Networks and Distributed Systems* 4(1):108-130.
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16. Ali S, Al-Sunni F, **Shafiq M**, Bakhshwain J (2010) U-model based learning feedforward control of MIMO nonlinear systems. *Journal of Electrical Engineering* 91(8):1-11.
17. **Al-Lawati A, Bourdouce H** (2009) Integration of FBG strain sensors in WDM networks – effects on quality factor. *The Journal of Engineering Research* 6(1):46-50.



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25. **Bourdoucen H**, Dehmas M, Yallaoui E (2010) Analysis and simulation of planar semiconductor structures using a semi-analytical technique. *The Journal of Engineering Research* 7(1):62-69.
26. Elfadil N, **Hossen A** (2009) Identification of patients with congestive heart failure using different neural networks approaches. *Technology and Healthcare Journal* 17(4):305-321.
27. **Feilat E** (2010) Performance comparison of adaptive estimation techniques for power system small-signal stability assessment. *The Journal of Engineering Research* 7(2):10-23.
28. **Hamza N**, **Khriji L**, Touati F (2010) Multi-purpose healthcare monitoring system based on ISM band communication link support. *International Journal of Healthcare Technology and Management* 11(3):176-192.
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30. **Hossen A**, Muthuraman M, Raethjen J, Deuschl G, Heute U (2010) Discrimination of Parkinsonian Tremor from Essential Tremor by implementing a wavelet-based soft-decision technique on EMG and Accelerometric Data. *Journal of Biomedical Signal Processing and Control* 5(3):181-188.
31. **Jamil T** (2010) Implementation of an economical parking helper device using ultrasound sensors. *Journal of the American Institute of Physics – IAENG Transactions on Engineering Technologies* 1247(1):100-114.
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35. **Malik A, Al-Badi A** (2009) Economics of wind turbine as an energy fuel saver – a case study for remote application in Oman. *Energy* 34(10):1573-1578.
36. Medien Z, Machhout M, Bouallegue B, **Khriji L**, Baganne A, Tourki R (2010) Design and hardware implementation of QoSS-AES processor for multimedia applications. *Transactions on Data Privacy* 3(2010):1-22.
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Jamil T. (2010) Complex Binary Associative Dataflow Processor, patent granted by the Australian Patent Office (IP Australia), Patent No. 2010100706, in July 2010. Details of this patent have been published in the Australian Government – IP Australia Supplement to the Australian Official Journal of Patents, 24(28): 3211 and 24(30):3479.

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Jamil T. (2010) Introduction to associative dataflow processing – From concept to implementation. ISBN: 9783639252330. VDM Verlag, Germany.

Chapters in Books

Hossen A, Al-Ghunaimi B (2010). Congestive Heart Failure: Different Non-invasive Diagnosis Techniques. In: *Congestive Heart Failure: Symptoms, Causes, and Treatment*. ISBN: 9781608766777, Nova Science Publishers.

Khriji L, Touati F (2010). Biotelemetry systems. In: *Biomedical Engineering – Trends, Researches, and Technologies*. ISBN: 9789537619XX, INTECH Publications.

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23. **Jamil T, Al-Abri S** (2010). Design of a divider circuit for complex binary numbers. World Congress on Engineering and Computer Science, San Francisco, California, USA, 20-22 October 2010. **Certificate of Merit Winner at the Congress Awards Ceremony.**
24. **Khriji L**, Touati F, Benhamed K, Al-Yahmadi A (2010). Q-learning based mobile robot behavior's coordination. The International Renewable Energy Congress, Tunisia, 5-7 November 2010.
25. **Metwally I** (2010). Design and calibration of a charge meter for impulse high-voltage measurement. The 7th Mansoura International Engineering Conference, Sharm-el-Sheikh, Egypt, 23-28 March 2010.
26. **Nadir Z**, Idrees M (2009). Pathloss determination using Okumura-Hata model and cubic regression for missing data for Oman. International Multi-conference of Engineers and Computer Scientists, Hong Kong, 17-19 March 2009.
27. Safaei F, Shantia A, Khonsari A, **Ould-Khaoua M** (2009). The effects of traffic patterns on power consumption of torus-connected NoCs with faults. International Conference on Scalable Computing and Communications, Dalian, China, 25-27 September 2009.
28. Salmi T, **Bouzguenda M, Gastli A** (2009). Single-phase transformerless inverters associated to PV systems: a comparison of different topologies. Industrial Applications of Energy Systems Conference and World Renewable Regional Conference, Sohar, Oman, 7-9 December 2009.
29. Salmi T, **Bouzguenda M, Gastli A**, Masmoudi A (2010). Harmonics and common-mode voltage in transformerless AC module integrated in PV systems. The 5th International Conference and Exhibition on Ecological Vehicles and Renewable Energies, Monte-Carlo, Monaco, 25-28 March 2010.
30. Talebi M, Khonsari A, Mostafavi S, **Ould-Khaoua M** (2009). Rate control for scalable multimedia applications in network-on-chips. International Conference on Scalable Computing and Communications, Dalian, China, 25-27 September 2009.
31. Yahya A, Raisi I, Shariri F, Hamdan M, Touati F, **Nadir Z** (2009). High efficiency switching mode class-E power amplifier design improvements for RF. IEEE Student Conference on Research and Development, Malaysia, 16-18 November 2009.
32. **Yousef H**, Hamdy M, **Shafiq M** (2010) Adaptive fuzzy control for strict-feedback nonlinear time-delay systems without backstepping. IEEE Conference on Decision and Control, Atlanta, Georgia, USA, 15-17 December 2010.

Department of Electrical and Computer Engineering

Technical Reports

1. **Ahmad A, Nadir Z, Jamil T** (2010). Study of error detection and correction schemes for fault-tolerant memory systems. Final Report, Sultan Qaboos University.
2. **Al-Hinai A**, Al-Abri A (2010). Harmonics measurements at Centre of Information System (CIS). Final Report. Sultan Qaboos University.
3. **Al-Hinai A**, Al-Abri A, **Al-Hinai S** (2010). Harmonic analysis: Qarn alarm steam project electrical system and harmonic study. Final Report. Petroleum Development Oman.
4. **Al-Hinai A**, Al-Abri A, **Al-Hinai S** (2010). Power flow analysis: Qarn alarm steam project electrical system and harmonic study. Final Report. Petroleum Development Oman.
5. **Al-Hinai A**, Al-Abri A, **Al-Hinai S** (2010). Short circuit analysis: Qarn alarm steam project electrical system and harmonic study. Final Report. Petroleum Development Oman.
6. **Al-Hinai A, Al-Badi A, Al-Hinai S** (2010). Harmonics Measurements at SRDC Project. Final Report. Petroleum Development Oman.
7. **Al-Hinai A, Al-Badi A, Al-Hinai S, Al-Sinani S** (2010). Harmonics Measurements at Mina Al Fahal computer building (main LV switchboard). Final Report. Petroleum Development Oman.
8. **Al-Hinai A**, Al-Nasser H, **Al-Hinai S** (2010). Under-frequency load shedding for Occidental of Oman network. Final Report. Occidental of Oman.
9. **Feilat E, Al-Hinai A** (2010). Technical evaluation of power system analysis software for PDO applications. Final Report. Petroleum Development Oman.
10. **Feilat E, Al-Hinai A** (2010). Verification of short circuit withstand capability of Voltamp 10MVA power transformer. Final Report. Voltamp.
11. **Gastli A, Al-Alawi S, Bourdoucen H, Malik A**, Touati F, **Al-Lawati A, Al-Badi A** (2009). Renewable energy business opportunities in Duqum-Oman. Final Report. Daewoo Shipbuilding and Marine Engineering.
12. **Malik A** (2009). Minimizing the environmental impact of the envisaged expansion in power generation in northern grid of Oman. Final Report.
13. Prathapar S, **Al-Lawati A**, Baawain M, Tahat M, Rahman H, Julius T (2009). Accelerating water evaporation. Final Report. Petrogas LLC.
14. Prathapar S, **Al-Lawati A**, Baawain M, Tahat M, Rahman H, Julius T (2009). Oil production water disposal issues at Sahma. Final Report. Petrogas LLC.



OTHER ACTIVITIES

Seminars

1. **Bourdoucen H** (2010) Optical Communication and Sensing, SQU, Oman, 17 January 2010.
2. **Bourdoucen H** (2010) Overview of ICT at SQU, The Research Council, Muscat, Oman, 5 May 2010.
3. **Al-Abri D** (2010) Free and open source software, SQU, Oman, 2 August 2010.
4. **Tarhuni N** (2010) Electromagnetic Spectrum, SQU, Oman, 16 October 2010.

Cooperation with Local and Foreign Organizations

Hossen A, Research visit to Kiel, Germany, in January 2010, supported by DAAD, Germany.

Short Courses

1. **Metwally I** (2010) Distribution system protection. 31 July- 4 August 2010.
2. **Metwally I** (2010) Electric power system modelling and analysis. 12-14 June 2010.
3. **Khriji L** (2010) Communications, Radars and Satellites. October 2010.
4. **Khriji L** (2009) Electromagnetic waves and applications. November 2009.
5. **Al Hinai A** and **Feilat E**, (2010) Electrical power system modelling and analysis. 27-29 June 2010.

Invited Talk

1. **Ahmad A** (2009) Challenges and trends towards VLSI testing. The 2nd International Conference on Computer and Electrical Engineering. Dubai, United Arab Emirates.
2. **Ahmad A** (2009) Linear feedback shift register applications and critical roles. The 4th International Design and Test Workshop. King Abdulaziz City for Science and Technology, Riyadh, Saudi Arabia.
3. **Al-Lawati A** (2009) ICT in Education. Ministry of Transportation and Communications, Oman.
4. **Al-Lawati A** (2010) Photonics research at SQU, Communication and Information Research Centre, Oman.
5. **Al-Lawati A** (2010) Utilization of Renewable Energy in Oil Fields. Petrogas LLC, Oman.
6. **Hossen A** (2010) Identification of Parkinson Tremor from Essential Tremor: A Wavelet-based Approach. Kiel University, Germany.
7. **Khriji L** (2010) Basics of Color Imaging and Applications in Food Industries. SQU, Oman.

Department of Electrical and Computer Engineering

Students' Activities

1. MATLAB short course, September 2009.
2. Society trip to Nizwa, October 2009.
3. Project design workshop, November 2009.
4. Information technology scientific gathering, February 2010.
5. PC formatting course, February 2010.
6. OrCAD workshop, March 2010.
7. Electronics Club 2nd Gathering, Middle East College of Information Technology, March 2010.
8. Engineering exhibition, March 2010.
9. 2nd Electrical Engineering gathering, April 2010.
10. Engineering Society exhibition, September 2010.
11. Electronics and microcontroller workshop, October 2010.
12. PSpice short course, October 2010.
13. Sumo competition, Japanese Embassy, October 2010.
14. Project Design workshop, December 2010.

Department of Mechanical & Industrial Engineering

Website :<http://www.squ.edu.om/Mechanical/>



Department of Mechanical and Industrial Engineering



SUMMARY

Welcome to the Department of Mechanical & Industrial Engineering, College of Engineering at Sultan Qaboos University, Sultanate of Oman. The Department offers Mechanical Engineering and Industrial Engineering programs at Bachelor, Master and Doctoral levels. In addition, the Department offers a joint degree program in Mechatronics Engineering with the Department of Electrical and Computer Engineering. The aim of this booklet is to provide the constituents with the information about the Department.

Our curriculum is designed to produce graduates who can become future leaders for industry, academia, government and society in Oman whose vision is founded upon fundamental knowledge, creative and analytical skills, local/regional perspective and ethics. Through a nice blend of course work and projects, the Department endows students with the ability to apply knowledge of science, mathematics and engineering to work effectively in multidisciplinary teams, provide leadership and technical expertise, and practice engineering with concern for society and environment. Our undergraduate programs are of world class standard and ABET accredited. In Fall 2008, the Department started to offer Ph.D. programs in Mechanical and Industrial Engineering.

Table D1: Summary

	<i>FL2008-SP2009</i>	<i>FL2009-FL2010</i>
Faculty	24	26
Support staff	23	24
Total	47	50
On-study leave	4	2
Undergraduate Program		
Enrolment (Y2-5)	498	550
Courses offered	80	73
Graduates	78	96
Graduate Program		
Enrolment	9	16
Courses offered	6	17
Theses completed	1	
Research		
Grants	7	4
Contracts	6	18
Publications		
Refereed Journals	44	48
Others	70	62

Our staff is actively engaged in fundamental and applied research works. The research projects are either internally funded by the university or externally by the industries of Oman. Some of key projects in-progress include Well-bore Tubular Expansion, Multiphase Flow Metering, Solar Car, Soccer Playing Robot, Swellable Elastomers, Environmental Pollution, Smart Systems, Project Management, Simulation, Ergonomics, etc. In Spring 2009, a 'Test Rig' a unique facility was inaugurated in the Engineering Research Lab to support the oil industry. In addition, faculty members and staff are involved in providing consultancy services to the industries, particularly on environmental issues.

Our goal is to provide students with a balance of intellectual and practical experience that enables them to serve a

variety of societal needs. We also strive to provide avenues for excelling in research to our faculty/staff to serve society. The Department is proud of its alumni, many of whom are holding leading positions at government ministries, major national and international companies and corporations, academic institutions in Oman and the region.



DEPARTMENTAL PROFILE

Faculty

Dr. Ashraf A Shikdar, *Assoc. Professor, HoD*

Ergonomics, Methods Engineering and Work Measurement, Industrial Safety

Dr. Sabah Ahmed Abdul-Wahab Al-Sulaiman, *Professor*

Monitoring of pollutants in the atmosphere, outdoor air quality, modelling and chemistry of ozone formation, modelling of the dispersion of air pollution in the atmosphere, neural network and statistical analysis, liquid desiccant air dehumidifier, water desalination, renewable energy.

Dr. Tasneem Pervez, *Associate Professor*

Engineering Design & Analysis, Composite Materials, FEM, Vibration Analysis

Dr. Rafiq Ahmad Siddiqui, *Associate Professor*

Materials Science, Manufacturing Processes

Dr. Mahmoud A Tahat, *Associate Professor*

Thermo-Fluids, Renewable energy

Dr. Maki Rashid, *Associate Professor*

Computer integrated manufacturing, mechatronics, computer aided design

Dr. Saif Abdullah Al-Hiddabi, *Associate Professor*

Nonlinear Systems Analysis & Control, Flight Mechanics Guidance and Navigation

Dr. Jamil Abdo, *Associate Professor*

Contact / Friction, Engineering Design, Nano Technology

Dr. Khalid Al Zebdeh, *Assistant Professor*

Project Management, Design, Nano-Composites

Dr. Salih Akour, *Associate Professor*

Mechanical Systems, Design and Optimization

Dr. Saeed Ali Al-Araimi, *Assistant Professor*

Engineering Management, Engineering Economics

Dr. Nasser Al Azri, *Assistant Professor*

Fluids Mechanics, Thermodynamics

Dr. Amur S. Al Yahmadi, *Assistant Professor*

Modeling and Simulation, Control of Dynamic Systems and Robotics.

Dr. Nabeel Z. Al-Rawahi, *Assistant Professor*

Fluid Mechanics, Computational Fluid Dynamics, Multiphase flow

Department of Mechanical and Industrial Engineering

Dr. Hamdi Bashir, *Associate Professor*

Facilities Design, Manufacturing Systems, Quality Control and Reliability

Dr. Sayyad Zahid Qamar, *Associate Professor*

Engineering Design, Applied Materials and Manufacturing, Failure Analysis and Reliability.

Dr. Mohammed Khadem, *Assistant Professor*

Operations Research, Production Planning and Control, Simulation Models.

Dr. Mohammed Fanni, *Assistant Professor*

Machine Design, Control, Machine Dynamics, Robotics

Dr. Ibrahim Garbie, *Assistant Professor*

Manufacturing Systems Design, Agility and Reconfiguration

Dr. Mahmoud Al Kindi, *Assistant Professor*

Industrial Engineering and Management

Dr. Majid Al Moharbi, *Assistant Professor*

Dr. Khaled Goher, *Assistant Professor*

Modelling and Control of Dynamic Systems, Assistive Technologies, Rehabilitation Engineering, Mechanics of Mobile Robotics and Parallel Kinematic Machines.

Nasr Al-Hinai, *Lecturer*

Pursuing Doctoral Program

Issam Mahfoodh, *Lecturer*

Preparing for Doctoral Program

Farooq Aljahwari *Lecturer*

Mohamed Al-Lawati, *Demonstrator*

Technical and Support Staff

Dr. Siegfried Trautwein, *Technical Expert*, Mechanical Engineering

Dr. Sulaiman Al-Obaidani, *Research Associate*, Al-Hail Desalination Lab

Hilal Al-Ismaily, *Research Associate*, Fluids Mechanics & Thermodynamics

Mohammad A. Al-Hadhrami, *Department Superintendent*, Solid Mechanics, Ergonomics and CIM Labs

Saeed Nasser Al-Mughairy, *Senior Engineer*, Materials Lab, Al-Hail Desalination Lab

Mohammad Ali Al-Hadhrami, *Lab Engineer*, Fluid Mechanics Lab

Faisal H. Al-Khatri, *Lab Supervisor*, Thermodynamics Lab



Sami Al-Sulti, *Lab Engineer*, Mechanical Systems, Control & MIE Computer Lab

Abdullah Al-Omrani, *Lab Engineer*, CIM Lab and Ergonomics

Sheikha Al-Hatmi, *Lab Engineer*, Mechantronics

Nasser Al-Azizi, *Lab Engineer*, Al-Hail Desalination Lab

Hadid Subeit Al-Alawi, *Senior Engineer*, Workshop

Abdulaziz Al-Harasi, *Senior Support Engineer*, Workshop

Ahmed Sayed Faiz, *Assistant Mechanic*, Workshop

Moosa H. Al-Ramadani, *Technician*, Workshop

Mohammed K. Al-Salmi, *Support Engineer*, Workshop

Mahfoudh Saeed Al-Sharji, *Technician*, Workshop

Abdulbaset Al-Kindi, *Trainee Technician*, Workshop

Hamood k. Al-Mahrizi, *Carpenter*, Workshop

Saleh Al-Malki, *Technician*, Workshop

Yahia Al-Agbari, *Technician*, Workshop

Marshal Miranda, *Technician*, Workshop

Moadh A. Al-Zadjali, *Storekeeper*, Department's store

Basma S. Al-Farsi, *Coordinator*

Department of Mechanical and Industrial Engineering

Committees

Table D2: Departmental Committee membership

Committee	Members
Department Board	Dr. Ashraf Shikdar (Chair) Dr. Nasser Al-Azri All academic staff Dr. Siegi Trautwein Mohamed Al-Hadhrami
Curriculum and Accreditation Committee (DCAC)	Dr. Ashraf Shikdar (Chair) Dr. Yousef Zurigat All ME staff Dr. Hamdi Bashir All IE Staff
Timetabling Coordinators	Dr. Jamil Abdo (Coordinator) Dr. Hamdi Bashir
Final Year Project (FYP) Coordinators	Dr. Sabah Al-Sulaiman Dr. Salih Akour Dr. Khalid Al-Zebdeh Dr. Jamil Abdo (MCTE Coordinator)
Conference Committee	Dr. Ashraf Shikdar (Chair) Dr. Jamil Abdo All Staff
Postgraduate Studies and Research (PGSR) Committee	Dr. Tasneem Pervez (Chair) Dr. Yousef Zurigat Dr. Ibrahim Garbie Dr. Mahmoud Tahat Dr. Abdullah Al-Shabibi Dr. Ashraf Shikdar
Publications/web Committee	Dr. Nabeel Al-Rawahi (Chair) Dr. Sabah Al-Sulaiman Dr. Mohammad Khadem Farouq Al-Jahwari Nasra Al-Maskary
Recruitment Committee	Dr. Ashraf Shikdar (Chair) Dr. Tasneem Pervez Dr. Rafiq Siddiqui Dr. Mahmoud Tahat Dr. Saeed Al-Araimi Dr. Abdullah Al-Shabibi Dr. Nabeel Al-Rawahi



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+968 24141316



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Lab/HSE Committee

Dr. Seigi Trautwein (Chair)
Dr. Rafiq Siddiqui
Dr. Mahmoud Tahat
Dr. Maki Rashid
Dr. Mohammed Fanni
Mohamed Al-Hadhrami

Industrial Advisory Board (IAB)

Dr. Ashraf Shikdar (Chair)
Dr. Abdullah Al-Shabibi
Dr. Zahid Qamar
Dr. Tasneem Pervez
Dr. Saeed Al-Araimi
Dr. Hamdi Bashir

Student Society

Dr. Nasser Al-Azri
Dr. Ibrahim Garbie
Farouq Al-Jahwari
Nasra Al-Maskari

Student-Staff Liaison Committee

Dr. Ashraf Shikdar (Chair)
Dr. Salih Akour
Dr. Maki Rashid
Dr. Rafiq Siddiqui
Farouq Al-Jahwari
Nasra Al-Maskari
2 Students from each cohort

Social Activities Committee

Dr. Rafiq Siddiqui
Dr. Mohammad Khadem
Dr. Nasser Al-Azri

External Liaison Committee

Dr. Saeed Al-Araimi
Dr. Hamdi Bashir
Dr. Zahid Qamar

Strategic Planning Committee

Dr. Ashraf Shikdar
Dr. Zahid Qamar
Dr. Nabeel Al-Rawahi
Dr. Yousef Zurigat
Dr. Tasneem Pervez
Dr. Nasser Al-Azri

Promotion Committee

Dr. Ashraf Shikdar

Department of Mechanical and Industrial Engineering

UNDERGRADUATE STUDIES

Courses

Table D3. Courses offered in fall 2009

Code	Title	instructor
ENGR1500	Introduction to Engineering	Dr Majid Al Maharbi
ENGR1600	Workshop I	Dr. S. Rrautwein
ENGR1601	Workshop II	Dr. S. Rrautwein
MEIE5190	Special Topics	Dr. Y. Zurigat
MCTE4230	Thermal Sciences	Dr. S. Al Sulaiman
MEIE2129	Basic Mechanics	Dr. M. Ali
MEIE4183	Numerical Methods for Engineers	Drs. S. Al Sulaiman/N. Al Azri
MEIE4182	Applied Mathematics for Engineers	Drs. S. Qamar/N. Al Azri
MEIE4181	Instrumentation & Measurement	Drs. M. Ali/R. Zaier
MEIE5106	Pressure Vessels & Piping System Design	Dr. T. Pervez
MEIE4262	Manufacturing Processes	Dr. S. Akour
MEIE5161	Advanced Materials Technology	Dr. S. Qamar
MEIE4222	Production Planning and Control	Dr. M. Khadem
MEIE3161	Materials Science	Dr. R. Siddiqui
MEIE5202	Industrial Safety	Dr. A. Shikdar
MEIE3104	Engineering Drawing and Computer Graphics	Drs. S. Akour/H. Al Ismaili
MEIE3122	Machine Dynamics	Dr. M. Fanni
MEIE4271	Operations Research II	Dr. M. Khadem
MEIE3159	Thermofluids	Dr. Y. Zurigat
MEIE4286	Management for Engineers	Dr. S. Al Araiimi
MEIE3141	Thermodynamics	Dr. M. Tahat
MCTE4255	Mechatronics Systems Design	Dr. R. Zaier
MEIE4223	Facilities Planning	Dr. H. Bashir
MEIE5282	Applied Statistics	Dr. I. Garbie
MEIE4101	Computer Aided Machine Design	Drs. J. Abdo/M. Ali
MEIE4141	Fluid Mechanics	Dr. N. Al Rawahi
MEIE5110	Applied Finite Element Methods	Dr. T. Pervez
MEIE3102	Solid Mechanics	Dr. K. Zebdeh
MEIE4221	Quality Control	Dr. H. Bashir
MEIE2102	Statics	Dr. A. Al Shabibi
MEIE5261	Industrial Engineering Design	Dr. I. Garbie
MEIE4285	Engineering Economics	Dr. K. Zebdeh
MEIE5265	Computer Integrated Manufacturing	Dr. M. Rashid



Table D4: Courses offered in spring 2010

Code	Title	instructor
MCTE5291		Jamil Abdo
MEIE4286	Management for Engineers	Saeed Al Araith
MEIE4183	Numerical Methods for Engineers	Nasser Al Azri
MEIE2102	Statics	Nabeel Al Rawahi
MEIE4201	Ergonomics and Safety	Ashraf Shikdar
MEIE5149	Capstone Design	Jamil Abdo
MEIE3161	Materials Science	Sayyad Qamar
MEIE3108	Creative Decisions and Design	S. Qamar/J. Abdo
PNGE2102	Basic Mechanics	Salih Akour
MEIE4192	Computer Applications in Mechanical Engineering	Farooq al Jahwari
MEIE5190	Special Topics	Tasneem Pervez
MEIE4144	Heat Transfer	Sabah Al Sulaiman
MCTE4145	Instrumentation & Measurement	Riadh Zaier
MEIE5143	Unit Operations I	Nasser Al Azri
MEIE5265	Computer Integrated Manufacturing	Maki Rashid
MCTE4150	Modelling & Simulation	Fadi Gheith
MEIE4141	Fluid Mechanics	Nabeel Al Rawahi
MEIE3104	Engineering Drawing and Computer Graphics	Hilal Al Ismaili
MEIE4262	Manufacturing Processes	Rafiq Siddiqui
MEIE3261	Product Design and Development	Salih Akour
MEIE3212	Methods in Engineering and Work Measurement	Ibrahim Garbie
MCTE5142	Robotics	Riadh Zaier
MEIE3121	Dynamics	Majid Al Maharbi
MEIE5188	Business and Entrepreneurship	Yousuf Zurigat
MEIE4285	Engineering Economics	K. Zebdeh/ I. Garbie
MEIE5231	Inventory Management	Hamdi Bashir
MEIE4122	Engineering System and Control	Mohammed Ismail
MEIE3142	Thermodynamics II	Mahmoud Tahat
MEIE5121	Modelling & Simulation of Engineering Systems	Fadi Gheith
MEIE2129	Basic Mechanics	Salih Akour
MEIE3102	Solid Mechanics	Abdullah Shabibi
MEIE4223	Facilities Planning	Hamdi Bashir
MEIE3122	Machine Dynamics	Fadi Gheith
MEIE4267	Industrial Automation	Maki Rashid
MEIE3270	Operations Research I	Mohammed Khadem
MEIE4101	Computer Aided Machine Design	Jamil Abdo
MEIE4272	Simulation Models	Mohammed Khadem
MCTE3230	Property & Strength of Materials	Khalid Zebdeh
MEIE5101	Engineering Vibration	Mohammed Ismail

Department of Mechanical and Industrial Engineering

Table D5: Courses offered in Fall 2010

Code	Title	instructor
ENGR1500	Introduction to Engineering	Nasser Al-Azri
ENGR1600	Workshop I	Siegfried Trautwein
ENGR1601	Workshop II	Siegfried Trautwein
MCTE4150	Modeling & Simulation	Amur Al-Yahmedi
MCTE4255	Mechatronics System Design	Riyadh Zaier
MCTE4298	Mechatronics Engineering Semiar	Farooq Al Jahwari
MEIE2102	Statics	Majid Al-Maharbi
MEIE2129	Basic Mechanics	Salih Akour
MEIE3102	Solid Mechanics	Khalid Alzebdeh
MEIE3104	Engineering Drawing and Computer Graphics	Hilal Al-Ismaili
MEIE3121	Dynamics	Khalid Goher
MEIE3122	Machine Dynamics	Khalid Goher
MEIE3141	Thermodynamics I	Mahmoud Tahat
MEIE3159	Thermofluids	Mahmoud Tahat
MEIE3161	Materials Science	Rafiq Siddiqui
MEIE3198	Mechanical Engineering Seminar I	Farooq Al Jahwari
MEIE4101	Computer Aided Machine Design	Jamil Abdo
MEIE4141	Fluid Mechanics	Nabeel Al-Rawahi
MEIE4181	Instrumentation & Measurement	Riyadh Zaier
MEIE4182	Applied Mathematics for Engineers	Sulaiman Al Obeidani
MEIE4183	Numerical Methods for Engineer	Yousuf Zurigat
MEIE4198	Mechanical Engineering Seminar II	Farooq Al Jahwari
MEIE4221	Quality Control	Hamdi Bashir
MEIE4222	Production Planning and Control	Mohammad Khadem
MEIE4223	Facilities Planning	Hamdi Bashir
MEIE4271	Operations Research II	Mohammad Khadem
MEIE4285	Engineering Economics	Maki Rashid
MEIE4286	Management for Engineers	Mahmood Al-Kindi
MEIE5190	Special Topics	Amur Al-Yahmedi
MEIE5193	Project I	Salih Akour
MEIE5194	Project II	Sabah Al-Sulaiman
MEIE5261	Industrial Engineering Design	Ibrahim Garbie
MEIE5263	Design for Manufacturing	Maki Rashid
MEIE5282	Applied Statistics	Ibrahim Garbie
MEIE5287	Project Management	Khalid Alzebdeh
MEIE5291	IE Project I	Khalid Alzebdeh
MEIE5292	IE Project II	Khalid Alzebdeh
MEIE5295	Seminar II	Farooq Al Jahwari
MEIE6004	Advanced Numerical Methods	Yousuf Zurigat
MEIE6201	Productivity Analysis and Management	Ashraf Shikdar
MEIE6211	Special Topics in IE	Saif Al-Hiddabi
MEIE6212	Directed Studies	Jamil Abdo
MEIE7000	Research Project	Jamil Abdo
MEIE8001	PhD Thesis	Jamil Abdo

Employment Status

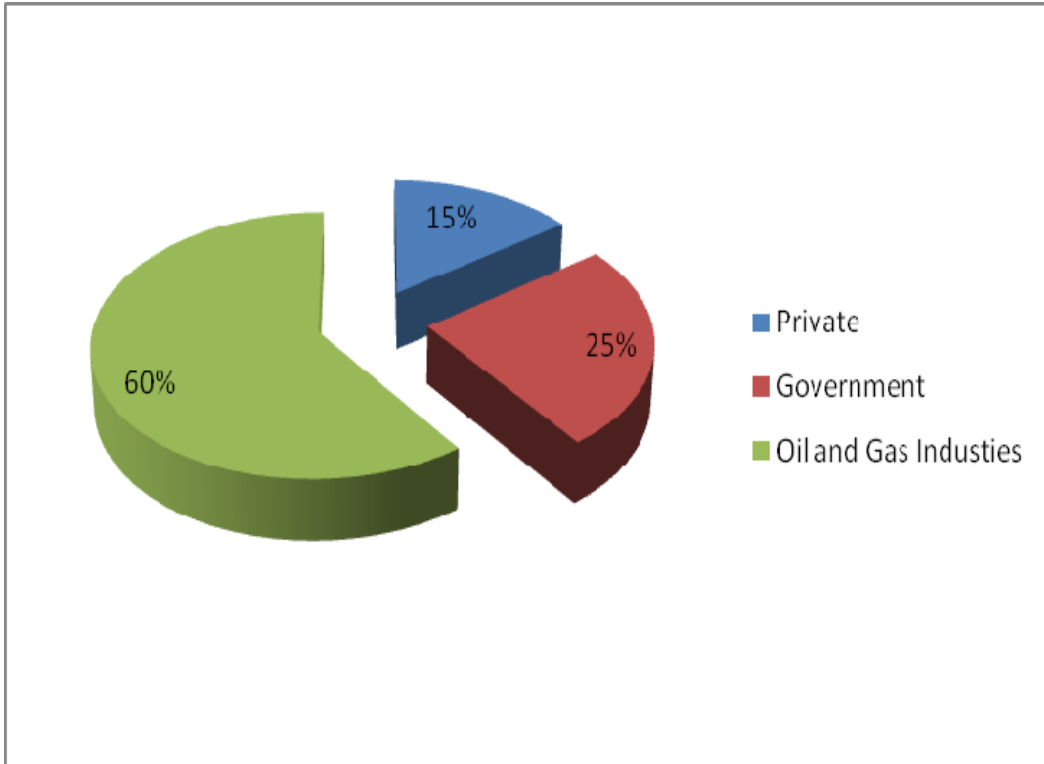


Figure D1: Job placement for the graduates of the last 10 years

Department of Mechanical and Industrial Engineering

POSTGRADUATE STUDIES

Student Enrolment

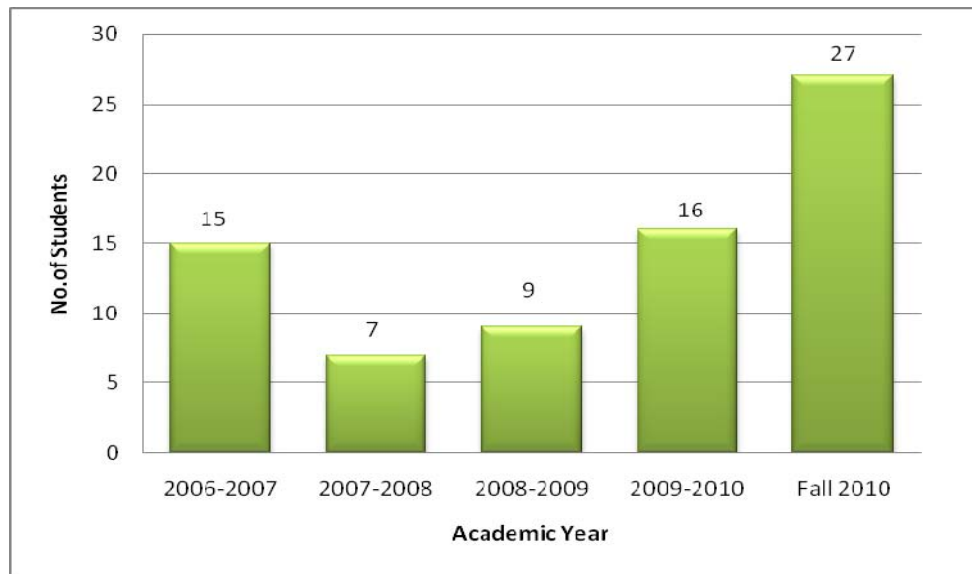


Figure D2: MSc. and PhD Students' enrolment for the past five years

Courses

Table D6: Postgraduate courses offered in year 2010

Semester	Code	Title	Instructor
Fall 2009	ENGR6912	Eng. Econ. Analysis	Maki Rashid
	MEIE6111	Adv.Eng.Measur.Sys	Saif Al-Hiddabi
	MEIE6212	Directed Studies	Jamil Abdo
	MEIE7000	Research Project	Jamil Abdo
Spring 2010	MEIE6108	Vibration	
	MEIE6110	Non-linear Systems Analysis and Control	Saif Al-Hiddabi
	ENGR 6211	Special Topics in IE	Said Al Aرامي
	MEIE 6208	Reliability Engineering	Hamdi Bashir



	MEIE6212	Directed Studies	Jamil Abdu
	MEIE7000	Research Project	Abdulauh Al Shabibi
Fall 2010	ENGR6913	Advanced Engineering Mathematics	Sayyad Qamar
	MEIE6004	Adv. Numerical Meth.	Yousuf Zurigat
	MEIE6201	Production Analysis & Management	Ashraf Shikdar
	MEIE6211	Special Topics	Saif Al-Hiddabi
	MEIE6212	Directed Studies	Jamil Abdo
	MEIE7000	Research Project	Jamil Abdo
	MEIE8001	PhD Thesis	Jamil Abdo

MSc. Students' Projects

Table D7: Students' projects

Project Title	Supervisor	Student Name
Design of an Solid Expandable Tubular Test-rig	Dr. Tasneem Pervez Dr. Saif A.Al-Hiddabi	Muhammed Al-Saqri
Analysis of Material Flow in Drawing and Extrusion Processes Using Finite Element Method	Dr. Tasneem Pervez Dr. Rafiq A. Siddiqui	Suad Al Busaidi
The Impact of Improved Workstations on Employee Health and Safety	Ashraf Shikdar	Khalid Al-Jaradi
Determination of the Features of the Temperature Inversions in GCC.	Dr. Sabah Abdul-Wahab	Mohammed Al-Kalbani
Development of Techniques for Early Detection of Water Leakage on Pipelines and Water Distribution Networks	Dr. Khamis Al-Balushi	Abdulsalam Al-Shukeiry
Multi Stage Flash Desalination Troubleshooting Using Fuzzy Logic-Based Expert System	Sabah Abdul-Wahab Ali Elkamel (Canada) Amer Al-Yahmadi	Mohammed Al-Weshahi

Department of Mechanical and Industrial Engineering

RESEARCH

Grants

Table D8: Internal Grants held by faculty members in year 2010

Research Title	Principal Investigator	Budget (R.O.)
A Study of Productivity in the Manufacturing Sector of Oman	Dr. Hamdi Bashir	2116
Feasibility of Reconfigurable Omani Manufacturing Firms for Globalization	Dr. Ibrahim Garbie	9121
Design and construction of micro and nano pin on disc testing machine	Dr. Jamil Abdo	6027
Design and Fabrication of an Ergonomically Correct Sit-stand Computer Workstation	Ashraf Shikdar	4,100

Contracts

Table D9: Contracts held by faculty members in year 2010

Research Title	Principal Investigator(s)	Budget R.O.	Funded By
Sign Board Production Process Improvement (To significantly improve and develop the manufacturing of road signs by technological enhancement.)	Dr. Salih Akour	24,360	IIC/TRC
Occupational Health and Safety Issues Affecting Worker Performance in Omani Industries	Ashraf Shikdar	97,500	TRC
An Assignment to Verify the Achievements Related to the Implementation of the Terminal Phase Out Management Plan (TPMP) for Chlorofluorocarbons (CFCs) Substances in Oman SQU Project Code: AS/ENG/MIED/10/04	Dr. Sabah Al-Sulaiman	9,200 USD (3,538 RO)	United Nations Industrial Development Organization (UNIDO)
Developing a Report on Phasing-Out the Consumption of Hydro Chlorofluorocarbons (HCFCs) in Oman: Preparation of the HCFC Phase-Out Management Plan (HPMPs) AS/ENG/MIED/10/01	Dr. Sabah Al-Sulaiman	24,000 USD (9,230 RO)	United Nations Environment Programme (UNEP)
Characterization and Longevity Testing of Swellable Elastomers; PDO; Started 2009	SZ Qamar (PI), T Pervez (Co-PI)	88,462	
Low Cost Expandable Research; PDO; Started 2009	T Pervez (PI), SZ Qamar (Co-PI), SA Al-Hiddabi (I)	84,231	



Material Characterization of Swelling Elastomer Seals for Zonal Isolation; PDO; Completed 2009	T Pervez (PI), SZ Qamar (Co-PI), SA Al-Hiddabi (I)	105,769	
Material Characterization of Easywell Water-Swelling and Oil-Swelling Elastomers; Maersk Oil, Qatar; Started 2009 – Completed 2010	SZ Qamar (PI), T Pervez (Co-PI)	10,769	
Material Characterization of Water-Swelling and Oil-Swelling Elastomers; Maersk Oil, Qatar; Received 2008 - Completed 2010	SZ Qamar (PI), T Pervez (Co-PI)	10,577	
Chemical and Mechanical Analysis of Polished and Sucker rods	Majid Al-Maharbi	1,870	Sino Gulf Energy Enterprise
Investigating the Effectiveness of Implementing a New Design for Crude Oil Degasser	Dr. Nabeel Al-Rawahi	189,600	PDO
Low Cost Expandable Research	Dr. Tasneem Pervez (PI), Dr. Sayyad Zahid Qamar (Co-PI), Dr. Saif A Al-Hiddabi (I)	84,652	PDO
Characterization and Longevity Testing of Swellable Elastomers	Dr. Sayyad Zahid Qamar (PI), Dr. Tasneem Pervez (Co-PI)	89,147	PDO
Building integrated Solar Cooling	Dr. Yousef Zurigat	54,700	TRC
Testing and Characterization of Easy well Water- Swelling and Oil Swelling Elastomers	Dr. Zahed Qamar	Maersk Oil Qatar	2010
Developing an Efficient layout for the New facility of Mazoun Establishment and Trading Company	Dr.Hamdi Bashir	Industrial Innovation Center	2010
Multiphase Flow Loop Auditing by NEL: Phase I	Dr. Nabeel Al-Rawahi	PDO	2009
Monodiameter expandable solutions. Improving understanding of wall thinning & Shortening of Expandable tubular under MoD conditions	Dr.Tasneem Pervez	PDO	2010

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Publications

Refereed Journal Papers

1. **Abdo J**, Al-Yhmadi, (2009) Solid State Phenomena, The effect of controlled frequency and amplitude of vibration on friction, 147:380-385.
2. **Abdo J**, Nouby M, Mathivanan D, Srinivasan K, (2010), Reducing disc brake squeal through FEM approach and experimental design technique, Int. J. Vehicle Noise and Vibration, 6(2/3)
3. **Abdo J**, Tahat M, Abualsoud A, Danish M, (2010), International Journal of Mechanics and materials in Design, The effect of frequency of vibration and humidity on the stick-slip amplitude, 6 (1):45-51.
4. **Abdul-Wahab SA** (2009) Foreword. The International Journal of Environmental Studies 66(2):131-132.
5. **Abdul-Wahab SA** (2009) Two case studies of air pollution from Oman and Kuwait. The International journal of Environmental Studies 66(2):179-19.
6. **Abdul-Wahab SA** (2010) Level of environmental awareness towards depletion of the ozone layer among distributors and consumers in the solvent sector: A case study from Oman. Climatic Change 103(3-4):503-517.
7. **Abdul-Wahab SA, Abdo J** (2010) The effects of demographic factors on the environmental awareness of Omani citizens. Journal of Human and Ecological Risk Assessment 16(2):380-401.
8. **Abdul-Wahab SA**, Al-Damkhi AM, Al-Hinai H, Al-Najar KA, Al-Kalbani MS (2010) Total fog and rainwater collection in the Dhofar Region in the Sultanate of Oman during the monsoon season. Water International 35(1):100-109.
9. **Abdul-Wahab SA**, Al-Damkhi AM, Al-Hinai H, Dev R, Tiwari GN (2010) Experimental study of an inverted absorber solar still. Desalination and Water Treatment (DWT) 19(3):249-254.
10. **Abdul-Wahab SA**, Al-Weshahi MA (2009) Brine management: substituting chlorine with on-site produced sodium hypochlorite for environmentally improved desalination processes. Water Resources Management 23(12):2437-2454.
11. **Akour S** (2010) Dynamics of Nonlinear Beam on Elastic Foundation", Lecture Notes in Engineering and Computer Science, 2184(1):1427-1433.
12. **Akour S** and Maaitah H (2010), Effect of Core Material Stiffness on Sandwich Panel Behavior Beyond the Yield Limit, Lecture Notes in Engineering and Computer Science, 2184(1):1321-1330.
13. **Akour S**, Nayef JF, Nicholson DW (2010) Defense Hole Design for Shear Dominant Loaded Plate, International Journal of Applied Mechanics, 2(2):381-398.
14. Al-Damkhi AM, **Abdul-Wahab SA**, Al-Khulaifi NM (2009) Kuwait's 1991 environmental tragedy: lessons learned. Disaster Prevention and Management 18(3):233-247.
15. Al-Damkhi AM, **Abdul-Wahab SA**, Al-Nafisi AS (2009) On the need to reconsider water management in Kuwait. Clean Technologies and Environmental Policy 11(4):379-384.
16. Al-Damkhi AM, Al-Fares RA, Al-Khalifa KH, **Abdul-Wahab SA** (2009) Water issues in Kuwait: A future sustainable vision. The International Journal of Environmental Studies 66(5):619-636.
17. Al-Damkhi AM, Khuraibet AM, **Abdul-Wahab SA**, Al-Attar FA (2009) Toward defining the concept of environmental crime on the basis of sustainability. Environmental Practice 11(2):115-124.



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18. **Bashir H, Al Zebdeh K, Abdo J**, (2009), Concurrent Engineering Research and Applications, An eigenvalue based approach for assessing the decomposability of interdependent design project tasks, 17 (1):35-42.
19. **Bashir HA** (2010) Removal of redundant relationships in an AON project network for evaluating schedule complexity. *Journal of Construction Engineering and Management* 36(1):787-793.
20. Ettouney RS, **Abdul-Wahab SA**, Elkilani AS (2009) Emissions inventory, ISCST, and neural network modelling of air pollution in Kuwait. *The International Journal of Environmental Studies* 66(2):193-206.
21. Foley DC, **Al-Maharbi M**, Hartwing KT, Karaman I, Kezkes L, Mathaudhu S, (2010), Grain Refinement vs. Crystallographic Texture: Mechanical Anisotropy in a Magnesium Alloy, *Scripta Materialia*, 64:193-196.
22. **Goher KM**, Tokhi MO (2010) Development of a Novel Design of Two-Wheeled Vehicle with an Extended Rod, *Cyber Journals: Multidisciplinary Journals in Science and Technology, Journal of Selected Areas in Robotics and Control (JSRC)*, December Edition, 1(2):6-16.
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24. **Goher KM**, Tokhi MO (2010) Modelling and Control of a Two Wheeled Vehicle with an Extended Rod, a Genetic Algorithm-Based Optimization Approach, *Cyber Journals: Multidisciplinary Journals in Science and Technology, Journal of Selected Areas in Robotics and Control (JSRC)*, December Edition, 1(2):17-22.
25. Mahmoudi H, Spahis N, **Abdul-Wahab SA**, Sablani SS, Goosen MFA (2010) Improving the performance of a seawater greenhouse desalination system by assessment of simulation models for different condensers. *Renewable and Sustainable Energy Reviews* 14 (8):2182-2188.
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28. Meribout M, **Al-Rawahi N**, Al-Naamany A, Al-Bimani A, Al-Busaidi K, Meribout A (2010) Integration of impedance measurements with acoustic measurements for accurate two phase flow metering in case of high water-cut. *Flow Measurement and Instrumentation*, 21 (1):8-19.
29. **Pervez T**, Al-Zebdeh K and Al-Jahwari FK (2010) Effects of Boundary Conditions for Laminated Composite Plates Using Higher Order Shear Deformation Theory. *Journal of Applied Composite Materials*, 17(5):499-514.
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31. **Qamar SZ** (2009) Effect of Heat Treatment on Mechanical Properties of H11 Tool Steel, *Journal of Achievements in Materials and Manufacturing Engineering, World Academy of Materials and Manufacturing Engineering*, 35 (2):115-120
32. **Qamar SZ**, Hiddabi SA, Pervez T, Marketz F (2009) Mechanical Testing and Characterization of a Swelling Elastomer, *Journal of Elastomers and Plastics*, 41 (5).

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33. Seibi AC, Al-Yhamadi AS, Al-Hiddabi SA, **Pervez T**, Karrech A, Al-Shabibi A (2009) Dynamic Effects of Mandrel/Tubular Interaction on Downhole Solid Tubular Expansion in Well Engineering. ASME Journal of Energy Resources Technology, 131(1):1-7.
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36. Tahri T, **Abdul-Wahab SA**, Bettahar A, Douani M, Al-Hinai H, Al-Mulla Y (2009) Desalination of seawater using a humidification-dehumidification seawater greenhouse. Desalination and Water Treatment 12:382-388.
37. Tahri T, Bettahar A, Douani M, **Abdul-Wahab SA**, Al-Hinai H, Al-Mulla Y (2010) Utilisation De L'Energie Solaire dans Le Dessalement De L'Eau De Mer dans Une Serre Agricole. Revue des Sciences Fondamentales et Appliquées 2(1):174-189.

Chapters in Books

1. **Abdul-Wahab SA** (2009) Maritime oil transport and pollution prevention, Chapter 4, In: Kutz M, Elkamel A (eds.) Environmentally conscious fossil energy production, ISBN 978-0-470-432747, John Wiley & Sons.
2. **Abdul-Wahab SA** (2009) Solar thermal energy technology: Experimental study on the design and performance of an indirect solar dryer for agricultural products, Chapter 5. In: Hästesko T, Kiljunen O (eds.) Air conditioning systems: Performance, environment and energy factors, ISBN 978-1-60741-555-8, Nova Science Publishers, Inc.
3. **Abdul-Wahab SA** (2009) Vapour side corrosion (VSC) of copper-nickel condenser tubes in MSF plant: Copper-nickel dust formation, Chapter 7. In: Urbonienė IA (ed) Desalination: methods, costs and technology, ISBN 978-1-61668-909-4, Nova Science Publishers, Inc.
4. **Abdul-Wahab SA**, Al-Kalbani MS (2010) Analysis of low-level temperature inversions in some of GCC Countries: Developing a template for characterization of long term analysis of climate change and global warming in the region, Chapter 1. In: Gastillo JM (ed) Relative humidity: Sensors, management, and environmental effects, ISBN 978-1-61761-734-8, Nova Science Publishers, Inc.
5. **Abdul-Wahab SA**, Reddy KV, Al-Weshahi MA, Al-Hatmi S, Tajeldin YM (2009) Performance evaluation and optimization of the MSF desalination plant, Chapter 2. In: Urbonienė IA (ed) Desalination: methods, costs and technology, ISBN 978-1-61668-909-4, Nova Science Publishers, Inc.
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7. **Al-Kindi M**, Yssine A (2009) Impact of Engineering Design on Outsourcing Decisions Outsourcing, teamwork and Business management Frank Columbus (EdS), Nova Publisher.



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Conference Papers

1. **Abdo J**, Haneef D (2010) TeckConnect World Conference/Nanotech & Cleantech for Oil & Gas, Nanoparticles: Promising Solution to Overcome Stern Drilling Problems, Anaheim, USA, 21-24 June 2010.
2. Abdo J, **Zaier R** (2010) Improved Rough Surfaces Wear Models. International Conference on Applied Mechanics, Materials, and Manufacturing (ICAMMM 2010). Muscat, Oman, 13-15 December.
3. Abdo J, **Zaier R** (2010) Investigation of The Effect of Amplitude of Vibration on Stick-Slip Amplitude for Different Materials. International Conference on Applied Mechanics, Materials, and Manufacturing (ICAMMM 2010). Muscat, Oman, 13-15 December 2010.
4. **Abdo J**, Tahat M (2009) The Effect of Excitation Frequencies on Stick-Slip Amplitude, Integrity, Reliability, and Failure 'IRF' 2009" Conference, Porto, Portugal, 20-24 July 2009.
5. Abouelsoud AA, **Abdo J** (2009) Amplitude estimation of stick-slip vibration, Integrity, Reliability, and Failure 'IRF' 2009" Conference, Porto, Portugal, 20-24 July 2009.
6. Abouelsoud AA, Abdo J, **Zaier R** (2010) Adaptive Velocity Controller of Rigid Body Motion Subject to Single State Elastoplastic Friction Model. International Conference on Applied Mechanics, Materials, and Manufacturing (ICAMMM 2010). Muscat, Oman, 13-15 December 2010.
7. **Akour S** (2010) Dynamics of Nonlinear Beam on Elastic Foundation, The 2010 International Conference of Mechanical Engineering, Imperial College, London, UK, 29 June – 2 July 2010.
8. **Akour S**, Al-Husban M, Abdalla MO (2010) Design and Optimization of Stress Relief System for Uniaxially Loaded Laminates, International Conference on Applied Mechanics, Material and Manufacturing, Muscat, Oman, 13-14 December 2010.
9. **Akour S**, Al-Husban M, Nayfeh J (2010) Design and Optimization of Defence Hole System for Hybrid Loaded Laminate, International Conference of Aviation Technology, Engineering and Management, New Orleans, Louisiana, USA, 22-24 March 2010.
10. **Akour S**, Maaitah H (2010) Effect of Core Material Stiffness on Sandwich Panel Behavior Beyond the Yield Limit, The 2010 International Conference of Mechanical Engineering, Imperial College, London, UK, 29 June – 2 July 2010.
11. Al-Busaidi MSA, **Zaier R** (2010) Walking Gait Analysis for Humanoid Robot Using Visual Motion Capture. International Conference on Applied Mechanics, Materials, and Manufacturing (ICAMMM 2010). Muscat, Oman, 13-15 December 2010.
12. Al-Husban M, **Akour S**, Nayfeh J (2010) Design and Optimization of Defence Hole System for Shear Loaded Laminate', International Conference of Aviation Technology, Engineering and Management, New Orleans, Louisiana, USA, 22-24 March 2010.
13. Al-Khalidia AAT, **Zurigat YH**, Dawoud B, Aldoss T, Theodoridise G (2010), Performance of a greenhouse deslination condenser: An experimental study, Proceedings of the 1st International Nuclear and Renewable Energy Conference (INREC10), Amman, Jordan, 21-24 March 2010.
14. **Al-Kindi M**, Abbas EA (2010) A Decision Analysis View of Six Sigma. IEEE International Systems Conference, San Deigo , USA. 5-8 April 2010.
15. **Al-Kindi M**, Abbas EA (2010) Sequential Testing Decision in Product Development, IEEE International Systems Conference, San Diego, 5-8 April 2010.

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16. **Al-Maharbi M**, Foley D, Karaman I, Beyerlein I, Hartwig KT, Kecskes LJ, Mathaudhu S (2010) Importance of crystallographic texture of AZ31B on flow stress anisotropy and tension-compression asymmetry. Magnesium Technology 2010, Seattle, 2010.
17. Al-Rawahi N, **Zurigat YH**, Al-Azri N (2010) Prediction of hourly solar radiation on horizontal and inclined surfaces using daily averaged global radiation data, 2010 ICAMMM Conference, Muscat, Oman, 12-15 December 2010.
18. **Garbie IH** (2010) New Evaluation of Industrial Enterprises, Proceedings of the International Conference of Applied Mechanics, Materials, and Manufacturing (ICAMMM 2010), Muscat, Oman, 13-15 December 2010.
19. **Garbie IH**, Shikdar AA (2010) Analysis of Industrial Organizations Complexity: a Conceptual Model, Proceedings of the International Conference of Applied Mechanics, Materials, and Manufacturing (ICAMMM 2010), Muscat, Oman, 13-15 December 2010.
20. **Garbie IH**, Shikdar AA (2010) Complexity level in Industrial Firms: Case Studies Implementation, Proceedings of the 2010 International Conference on Industrial Engineering and Operations Management (IEOM 2010), Dhaka, Bangladesh, 9-10 January 2010.
21. **Garbie IH**, Shikdar AA (2010) Design for Manufacturing Systems Complexity: A perspective Approach, Proceeding of the ASME 2010 10th Biennial Conference on Engineering Systems Design and Analysis (ESDA 2010), Istanbul, Turkey, 12-14 July 2010.
22. **Garbie IH** (2010) Enhancing the Performance of Industrial Firms through Implementation of Lean Techniques, Proceedings of the International Conference of Industrial Engineering Research (IERC), Cancun, Mexico, 5-9 June 2010.
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24. Khezzar L, **Zurigat YH** (2009) Industrial CFD in Turbomachinery Technology, 13th Annual Conference Rotate, Abu Dhabi, United Arab Emirates, 18-22 October 2009.
25. **Pervez T** and Qamar SZ (2009) Finite Element Analysis of Tubular Ovality in Oil Wells. Advances in Materials & Processing Technologies, Malaysia, Kuala Lumpur, Malaysia, October 2009.
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27. **Qamar SZ** (2009) "FEM Study of Extrusion Complexity and Dead Metal Zone, 17th International Scientific Conference on Achievements in Mechanical and Materials Engineering (AMME-2009), World Academy of Materials and Manufacturing Engineering, 14-17 June 2009, Gdansk, Poland.
28. **Qamar SZ**, Pervez T, Al-Hiddabi SA (2010) "Pre and Post-Swelling Mechanical Behavior of a Water-Swelling Elastomer, 14th International Research/Expert Conference on "Trends in the Development of Machinery and Associated Technology (TMT 2010), Mediterranean Cruise, 11-18 September, 2010
29. **Qamar SZ**, Siddiqui RA and **Pervez T** (2009) Effect of Heat Treatment on Mechanical Properties of H13 Steel. 13th International Research/Expert Conference, Trends in the Development of Machinery and Associated Technology (TMT 2009), Hammamet, Tunisia, 16-21 October 2009.



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30. Shikdar AA, **Garbie IH** (2010) Development of a Smart Workstation for an Assembly Task, Proceedings of the 40th of International Conference on Computers and Industrial Engineering, Awaji Island, Japan, 25-28 July 2010.
31. Tahat M, **Abdo J**, Haneef D (2010) Nano-Enhanced Drilling Fluids: Capable Solution for Reducing High Torque and Drag in Drilling Operation, The Eighteenth Annual International Conference on Composites or Nano Engineering, Anchorage, Alaska, USA, 4-10 July 2010.
32. Tahri T, Bettahar A, Douani M, **Abdul-Wahab SA**, Al-Hinai H, Al-Mulla Y (2010) Dessalement Solaire De L'eau de Mer Dans Une Serre: Simulation De La Condensation Et Effets Des Paramètres Opératoires. The International Congress for Applied Mechanics, Marrakesh, Morocco, 5-7 May 2010.
33. **Zaier R**, Abdo J (2010) Design of Stable Piecewise Linear Oscillator for Humanoid Robot Locomotion. International Conference on Applied Mechanics, Materials, and Manufacturing (ICAMMM 2010). Muscat, Oman, 13-15 December 2010.
34. **Zaier R**, Abdo J (2010) Vibration Reduction for Legged Vehicle during Locomotion", International Conference on Applied Mechanics, Materials, and Manufacturing (ICAMMM 2010). Muscat, Oman, 13-15 December 2010.
35. **Zaier R**, Abdo J. (2010) Iterative Learning Control Design for Mass Production of Hard Disk Drives. International Conference on Applied Mechanics, Materials, and Manufacturing (ICAMMM 2010). Muscat, Oman, 13-15 December 2010.

Technical Reports

1. **Abdul-Wahab SA**, Al-Weshahi M, Al-Hatmi S, Tajeldin YM (2009) Performance evaluation and optimization of the Barka MSF desalination plant. Final Report, The Middle East Desalination Research Center (MEDRC), Project contract number CR/ENG/MIED/09/01.
2. **Al-Maamari R**, Houache O, **Abdul-Wahab SA** (2010) Abnormal viscosity behaviour of Mukhaizna crude at elevated temperature compared to crude of similar API. Final Report, Petroleum Development of Oman (PDO), Project contract No. 2004-75.
3. **Amur AL Yhamedi**, Tasneem Pervez (2009) "Behavior Based Control of a Robotic Based Navigation Aid for the Blind", Project contract No. IG/ENG/MIED/07/04
4. **Pervez T** and Al-Yahmadi AS (2010) Behavior Based Control of a Robotic Based Navigation Aid for the Blind, Final Report, Sultan Qaboos University
5. **Pervez T** and Qamar SZ (2009) Fast Swell Testing of Elastomers for Shallow Aquifer Applications, Final Report, Petroleum Development of Oman (PDO), SQU Project Code CR/ENG/MIED/08/01
6. **Pervez T**, Qamar SZ (July 2010) "Low-Cost Expandable Research," Petroleum Development Oman (PDO)
7. **Pervez T**, Qamar SZ and Al-Hiddabi SA (2009) Research Database for Solid Expandable Tubular", Final Report, Petroleum Development of Oman (PDO), SQU Project Code CR/ENG/MIED/09/02.
8. **Pervez T**, Qamar SZ and Al-Hiddabi SA (2010) Low Cost Expandable Research. Interim Report, Petroleum Development of Oman (PDO), SQU Project Code CR/ENG/MIED/09/02.
9. **Qamar SZ** and Pervez T, (2010) Longevity Test-setup Design for Swelling Elastomers (Task # 1), Interim Report, Petroleum Development of Oman (PDO), SQU Project Code CR/ENG/MIED/09/03
10. **Qamar SZ**, (2010) Organized "Advanced Simulation Seminar: SimExpert, Nastran, Adams, Easy5," hosted by MIE Dept; presented by MSC Software.

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11. **Qamar SZ**, Pervez T (2010) "Material Characterization of Water-Swelling and Oil-Swelling Elastomers," Maersk Oil Qatar.
12. **Qamar SZ**, Pervez T (2010) "Tensile Testing of Elastomers #1343 and #1350," Maersk Oil Qatar
13. **Qamar SZ**, Pervez T (2010) "Testing and Characterization of Easywell Water-Swelling and Oil-Swelling Elastomers," Maersk Oil Qatar
14. **Zurigat, Y.H.**, Al-Rawahi, N. and Al-Azri, N. (2010), Building integrated Solar Cooling Systems, Progress Report, TRC, Project contract No. 2010-01.

OTHER ACTIVITIES

1. Al-Yahmedi A, **Zaier R** (2010) Public-School Supervision in School Competition in Robotics", Oman.
2. **Zaier R**, Al-Yahmedi A. (2010) Sumo Robot Competition with the Embassy of Japan. SQU, Oman, 1 November.

Invited Guest Speaker (Lectures, workshops & seminars)

1. **Abdul-Wahab SA** (2010) Reviewing of the HCFCs data collected under the HPMP for the Sultanate of Oman. The 2010 Main Meeting of West Asia ODSs Officers' Network and Meeting of West Asian Climate Change Focal Points. Organized by United Nations Environment Programme (UNEP/ROWA) & United Nations Industrial Development Organization (UNIDO), Jeddah, Saudi Arabia, 20-23 September 2010.

Seminars

1. **Abdul-Wahab SA** (2010) Researches and studies related to atmospheric air pollution in Muscat. Municipal Council (Muscat Municipality), Oman, 13 December.

Workshops Attended

1. **Abdul-Wahab SA** (2010) Seventh Annual Meeting of Science and Technology in Society (STS) Forum, 3-5 October 2010, Kyoto, Japan.
2. **Salih Akour** (2010) ABET Workshop: Sustainable Program Assessment, by ABET Foundation Inc., USA, Held in Sultan Qaboos University, Oman.
3. **Salih Akour** (2010) Intellectual Property Workshop: WIPO National Workshop on International Classification for Industrial Designs, Held in Ministry of Commerce and Industry, Oman.
4. **Salih Akour** (2010) Rapid Prototyping Workshop: Operating Hardware and software of Z650 Machine, by Gulf Services & Industrial Supplies Co LLC, Oman.
5. **Salih Akour**, (2010) Energy Services Workshop, by International Trade Organization, Held in Ministry of Commerce and Industry, Oman.



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Cooperation with Local and Foreign Organizations

1. **Akour S**, Member of Al-Sult bin Malik School Guardian Council (2008-Present).
2. **AL-Yahmedi**, Amur Salim 9/2009 – August/2010 Spent the sabbatical year as a visiting fellow in the Biorobotics & Locomotion Lab., Sibley School of Mechanical and Aerospace Engineering, Cornell University, NY, USA .
3. **Pervez T**, Brinker Technology, Aberdeen, Scotland, 2009.
4. **Pervez T**, Enventure Global Technology, Houston, USA, 2008-present
5. **Pervez T**, Swell-Fix and RUMA Rubbers Holland, 2008-2009.
6. **Pervez T**, Tendanke, Aberdeen, Scotland, 2010-present

Short Courses

1. **Abdo J**, Elkamel A, **Abdul-Wahab SA** (2010) Modeling and optimization of a crude oil desalting and dehydration process. 16-17 May.

Invited Talk

1. **Abdo J** (2009) Application of AHP in distribution utility planning. Aachen University of Technology, Germany.
2. **Pervez T** (2009) Solid Expandable Tubular and Swelling Elastomer Research at SQU. Expandable Technology Forum, Abu Dhabi, January 19-20, 2009.
3. **Pervez T** (2010) Accreditation of Engineering Programs – An Option or Necessity. International Conference on Operations Research and Management, Dhaka, January 08-10, 2010,
4. **Pervez T** (2010) Progress and Challenges in Solid Expandable Tubular Research. Production Optimization Middle East, Kuwait, May 08-12 2010.

Department of Petroleum & Chemical Engineering

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Department of Petroleum and Chemical Engineering



SUMMARY

To cope with societal evolvement and ever growing industrial demands, the Department has undergone a major restructuring. Two new programs have emerged: one in Petroleum and Natural Gas Engineering (PNGE) and the other in Chemical and Process Engineering (CHPE). Since then, the student intake to the Department has reached 80 for 2005 cohort, from average figures of 20 to 30 previously.

Responding to local demands has directed the Department into the universal new trends: student learning based education. The Petroleum and Natural Gas Engineering program obtained substantial equivalency to the corresponding petroleum programs in US for 6 years while the Chemical and Processing Engineering program recently has been accredited fully similar to any US University.

Since 2008, PCE has started development of integrated curriculum for both CHPE, and PNGE Programs. In this curriculum, the knowledge will be attached to domain of courses instead of single course. The flow of knowledge within each domain will be presented to the students from the beginning. The evaluation of each domain will be conducted separately and then all domains will contribute to the overall assessment of the program.

Table E1: Summary

	FL2008-SP2009	FL2009-FL2010
Faculty	19	19
Support staff	10	10
Total	29	29
On-study leave	1	0
Undergraduate Program		
Enrolment (Y2-5)	380	300 FL09
Courses offered	43	48
Graduates	89	92
Graduate Program		
Enrolment	19	25
Courses offered	4	6
Theses completed	1	3
Research		
Grants	3	3
Contracts	13	2
Consulting	3	1
Publications		
Refereed	30	29
Journals		
Others	11	21

The Department has started M Sc of Petroleum and Natural Gas (PNGE) since 2003, and Ph D programs for Chemical and Processing Engineering CHPE and PNGE recently starting from academic year 2009/2010. M Sc (with courses option) for both CHPE and PNGE programs was approved by SQU. CHPE M.Sc (with thesis option). is in processing.

Faculty as well as technicians have also taken part in doing research, providing laboratory services and consultancy. The Department is currently working hand in hand with the College Administration and the Oil and Gas Research Centre to expand the Engineering Research Laboratories (ERL). ERL will be hosting three major research projects of Thermally-Assisted Gas-oil Gravity Drainage, Formation Damage and Chemical Profile Control (CPC). In chemical engineering, a modern gas-solid reactor and a sophisticated GC are in function. Thus the strong infrastructure and tradition of engaging in quality research have resulted in a number of publications in renowned international journals and conference proceedings.



DEPARTMENTAL PROFILE

Faculty

Currently, the Department consists of a total of 19 academics consisting of 6 associate professors, 13 assistant professors.

Academic Staff

Dr. Yahya M. Al-Wehaibi, *Asst. Professor* and Head of Department

Reservoir Simulation, multi contact miscible gas injection, first-contact miscible WAG injection, thermal injection, neural magnetic resonance.

Dr. Ali Soud Al-Bemani, *Assoc. Professor*

Well testing, reservoir engineering, rock and fluid properties and computer application in petroleum engineering

Dr. Gholamreza Vakili-Nejad, *Assoc. Professor*

Applied Statistical and Chemical Thermodynamics, Applied Hydrocarbon Thermodynamics, Characterization of Petroleum Fluids, Nanofluids, Nanothermodynamics

Dr. Mahmoud Abdel-Goad, *Assoc. Professor*

Polymer engineering, composite materials, expanded graphite.

Dr. Rashid S. Al-Maamari, *Assoc. Professor*

EOR, wettability, hydrocarbon contamination of groundwater, treatment and utilization of oilfield produced water.

Dr. Farouq Sabri Mjalli, *Assoc. Professor*

Process modelling and control, Green Engineering,

Dr. Ibrahim Ashour, *Assoc. Professor*,

Applied thermodynamics and separation processes, Green Engineering, natural gas, Chemical Engineering education

Dr. Khalid Hilal Al-Rawahy, *Asst. Professor*

Mineral resources, geology, genesis, supply and demand analysis, modeling, and forecasting techniques.

Dr. Hamoud K. Al-Hadrami, *Asst. Professor*

Simulation modeling and geological modeling. Drilling engineering. Formation evaluation.

Dr. Majid A. Al-Wadhahi, *Asst. Professor*

Reservoir simulation, 3-phase flow in porous media, artificial neural network

Dr. Baba El-Yakubu Jibril, *Asst. Professor*

Heterogeneous catalysis, adsorption

Dr. Adel M. Al-Ajmi, *Asst. Professor*

Mining engineering and rock mechanics

Dr. Talal K. Al-Wahaibi, *Asst. Professor*

Multiphase flow and mixing, Flow in porous media, Drag reducing polymers

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Dr. Mansoor H. Al-Harathi, Asst. Professor

Risk and Uncertainty, Integrated reservoir management, Economic Evaluation of Oil and Gas Projects, Stochastic Integrated Asset Model, Decision Making under Uncertainty, Portfolio Management, Project Management

Dr. Ilham Kirm, Asst. Professor

Heterogeneous Catalysis and Catalytic Reactors.

Dr. Abdul Aziz R. Al-Hashmi, Asst. Professor

Petroleum reservoir engineering and petrochemical engineering.

Dr. Jamil Naser, Asst. Professor

Environmental Engineering, water quality, Heavy metals contamination, Desalination, Engineering Education

Dr. Mohammad Al-Abri, Asst. Professor

Water Treatment, Nanotechnology and Green Engineering

Dr. Rashid S. Al-Hajri, Asst. Professor

Heterogeneous catalysis, petroleum reservoir engineering and petrochemical engineering.

Technical and Support Staff

Said Soud Al-Omeiri, Chief Technician

Nasser Al-Mandhari, Senior Engineer

Sabri Salam Al-Khusaiby, Department Superintendent

Hamdan Bin Saif Al-Amri, Lab Supervisor

Ike Fernandez Siruno, Senior Engineer

Nayyar Afzal, Lab Supervisor

Salim Ali Al-Mazrui, Lab Supervisor

Adel Al-Rubkhi, Technician

Sheikha Salim Al-Hajri, Coordinator



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Committees

Table E2: Committee membership

Committee	Members
PCED Postgraduate Studies & Research Committee	Dr. Mahmoud Abdul Goad (Chair) Dr. Fathi Jamshid Dr. Gholam-Reza Vakili Dr. Yahya Al-Wehaibi Dr. Majid Al Wadhahi
PCED Appointment Committee	Dr. Ibrahim Ashour (Chair) Dr. Jamil Naser Dr. Gholam-Reza Vakili Dr. Mahmoud AbdelGoad Dr. Rashid Al-Maamari Dr. Yahya Al Wehaibi
PCED Board Secretary	Dr. Ilham Kirm
PCED Book and Library Coordinator	Dr. Mohamed Al Abri
PCED Chief Technician & Labs Supervisor	Mr. Nasser Al-Mandhari
PCED Curriculum and Accreditation Committee	Dr. Rashid Al-Maamari (Chair) Dr. Ibrahim Ashour Dr. Golam-Reza Vakili Dr. Baba Jibril Dr. Yahya Al Wehaibi Dr. Majid Al Wadhahi
PCED Exam Review Committee	Dr. Ibrahim Ashour Dr. Rashid Al-Maamari Dr. Jamil Naser
PCED In-house Industrial Training Coordinator	Dr. Mohamed Al Abri Dr. Ilham Kirm
PCED Seminar Coordinator	Dr. Fathi Jamshid Dr. Khalid Al Rawahi
PCED SPE Representative	Dr. Hamoud Al-Hadrami
PCED Student Society Advisor (SPE/CHEME)	Dr. Abdul Aziz Al Hashmi
PCED Timetabling Officer	Dr. Rashid Al-Maamari Dr. Baba Jibril

Department of Petroleum and Chemical Engineering

UNDERGRADUATE STUDIES

Courses

Table E3: Courses offered in Fall 2009

Code	Title	Instructor
PNGE3202	Numerical Methods	Golam Reza Vakil
PNGE5212	Secondary Oil Recov	Yahya Al-Wahaibi
CHPE5312	Project I	Jamshid Fathi
PETM3006	Eng Geology	Khalid Al-Rawahi
PNGE4101	Statistics for Eng.	Adel Al-Ajmi
PNGE4312	Drilling Tech. Lab	Hamoud Al-Hadrami
PNGE4412	Reservoir Eng.	Rashid Al-Maamari
CHPE3102	Eng. Thermo	Abdulazeez Al-Hashmi
CHPE3103	Professional Practic	Baba Jibril
CHPE4212	Unit Operations I	Mahmoud Abdelgoad
PNGE3112	Intro. to Petro & Na	Ali Al Bimani
PNGE4312	Drilling Tech. Lab	Hamoud Al-Hadrami
PNGE6002	Advanced Reserv. Eng	Shahab Ayatollahi
CHPE3101	Materials Eng.	Ilham Kirm
CHPE3302	Fluid Flow	Talal Al-Wahaibi
CHPE4312	Chem Eng. Lab I	Mohammed Al Abri
CHPE5412	PI n & Process Design	Usman Elnafaty
CHPE3402	Heat Transfer	Jamil Nasser
CHPE4112	Chem Eng. Thermody	GolamReva Vakil
CHPE4302	Desalination	Mohammed Al Abri
CHPE4712	Chem Eng. Lab II	Jamshid Fathi
PNGE5103	Eng. Econ.	Khalid Al-Rawahi
PNGE5112	Production Eng.	Yahya Al-Wahaibi
CHPE3112	Princi. of Chem Proc	Jamil Nasser
CHPE5312	Project I	Ibrahim Ashour
CHPE5412	PI n & Process Design	Usman Elnafaty
PNGE3111	Chem.for Petr. Eng.	Abdulazeez Al-Hashmi
PNGE4212	Drilling Technology	Hamoud Al-Hadrami
CHPE4102	Polymers	Mahmoud Abdelgoad
CHPE4312	Chem Eng. Lab I	Mohammed Al Abri
CHPE5112	Chem Process Control	Baba Jibril
CHPE5112	Chem Process Control	Baba Jibril
CHPE5812	Kinetics and Cataly	Jamshid Fathi
PNGE5203	Mng.for PCE	Mansoor Al-Harthy



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CHPE2211	Organic Chemistry	Ilham Kirm
CHPE3302	Fluid Flow	Talal Al-Wahaibi
CHPE4712	Chem Eng. Lab II	Talal Al-Wahaibi
PNGE5115	Project I	Majid Al-Wadhahi

Table E4: Courses offered in Spring 2010

Code	Title	Instructor
CHPE2211	Organic Chemistry	Ilham Kirm
CHPE3211	Apply Physical Chem	GolamReva Vakil
CHPE3402	Heat Transfer	Jamil Nasser
PETM3006	Eng Geology	Said Al-Omairi
PNGE5102	Health,Safety&Envirm	Mohammed Al Abri
CHPE3112	Princi. of Chem Proc	Jamil Nasser
CHPE3212	Chemc.Process.Indus	Talal Al-Wahaibi
CHPE4412	Process Heat Transfe	Mahmoud Abdelgoad
CHPE5512	Project II	Ibrahim Ashour
PNGE4512	Formation Evaluation	Hamoud Al-Hadrami
CHPE4402	Natural Gas Process.	Jamshid Fathi
CHPE4512	Chem React Eng.	Jamshid Fathi
PNGE4101	Statistics for Eng.	Adel Al-Ajmi
PNGE4612	Well Testing	Rashid Al-Maamari
PNGE5412	Field Process of NG	Yahya Al-Wahaibi
CHPE5207	Petroleum Refining	Mahmoud Abdelgoad
CHPE5512	Project II	Baba Jibril
PNGE4101	Statistics for Eng.	Adel Al-Ajmi
PNGE5103	Eng. Econ.	Khalid Al-Rawahi
CHPE3302	Fluid Flow	Talal Al-Wahaibi
CHPE5212	Chemical Eng Lab III	Baba Jibril
CHPE5512	Project II	Jamshid Fathi
PNGE2102	Basic Mechanics	Salih Akour
PNGE4712	Reservoir Simulation	Majid Al-Wadhahi
CHPE3101	Materials Eng.	Ilham Kirm
CHPE3102	Eng. Thermo	Abdulazeez Al-Hashmi
CHPE3102	Eng. Thermo	Abdulazeez Al-Hashmi
CHPE5212	Chemical Eng Lab III	Baba Jibril
PNGE3202	Numerical Methods	GolamReva Vakil
PNGE3212	Rock & Fluid Propert	Yahya Al-Wahaibi
CHPE4114	Comp Aided design	Baba Jibril

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PNGE5203	Mng.for PCE	Mansoor Al-Harthy
PNGE5215	Project II	Majid Al-Wadhahi
CHPE3103	Professional Practic	Baba Jibril
CHPE4612	Unit Operation II	Mohammed Al Abri

Table E5: Courses offered in Fall 2010

Code	Title	Instructor
CHPE2211	Organic Chemistry	Ilham Kirm
CHPE3101	Materials Eng.	Ilham Kirm
CHPE3102	Eng. Thermo	Ibrahim Ashour
CHPE3102	Eng. Thermo	Farouq Mjalli
CHPE3103	Professional Practic	Baba Jibril
CHPE3112	Princi. of Chem Proc	Jamil Nasser
CHPE3302	Fluid Flow	Talal Al-Wahaibi
CHPE3302	Fluid Flow	Talal Al-Wahaibi
CHPE3402	Heat Transfer	Abdulazeez Al-Hashmi
CHPE4112	Chem Eng. Thermody	GolamReva Vakil
CHPE4112	Chem Eng. Thermody	Jamshid Fathi
CHPE4212	Unit Operations I	Mahmoud Abdelgoad
CHPE4212	Unit Operations I	Mahmoud Abdelgoad
CHPE4302	Desalination	Mohammed Al Abri
CHPE4312	Chem Eng. Lab I	Mohammed Al Abri
CHPE4312	Chem Eng. Lab I	Mohammed Al Abri
CHPE4712	Chem Eng. Lab II	Talal Al-Wahaibi
CHPE4812	Special Topics I	Jamil Nasser
CHPE5112	Chem Process Control	Baba Jibril
CHPE5312	Project I	Baba Jibril
CHPE5312	Project I	Mahmoud Abdelgoad
CHPE5312	Project I	Jamshid Fathi
CHPE5312	Project I	Mohammed Al Abri
CHPE5312	Project I	Farouq Mjalli
CHPE5312	Project I	Abdulazeez Al-Hashmi
CHPE5312	Project I	GolamReva Vakil
CHPE5312	Project I	Jamil Nasser
CHPE5312	Project I	Ilham Kirm
CHPE5312	Project I	Ibrahim Ashour
CHPE5312	Project I	Talal Al-Wahaibi



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CHPE5412	PIn &Process Design	Ibrahim Ashour
CHPE5612	Process Safety	
CHPE5812	Kinetics and Cataly	Jamshid Fathi
PNGE3111	Chem.for Petr. Eng.	Abdulazeez Al-Hashmi
PNGE3112	Intro. to Petro & Na	Hamoud Al-Hadrami

Employment Status

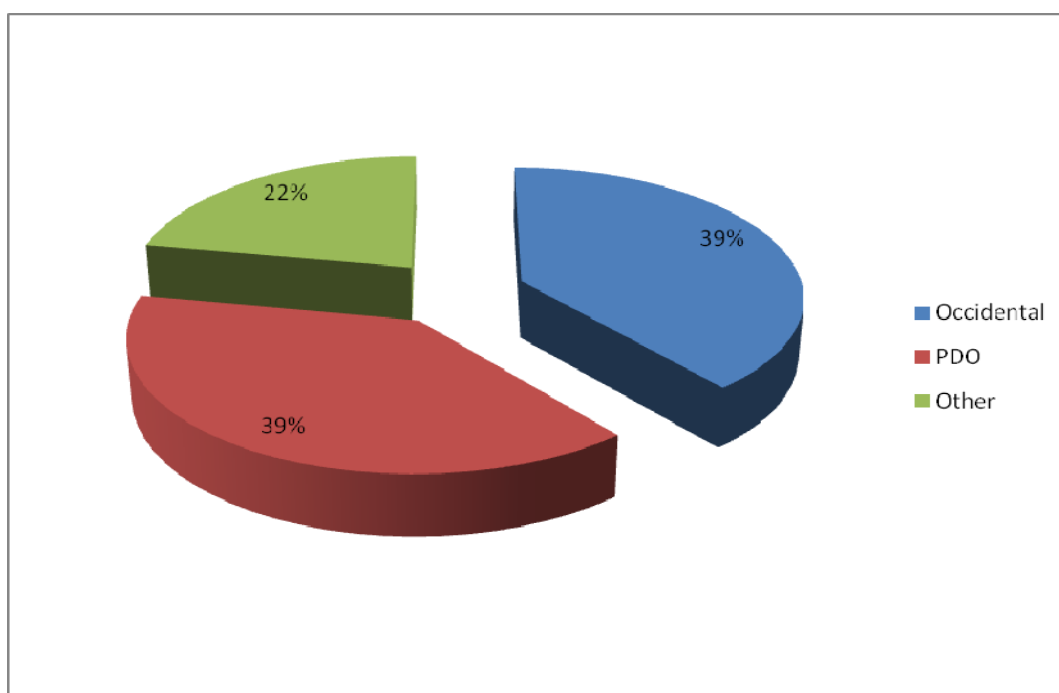


Figure E1: Job placement for the graduates of the last 5 years

Department of Petroleum and Chemical Engineering

POSTGRADUATE STUDIES

Student Enrolment

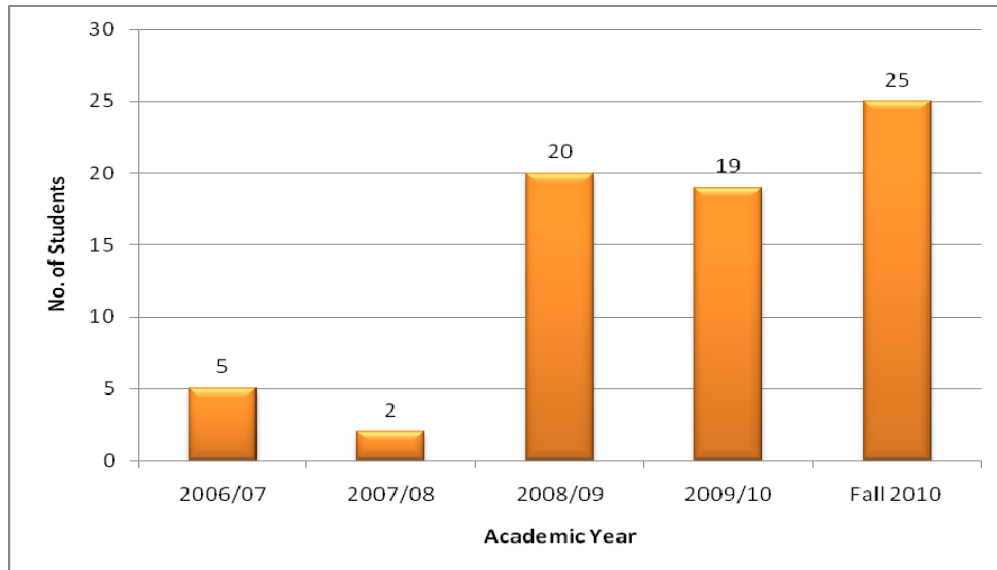


Figure E2: MSc. Students' enrolment for the past five years

Courses

Table E6: Postgraduate courses offered in PCE.

Semester	Code	Title	Instructor
Fall 2009	PNGE6001	Transport Process	Shahab Ayatollahi
	PNGE6103	Applied Reserv Simul	Majid Al-Wadhahi
	PNGE7000	Research Project	
	PNGE8001	PhD Thesis	
Spring 2010	PNGE6900	Special Topics	Mutasem Al Raisi
	PNGE6108	Thermophys.Prop.of o	GolamReva Vakil
	PNGE8001	PhD Thesis	
	PNGE7000	Research Project	
Fall 2010	PNGE6001	Transport Process	Ibrahim Al Saleh
	PNGE6002	Advanced Reserv. Eng	Ali Al Bimani
	PNGE6103	Applied Reserv Simul	Majid Al-Wadhahi
	PNGE7000	Research Project	
	PNGE8001	PhD Thesis	



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M. Sc. Students' Projects

Table E7: Student projects

Project Title	Supervisor	Student Name
Klinkenberg corrected gas permeability correlation for Shuaiba Formation	Rashid Al-Maamari OveBjorn Wilson	Reham Al-Jabri
Water Permeability correlation for Shuaiba Formation	Rashid Al-Maamari OveBjorn Wilson	Iman Al-Belushi
Low Surfactant Concentration Water Flood To Improve Oil Production From Selected Omani Oil Field	Mohamed Aoudia Rashid Al-Maamari	Azza Al-Kalbani
Potential of Bacillus Consortia Enzymes in Biodegradation of Heavy	Dr. Saif Al-Bahry Dr. Yahya Al-Wahaibi Dr. Elshafiae Abdulkadir Dr. Ali Al-Bemani	Balqees Al-Hinai
Numerical Investigation of Sweep Efficiency Improvement in Steamflooded Heavy Oil Field	Dr. Yahya Al-Wahaibi Dr. Mike O'Dell	Aamer Al-Belushi
Impact of Matrix Gas Injection in Gas Oil Gravity Drainage Process	Dr. Yahya Al-Wahaibi Dr. Adel Al-Ajmi	Abdulaziz Al-Shuaibi
Theoretical Investigation of Pressure drop and Hold-up During Dual Continuous Oil-Water Flows	Dr. Talal Al-Wahaibi Dr. Yahya Al-Wahaibi	Badar Al-Busaidi

Ph. D. Students' Projects

Table E8: Student projects

Project Title	Supervisor	Student Name
Borehole Stability Analysis in Shale	Dr. Pål Skalle Dr. Adel Al-Ajmi	Aminul Islam
Effect of Drag Reducing Polymers in Horizontal Oil-Water Flow	Dr. A.S. Olawale Dr. Talal Al-Wahaibi Dr. Adel Al-Ajmi Dr. Yahya Al-Wahaibi	Nurudeen Yusuf

Department of Petroleum and Chemical Engineering

RESEARCH

Grants

Table E9: Internal Grants held by faculty members in year 2010

Research Title	Principal Investigator	Budget R.O.	Funded By
Drag Reducing Polymers for Two-Phase Oil/Water Flow	Dr. Talal Al-Wahaibi	4000	SQU
Probabilistic Approach in Wellbore Stability Analysis	Dr. Adel Al-Ajmi	3,206	SQU
Formation damage Around Boreholes During EOR process	Dr. Hamoud Al-Hadrami	6,384	SQU
Production of Chemicals and Hydrogen using dry reforming of natural gas over nanocatalysts	Ilham Kirm	4808	SQU
Levels of mercury in traditional medicine herbal remedies and generic pharmaceutical available in Oman	Ilham Kirm	4800	SQU
Arsenic Levels in Drinking Water at Rural Areas of Oman	Jamil Naser	8,753	SQU

Table E10: External Grants held by faculty members in year 2010

Research Title	Investigators	Budget R.O.	Funded By
Polymer Technology for Improved Oil Recovery in Oman Fields	Dr. Rashid Al-Maamari	-	PDO
pH-Sensitive polymer for Novel Improving Reservoir Sweep and Conformance Control Applications (Phase - I)	Adel Al-Ajmi	-	PDO
PVT Measurements and Analysis (Phase - I)	Yahya Al-Wahaibi	-	PDO



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Publications

Refereed Journal Papers

1. Al- Ajmi A, **Al-Harthy M** (2010) Probabilistic wellbore Collapse Analysis, Journal of Petroleum Science and Engineering 74(3-4):171-177.
2. **Al-Abri M**, Al Anezi K, Dakheel A, Hilal N (2010) Humic substance coagulation: Artificial neural network simulation, Desalination 253:153-157.
3. **Al-Abri M**, Dakheel A, Tizaoui C, Hilal N (2010) Combined humic substance and heavy metals coagulation, and membrane filtration under saline conditions, Desalination 256:46-50.
4. **Al-Ajmi AM**, Zimmerman RW (2009) A New Well Path Optimization Model for Increased Mechanical Borehole Stability. J Pet Sci Eng 69(1):53-62.
5. **Al-Harthy M** (2010) Number of Development Wells: A Decision Under Uncertainty, The Engineering Economist 55(4):328-349.
6. **Al-Harthy M** (2010) Pitfalls of percentage take metric for assessment of petroleum fiscal regimes, International Journal of Sustainable Society 2(4):393-405.
7. Al-Harthy MH, **Al-Ajmi AM** (2009) How to Economically Evaluate a Drilling Fluid Plant? A Systematic Approach. Int J Oil, Gas and Coal Technology 2(3):280-296.
8. Al-Maamari F, Al-Shuraiqi H, Al-Wahaibi Y (2010) Experimental and Numerical Studies of Discontinuous Shale Effects on First-contact Miscible Water Alternating Gas Injection, Journal of Energy Sources, Part A: Recovery, Utilization, and Environmental Effects 32(6):567-575.
9. Al-Maamari RS, Hirayama A, Shiga T, Sueyoshi MN, Al-Shuely M, Abdalla OA, Kacimov AR (2010) Fluids' dynamics in transient air sparging of a heterogeneous unconfined aquifer, Environmental Earth Sciences, DOI 10.1007/s12665-010-0793-y.
10. **Al-Wahaibi Y** (2010) First- and Multi-Contact Miscible Gas Injection within Channeling Heterogeneity System, Energy Fuels Journal 24(3):1813-1821.
11. **Al-Wahaibi Y**, Al-Shuraiqi H, Al-Maamari F (2010) Slug Water Alternating Gas Flow Processes Behavior in the Vicinity of Discontinuous Shales, Journal of Petroleum Science and Technology 28(5):515-524.
12. Al-Wahaibi Y, Muggeridge A, Grattoni C (2009) Gas-Oil Non-Equilibrium in Multicontact Miscible Displacements within Homogeneous Porous Media, Journal of Petroleum Science and Engineering 68: 71-80.
13. Aoudia M, Al-Maamari RS, Nabipoor M, Al-Bemani AS, Ayatollahi S (2010) A Laboratory Study of Novel Alkyl Ether Sulfonates for Improved Oil Recovery from Carbonates, Energy and Fuels 24:3655-3660.
14. Arami-Niya A, Daud AW, **Farouq S. Mjalli** (2010) Comparative Study of the Textural Characteristics of Oil Palm Shell Activated Carbon Produced By Chemical and Physical Activation for Methane Adsorption", IChemE's journal, Chemical Engineering Research and Design, ChERD, doi:10.1016/j.cherd.2010.10.003.
15. Baniadam M, **Fathikalajahi J**, Rahimpour MR (2009) Incorporation of Eulerian-Eulerian CFD Framework in Mathematical Modeling of Chemical Absorption of Acid Gases into Methyl Diethyl Amine on sieve Trays, Journal of Chemical Engineering 151:286-294.

Department of Petroleum and Chemical Engineering

16. Baniadam M, **Fathikalajahi J**, Rahimpour MR (2009) Comparison of Separation Performance of a Structured Packed column with a tray-type Column for H₂S and CO₂, Oil & Gas and Technology-Review de l'IFP 64(2):179-190
17. Esmailzadeh F, Zeighami ME, **Fathikalajahi J** (2009) 1-D Modeling of Hydrate Decomposition in Porous Media, International Journal of Natural Sciences and Engineering 2(1):38-44.
18. Gowhazard H, **Al-Harthy M** (2010) Production Royalty Sliding Scale, Energy Sources, Part B: Economics, Planning, and Policy 6(1):53-62.
19. Jahanshahi M, Hosseinzadeh SF, Alipanah M, Dehghani A, **Vakili-Nezhaad GR** (2010) Numerical simulation of free convection based on experimental measured conductivity in a square cavity using Water/SiO₂ nanofluid, International Communications in Heat and Mass Transfer 37(6):687-694.
20. Khademi MH, Hezave AZ, Jahanmiri A, **Fathikalajahi J** (2009) An expression for Ratio of Critical Temperature to Critical Pressure with the heat Capacity for low to Medium Molecular Weight Compound, Journal of Chemical Engineering Data 54:690-700.
21. Kuen HY, Farouq SM, Koon YH (2010) RLS-Based Adaptive Control Of A Biodiesel Transesterification Reactor, Industrial & Engineering Chemistry Research, I&ECR 49:11434-11442.
22. Mukhtar AK, **Farouq SM**, Hashim MA, Al Nashef IM (2010) Phosphonium Based Ionic Liquids Analogous and Their Physical Properties, Journal of Chemical Engineering Data (JCED) 55:4632-4637.
23. Sarshar M, Esmailzadeh F, **Fathikalajahi J** (2010) Experimental and Theoretical study of Gas Hydrate Formation in A High Pressure Flow Loop, The Canadian Journal of Chemical Engineering, volume 9999.
24. Sarshar M, **Fathikalajahi J**, Esmailzadeh F (2010) kinetic of Hydrate Formation of Equilibrium. propane and its mixture with methane in a circulating flow reactor, Journal of Fluid Phase Equilibrium 298:38-47.
25. Sarshar, M, Esmailzadeh F, **Fathikalajahi J** (2010) Induction time of Hydrate Formation in a Flow Loop, Journal of Theoretical Foundation of Chemical Engineering 44(2):201-205.
26. Talaghat MR, Esmailzadeh F, **Fathikalajahi J** (2009) Calculation of driving force and prediction of gas consumption in simple and double gas hydrate formation with or without presence of kinetic inhibitors in batch system using Esmailzadeh Roshanfeker EOS Chemical and Biochemical, Engineering Quarterly Journal, 22(2 or 3).
27. Talaghat MR, Esmailzadeh F, **Fathikalajahi J** (2009) Experimental and theoretical Investigation of Simple Gas hydrate Formation With or without Presence of Kinetic Inhibitors in a Flow Loop Apparatus, Journal of Fluid Phase Equilibria 279:28-40.
28. Talaghat MR, Esmailzadeh F, **Fathikalajahi J** (2009) Experimental and theoretical Investigation of Double Gas Hydrate Formation with or without presence of kinetic Inhibitors in a flow Mini-Loop Apparatus, Journal of Chemical Engineering Technology 32(5):1-16.
29. Zabihi S, Alinia R, Esmailzadeh F, **Fathi Kalajahi J** (2010) Pretreatment of wheat straw using steam, steam/acetic acid/acetic acid and steam/ethanol and its enzymatic hydrolysis for sugar production, Journal of Biosystems Engineering 5:288-297.

Books/Chapters Publications

1. **Vakili-Nezhaad GR**, Complex Phase Equilibrium Modelling and Calculations in the Book Thermodynamics (ISBN: 978-953-7619-X-X) INTECH, In Press.



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Conference Papers

1. Abdel-Goad M, **Al-Hashmi A**, Rashid Al-Maamari (2009) Evaluation of viscoelastic properties of a high molecular weight polyacrylamide-based polymeric material, 2009 Multilingual Interdisciplinary Conference on Chemical, Mechanical and Materials Engineering (2009 ICCMME), Australia, 07-20 December 2009.
2. Al-Bahry S, **Al-Wahaibi Y**, Al-Bemani A, Elshafie A, Al-Sulimani H, Al-Muaini R, Al-Alawi W, Joshi S (2010) Bacillus licheniformis and B. subtilis isolates for MEOR application in Oman. 1st Annual World Congress of Petroleum Microbiology (WCP) 2010, Dalian, China, 25-27 July 2010.
3. **Al-Kindi A**, Muggeridge A, Al-Wahaibi Y (2010) Experimental Investigation into the Influence of Convective Dispersion and Model Height on Oil Drainage Rates during VAPEX, SPE 129169, Presented at the SPE EOR Conference at Oil & Gas West Asia, Muscat, Sultanate of Oman, 11-13 April 2010.
4. Al-Nashef IM, **Farouq SM**, Ali Hashim M, Hayyan M, Chooi KL, Tan XM (2010) Destruction of polychlorinated hydrocarbons in ionic liquids at ambient conditions, CHEMECA 2010, Adelaide, Australia.
5. Al-Rawahy KH (2010) Transport sector in Oman, contribution to Greenhouse gases, and future implications. Third SQU-JCCP Joint Symposium on Environmental Challenges and Mitigation Approaches for Sustainable Development in the Oil and Gas Industry, Muscat, Sultanate of Oman, 19-21 December 2010.
6. Al-Sulaimani H, **Al-Wahaibi Y**, Al-Bahry S, Elshafie A, Al-Bemani A, Joshi S, Zargari S (2010) Experimental Investigation of Biosurfactants Produced by Bacillus Species and their Potential for MEOR in Omani Oil Field, SPE 129228, Presented at the SPE EOR Conference at Oil & Gas West Asia, Muscat, Sultanate of Oman, 11-13 April 2010.
7. Atta, Yusuf A, **Baba, EI-Yakub J** (2010) Treatment of Phenolic Waste Water Using Microwave Enhanced Nickel/Copper Oxides Catalysts. Third SQU-JCCP Joint Symposium on Environmental Challenges and Mitigation Approaches for Sustainable Oil and Gas Industry Held at SQU, Oman, 19-20 December.
8. **Elshafie A**, Al-Wahaibi Y, Al-Bemani A, Al-Bahry S, Sugai Y, Al-Sulaimani H, Al-Maani R, Al-Alawi W, Joshi S (2010) Microbial consortia isolated from Oman Oil fields. 1st Annual World Congress of Petroleum Microbiology (WCP) 2010, Dalian, China, 25-27 July 2010.
9. Hayyan A, **Farouq SM**, Ali Hashim M, Hayyan M, Al-Nashef IM (2010) Reduction of Free Fatty Acids in Crude Palm Oil by Ultrasonic Energy for Biodiesel Production, CHEMECA 2010, Adelaide, Australia.
10. Hayyan A, **Farouq SM**, Hashim MA, Hayyan M, Al-Nashef IM (2010) World Sustainable Resources for Biodiesel Production, 2nd International Conference in Values and Sustainability. 2010, Faculty of Science, University of Malaya, Kuala Lumpur, Malaysia.
11. Hayyan M, **Farouq SM**, Ali Hashim M, Al-Nashef IM (2010) Chemical and electrochemical generation of superoxide ion in 1-butyl-1-methylpyrrolidinium trifluoroacetate room temperature ionic liquid, CHEMECA 2010, Adelaide, Australia.
12. Hayyan M, **Farouq SM**, Hashim MA, Al-Nashef IM (2010) Destruction of polychlorinated hydrocarbons using generated superoxide ion in ionic liquids, BIOMALAYSIA 2010, BioMalaysia 2010, Kuala Lumpur, Malaysia.
13. Hussain MA, Azlan M, **Farouq SM** (2010) Control of Polystyrene Batch Reactor Using Neural Network Based Model Predictive Control: An Experimental Study, CHEMECA 2010, Adelaide, Australia.

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14. Islam MA, Skalle P, **Al-Ajmi AM** (2010) Stability Analysis in Shale through Deviated Boreholes using the Mohr and Mogi-Coulomb Failure Criteria. In: Proc 44th US Rock Mechanics Symposium and 5th U.S.-Canada Rock Mechanics Symposium, held in Salt Lake City, UT, 27-30 June 2010.
15. **Kirm** (2010) Hydrogen Production: Green Full, Plenary Conference in The first International Conference on Materials and Environment, CIEM, Alger, Algeria, 5-7 October 2010.
16. **Kirm**, Muhd AS, Jibril B (2010) Adsorption and photodecomposition of phenol and Methylene Blue using supported titania catalysts, The first International Conference on Materials and Environment, CIEM, Alger, Algeria, 5-7 October, 2010.
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18. Nurdeen Y, **Al-Wahaibi T**, Al-Wahaibi Y, Al-Ajmi A (2010) Flow structures and transition between stratified and non-stratified horizontal oil-water flow, Presented at the International Conference on Multiphase Flow 2010 (ICMF-2010), Tampa, Florida, USA, 30 May - 4 June 2010.
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2. **Al-Maamari RS**, Abdel Goad M, Al-Hashmi AA, Zaitoun A (2010) Polymer Technology for Improved Oil Recovery in Omani Fields, Progress Report II, CR/DVC/OGRC/08/01; March 2010.
3. Al-Wahaibi T, Al-Wahaibi Y, Al-Ajmi A, Abdel Goad M, **Al-Hashmi A** (2010) Drag Reducing Polymers for Two-Phase Oil/Water Flow, 2nd Report, Sultan Qaboos University Internal Grant, January 2010.
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OTHER ACTIVITIES

Society of Chemical Engineers

1. The 5th Chemical Engineering Open Day, Around the World in Two Days.
2. First Aid Workshop.
3. Master Degree, from Oman or outside, a discussion session.
4. The Chemical Engineering night.
5. Visit to University of Nizwa.



Society of Petroleum Engineers:

1. Workshop on using Matlab.
2. Reception for SPE-German student chapter.
3. Opportunities and challenges in the oil industry, a discussion session.
4. Children Eid Party.
5. Discussion session with founders of Falcon Company about an engineer success story.
6. Oil and Gas Exhibition.

<http://www.squ.edu.om/eng/>

