



جامعة الفيصل
Alfaisal University

Annual Report

2015 - 2016

Office of Research & Graduate Studies

Results

Research

Research Funding

Type of Funding	Sources	2014 (SAR)	2015 (SAR)
External	MAARIFAH (NSTIP), GDRG, BOEING, ABB, KACST, ARABIO, ALANOUD, SAGIA, SHELL, ALJOMEH, MOE, NG, IZON, QNRF	12,665,550	16,219,394
Internal	Alfaisal University, SRG, IRG	3,372,591	3,495,106
TOTAL (SAR)		16,038,141	19,714,500

Research Output (Alfaisal University affiliation from Scopus)

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016est
Publications per Year	2	27	55	64	141	164	181	216	257
Cumulative Total Publications	4	31	86	150	291	455	636	852	1,109
Number of Citations per Year	0	5	89	217	524	1055	1607	2100	2600
Cumulative Total Citations	6	11	100	317	841	1896	3503	5603	8,203
Numb Publ/FT Fac/Yr (est)	0.1	1.0	1.2	1.0	1.3	1.3	1.1	1.5	1.7
Total Cit/Total Publ/Yr	1.5	0.4	1.2	2.1	2.9	4.2	5.5	6.6	7.4

Performance Indicators

US News Ranking 2016	Alfaisal University ranked 12 th out of 125 Universities in Arab Region & 5 th out of 15 in Kingdom. Medical School 5 th best in region
Nature Index 2016	Alfaisal University ranked 3 rd & 5 th in national & regional collaborations, respectively
QS University Rankings for Arab Region 2015	Alfaisal University maintained 1 st ranking in Kingdom for second year in row in number of citations per scientific paper & improved its ranking in Arab Region from 8 to 5.

Intellectual Property & Commercialization of Research

US Patents	Patent Applications & Invention Disclosures
Modified Drag Based Wind Turbine Design with Sails 2015	Seven patent applications and invention disclosures
Antimicrobial Polymer-Graphene-Silver Nanocomposite 2016	

Equipment & Laboratories

Renewable Energy Lab 2015	Nanotechnology Lab Equipped 2015	Biosensors & Nano-biotechnology 2016
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Graduate Studies

Number of Enrolled & Graduated Students from 2010 to 2015

Current Masters Programs	Number of Enrolled & Graduated Students												
	2010-11		2011-12		2012-13		2013-14		2014-15		2015-16		Cum Total Grad
	Enr	Grad	Enr	Grad	Enr	Grad	Enr	Grad	Enr	Grad	Enr	Grad	
Biomedical Sci (MBS)	-	-	-	-	6	0	13	-	30	6	36	7	13
Business Admin (MBA)	44	-	117	46	142	55	169	88	130	71	83	58	318
Eng & Syst Mngt (MEM)	-	-	-	-	-	-	-	-	-	-	-	-	-
Gen Counselling (MGC)	-	-	-	-	-	-	-	-	3	-	4	1	1
Nanosci Nanotech (MNT)	-	-	-	-	-	-	-	-	-	-	6	-	-
Public Health (MPH)	-	-	-	-	-	-	-	-	-	-	-	-	-
Rad & Imag Sci (MRIS)	-	-	-	-	-	-	32	-	62	28	70	30	58
Total	44	-	117	46	148	55	214	88	225	105	199	96	390
Cumulative Total Graduated	-	-	-	46	-	101	-	189	-	294	-	390	390

Achievements by Faculty and Students



Alfaisa University's engineering students; "Team Alfaisa" were awarded with Perseverance & Spirit of the Event Award in Shell Eco-marathon Challenge held in Manila in February 2015



MIT Faculty with Engineering Students 2016



Annual Research Day Student Poster Competition 2015: LHS: Student explaining poster to President and Provost RHS: Students in front of their posters



Three faculty members were promoted during 2015. From left to right Dr Ahmed Yaqinuddin promoted to Associate Professor in College of Medicine, Dr Nidal Nasser promoted to Full Professor “with distinction” in College of Engineering, and Dr Redha M. Radaideh promoted to Associate Professor in College of Engineering.



Faculty Awards for Research Excellence 2016 from L to R: Abd-Elhamid M. Taha, Assistant Professor of Electrical Engineering in the College of Engineering, Abiola C. Senok, Associate Professor of Microbiology & Immunology in the College of Medicine, and Mohammed Zourob, Professor of Chemistry in the College of Science & General Studies.



Boeing Solar Car Project: Engineering students posing with Executives from Boeing Saudi Arabia and Alfaisal University Senior Management 15 December 2015

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Executive Summary

In 2015 the total external research funding awarded was 16,219,394 SAR compared with 12,665,550 SAR in 2014. This was a 28% increase over the previous year and is a substantial achievement for Alfaisal University faculty members, as well as for the Office of Research & Graduate Studies. This is also the first year that external research funding has been obtained for the Annual Research Day Student Poster Competition with KACST donating 150,000 SAR and ABB donating 60,000 SAR. Major changes have been implemented to the NSTIP and GDRG programs. A merger between NSTIP and GDRG large grants has taken place with the creation of a new program called MAARIFAH2.

For the three Saudi Aramco contracts under the UCP program, all deliverables were met and contracts successfully completed. Achievements included seven published papers, and two invention disclosures. Alfaisal University was invited to submit a new application for consideration by Saudi Aramco. The editors of the Journal of Thermal Spray Technology, a Springer Publication, selected one of the images from the Aramco papers to be one of two images to be placed on cover of the December 2015 special ATSC issue of the Journal.

Students from the College of Engineering joined national and international universities in building ultra-fuel-efficient vehicles. They received the Perseverance and Spirit of the Event Award in the Shell Eco-marathon Challenge held in Manila in February 2015. The students stayed in high spirits, overcame great obstacles, supported others and showed outstanding endurance, resolve and resourcefulness. This was the first time that Saudi Universities competed in the Shell Eco-marathon. In a related development, Boeing Saudi Arabia awarded \$50,000 USD to College of Engineering faculty and students for the design, development and manufacture of a Solar Car in their final year capstone projects.

Alfaisal University is currently finalizing an agreement with Ultimate Solutions Company in the Kingdom and Dassault Systems in France to establish a Product Design & Development Unit (PDDU) in collaboration with the College of Engineering. The Unit will manage data and documentation relating to products, plants, facilities and their configuration; as well as work processes during the entire life cycle from concept, through design and manufacture, to service and disposal. This allows industry to develop better products, giving Saudi manufacturers better chance to compete globally and increase the quality of Saudi products and manufacturing processes. It also supports the Saudization program and provides jobs for women. This will be the first PDDU in the Middle-East region.

The Office of Research & Graduate Studies participated this year in the MOE 6th HE Students Academic Conference 2014. Two out of three projects won tenth place in Medical Sciences and General Sciences. The Conference strives to improve the scientific knowledge and leadership skills of students in higher education.

A grand total of SAR 1,495,106 was awarded for 34 projects in the IRG2015 competition over two cycles. An additional two million SAR was awarded over two years in a new Strategic Research Grants competition. Each college was awarded up to one project for a total of 500,000 SAR per project.

The winners of the Faculty Awards for Research Excellence for 2015 were Ahmed Yaqinuddin, Assistant Professor of Anatomy and Cell Biology, Samir Brahim Belhaouari, Assistant Professor of Mathematics, and Redha M. Radaydeh, Associate Professor of Electrical Engineering.

The Alfaisal University 6th Annual Research Day Student Poster Competition was held on 9 April 2015 and received 100 applications in Business and Management, Engineering and Technology, Medicine and Health Sciences, and Science and Humanities. Twenty-nine posters received awards. The winning students were honoured at the Annual Research Awards Ceremony.

Alfaisal University continues to do well in research output, for example, in 2014, 181 publications were produced with an Alfaisal University affiliation, and total citations for the year reached 1601. In 2015 publications exceeded 200 per year for the first time. A new US patent in the area of renewable energy was also awarded to a College of Engineering faculty member.

As a performance indicator, the QS World University Rankings for the Arab Region 2015 showed that Alfaisal University ranked first in Saudi Arabia for the second year in a row in the number of citations per scientific paper based on the Scopus database. Alfaisal has improved its ranking in the Arab Region from eight to five.

Analysis of the publications output suggests that the high citation rate is probably due to the high medical research output owing to strong collaborations with local and international research hospitals and institutes.

The Alfaisal Center for Research and Consultancy Studies in the Office of Research and Graduate Studies acts as an umbrella organization for channelling research, educational training, contract projects and consulting studies between external organizations, public and private, and Alfaisal faculty members. For example, the newly established Statistical Consulting Unit (SCU) provides advice on a wide range of statistical services to enable Saudi institutions and individual researchers to conduct more effective research and to improve the ability of these clients to use statistical methods. There are two other projects: the College of Business with the Saudi Arabian General Investment Authority (SAGIA) and the World Economic Forum (WEF) is assessing the competitiveness of the economy and providing insight into the drivers of enhanced productivity and prosperity. The College of Medicine is collaborating with Arabio on vaccine research and development. The partnership aims to improve currently available vaccines for major infectious disease and develop new vaccines for neglected tropical diseases.

MIT faculty members visited Alfaisal University in 2015 to meet stakeholders in the proposed Master of Engineering and Systems Management at the College of Engineering. MIT faculty and post docs will teach some of the graduate courses and Alfaisal graduate students will spend summer internships at MIT. This collaboration was made possible through the KACST Joint Centres of Excellence Program (JCEP).

Currently there are seven active graduate programs at Alfaisal University: The Master of Business Administration (MBA), which has graduated over 300 students. It has two tracks, Finance & Healthcare Management. The Masters of Biomedical Sciences (MBS), which is a thesis, option program. It has five tracks: Analytical Biochemistry, Biotechnology, Clinical Embryology & Reproductive Biology, Infection Control and Molecular & Cell Biology. There is also the Master of Engineering & Systems Management (MEM) with its thesis & courses options, in collaboration with the Centre for Complex Engineering Systems (CCES) at KACST and MIT; the Master of Radiological & Imaging Sciences (MRS), which is a courses-only option and helps to train instructors and managers. The Masters of Genetic Counselling (MGC), which is a courses-only option, will help to fill a critical need for counsellors in the Kingdom. The Master of Public Health (MPH) is a courses-only option and has tracks in Mass Gatherings (Hajj and Umrah), Biostatistics & Epidemiology and Health Policy & Management. Finally, the Masters of Nanoscience and Nanotechnology (MNNT), which is a thesis option program. Almost 400 students have so far graduated from the Master's Programs at Alfaisal University over the past 5 years.

1. Research

The total external research funding awarded was 16,219,394 SAR in 2015 compared with 12,665,550 SAR in 2014 (Tables 1 to 4). This was a 28% increase over the previous year and is a substantial achievement for Alfaisal University faculty members, as well as for the Office of Research & Graduate Studies (Figure 1). Assuming that we have 140 full time faculty members this works out to over 100,000 SAR per faculty member per year.

For the first time most of the external funding awarded came from sources other than MAARIFAH (e.g. the National Science Technology & Innovation Plan (NSTIP) Strategic Grants program) and GDRG. In 2015, MAARIFAH and GDRG awards totalled 6,833,626 SAR (i.e. 5,341,226 SAR + 1,492,400 SAR respectively, Tables 2 & 3). In contrast, external funding from other sources (BOEING, ABB, ARABIO, ALANOUD, SAGIA, SHELL, ALJOMEH, MOE, NG, IZON, & QNRF) totalled 9,385,768 SAR, which was 37% higher. This is a promising development that shows faculty members are going after a wider range of external funding sources.

Table 1. Total Research Funding Awarded in 2014 and 2015

Type of Funding	Sources	2014	2015
External	MAARIFAH (NSTIP), GDRG, BOEING, ABB, KACST	12,665,550	16,219,394
	ARABIO, ALANOUD, SAGIA, SHELL, ALJOMEH, MOE, NG, IZON, QNRF		
Internal	Alfaisal University, IRG, SRG	3,372,591	3,495,106
TOTAL		16,038,141	19,714,500

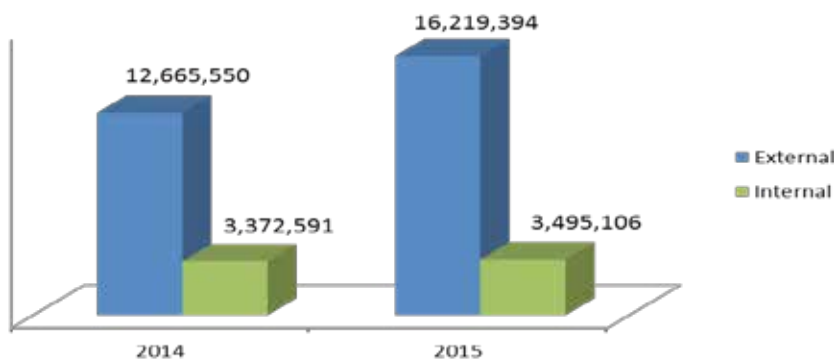


Figure 1 Total Research Funding Awarded in 2014 and 2015

1.1 External Research Funding & Activities

1.1.1 MAARIFAH (NSTIP) & GDRG Grants Awarded

In 2015, MAARIFAH and GDRG awards totalled 6,833,626 SAR (i.e. 5,341,226 SAR + 1,492,400 SAR respectively, Tables 2 & 3). This was a decrease from the previous year 2014 where a total of 11,036,050 SAR had been awarded.

Table 2. General Directorate for Research Grants (GDRG) Awarded in 2014 and 2015. Total Awarded in 2014: 2,210,000 SAR; and in 2015 1,492,400 SAR

#	Amount SAR	Project Title	College/ Area	Year Awarded	PI
1	1,192,000	RFID-based Multimodal Wireless Framework for Crowd Monitoring and Control in Hajj	CoE	2014	Nidal Nasser – PI & Hisham Abbas Co-I
2	548,000	Optimized Features Encoding and Classification Algorithms for Protein in Bioinformatics	CoSGS	2014	Belloui Bouzid-PI Brahim B. Samir Co-I
3	470,000	The Role of the Private Sector in Research & Development: A Case Study of Saudi Arabia	CoB	2014	Necati Aydin
4	1,492,400	Functionalized metal/ metal-oxides/graphene nanocomposites for solar renewable energy	CoSGS	2015	Edreese Alsharaeh

Table 3. MAARIFAH (National Science Technology & Innovation Plan (NSTIP)) Strategic Grants Awarded in 2014 and 2015. Total Awarded in 2014: 8,826,050 SAR; and in 2015: 5,341,226 SAR

#	Amount SAR	Title	College/ Strat Area	Year Awarded	PI/Institution
1	1,631,750	Using Micro- RNAs as Biomarkers for Diagnosing Prostate Cancers	CoM Medical & Health	2014	Ahmed Yaqinuddin (PI) / KFSHRC
2	1,971,300	Preventing Cardiovascular Disease: Using Nutraceuticals as Nutritional Interventions	CoM Medical & Health	2014	Paul Ganguly (PI) / KFSHRC
3	1,984,000	Role of Striatin in Regular Calcium Homeostasis in Cardiomyocytes: A novel Regulator of The L-type Calcium Channel	CoM Medical & Health	2014	Moni Nader/ KFSHRC
4	1,870,000	Design of new composite materials containing metal oxide supported 2D-graphene sheets	CoE/ Nanotechnology	2014	Edreese Alsharaeh/ King Abdulaziz University
5	1,369,000	Activated Carbon/Methanol Adsorption Cooling System Driven by a Novel Solar-Powered Heat Engine	CoE/ Engineering	2014	H. Z. Hassan Zohair/ King Saud Univ
6	1,481,736	Proposing and Investigating New Scenarios for Advanced Communications Networks Based on Free Space Optical Communications	CoE	2015	Redha Radaydeh/ KFPUM
7	1,915,300	Novel & Rapid Highly Sensitive Theranostic Array Sensing Platform for MRSA	COSGS Medical & Health	2015	Mohammed Zourob/ KFSHRC
8	1,944,190	Synthesis of Size Selected Semiconductor Nanoparticles by Wet-Chemical Techniques for Quantum Dot Solar Cell Applications	COSGS Nanotechnology	2015	Edreese Alsharaeh/ University of Hail

1.1.2 Other Research Grants Awarded

Significant external funding came from sources other than MAARIFAH (e.g. the National Science Technology & Innovation Plan (NSTIP) Strategic Grants program) and GDRG. For example, in 2015, MAARIFAH and GDRG awards totalled 6,833,626 SAR In contrast external funding from other sources (i.e. BOEING, ABB, ARABIO, ALANOUD, SAGIA, SHELL, ALJOMEH, MOE, NG, IZON, & QNRF) totalled 9,385,768 SAR which was 37% higher (Tables 2- 4). This is a promising development that shows faculty members are going after a wider range of external funding sources.

Table 4. Other External Sources of Research Funding in 2014 and 2015. Total Awarded in 2014: 1,629,500 SAR; and in 2015 9,385,768 SAR

#	Amount SAR	Company/Agency/Foundation/Project Title	College/Area	Year Awarded	PI
1	267,000	SAGIA/ Managing Executive On-Line Survey under World Economic Forum	COB	2014	Mohammed Kafaji
2	87,500	SHELL/ALJOMEH/Shell Eco-marathon	COE	2014	Zhao Yong
3	500,000	AlAnoud Foundation/Cancer Research	COM	2014	Khaled AlKattan
4	400,000	ARABIO / Infection Control	COM	2014	Abiola Senok
5	375,000	BOEING/Student Research Projects	COE/COM/COB/COSGS	2014	Students
6	817,500	SAGIA/ Managing Executive On-Line Survey under World Economic Forum	COB	2015	Mohammed Kafaji
7	800,000	SAGIA/ Corporate Governance Index (CGI)	COB	2015	Abdulaziz Alwathnani
8	500,000	Al Anoud Foundation/Cancer Research	COM	2015	Khaled Al Kattan
9	400,000	ARABIO/Infection Control	COM	2015	Abiola Senok/Khaled Al Kattan
10	187,500	BOEING/Solar Car Project	COE	2015	Students
11	300,000	MOE/Nanotech based sensors for early liver cancer detection	COSGS	2015	Mohammed Zourob/KAU
12	1,513,000	National Guard/A novel & rapid highly sensitive theranostoc array sensing platform	COSGS	2015	Mohammed Zourob
13	1,588,000	National Guard /Development of highly specific recognition receptors targeting MERS-CoV capsid protein	COSGS	2015	Mohammed Zourob
14	206,250	IZON SCIENCE EUROPE LTD/ Postdoctoral support	COSGS	2015	Mohammed Zourob
15	2,863,518	QATAR NATIONAL RESEARCH FUND NPRP/ Power Control, Mobility and Interference Management for Underlay D2D Communications in 5G Networks	COE	2015	Redha Radaydeh Co-Inv /Texas A&M Univ Qatar/KAUST
16	210,000	ABB/KACST/Annual Research Day Student Poster Competition	COE/COB/COM/COSGS	2015	Mattheus Goosen/ORG

1.1.3. Aramco Projects

One of the major achievements has been the success of Alfaisal University faculty in the Saudi Aramco University Collaboration Programs (UCP). Three out of six research proposals submitted by faculty members at Alfaisal University were accepted for funding as part of the Saudi Aramco University Collaboration Program (UCP). All deliverables were met and contracts successfully completed. Achievements include seven published papers, and two invention disclosures. Alfaisal University was invited to submit a new application for consideration by Saudi Aramco. Furthermore, the editors of the Journal of Thermal Spray Technology, a Springer Publication, selected one of the images from the Aramco papers to be one of two images to be placed on the cover of the December 2015 special ATSC issue of the Journal (Figure 2. LHS: Agglomerated and sintered Mo-Mo₂C powder showing high porosity and surface area, (Faisal et al 2015 Development of Plasma-Sprayed Molybdenum Carbide-Based Anode Layers with Various Metal Oxides for SOFC, JTST)

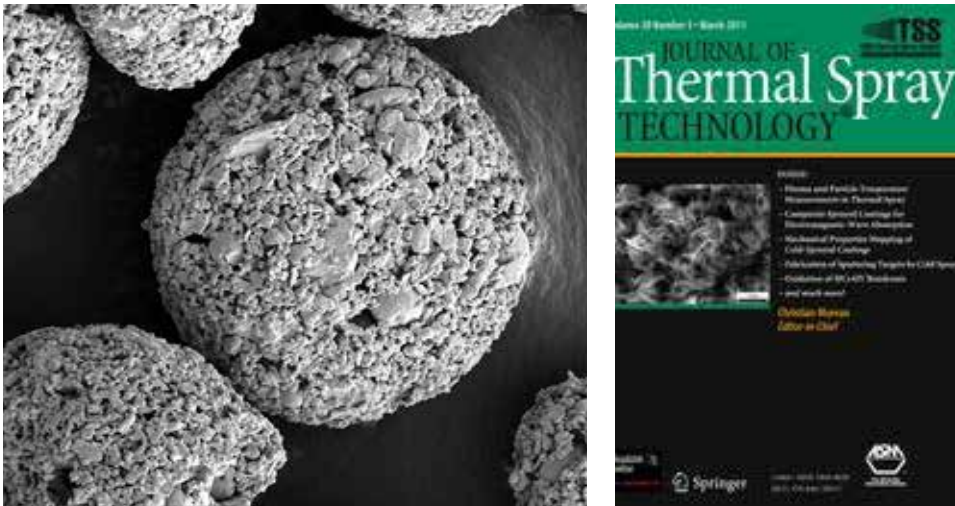


Figure. 2: Agglomerated and sintered Mo-Mo₂C powder showing high porosity and surface area, (Faisal et al 2015 Development of Plasma-Sprayed Molybdenum Carbide-Based Anode Layers with Various Metal Oxides for SOFC, JTST, 24 (8), pp1415-1428).

1.1.4 Shell Eco-Marathon Challenge

Students from the faculty of Engineering joined national and international universities in building ultra-fuel-efficient vehicles for the Shell Eco-Marathon Challenge, held in Manila in 2015. Team Alfaisal consisted of nine highly motivated students and a faculty member, with diverse nationalities. This was the first time that Saudi Universities competed in the Shell Eco-marathon. Teams from two other national universities also took part: KSU and KFUPM.

Students researched, designed and built their own eco-vehicle. The process included computer aided design, simulation, laser cutting and creating a fiberglass body panel. The students gained the knowledge and skills to design, develop and manufacture. Team Alfaisal named the vehicle "Faith", after the words of HM the late King Faisal bin Abdulaziz, "The education of our youth should rest on three foundations: Faith, Knowledge and Performance."

Despite the delay in receiving their car onsite in Manila, Team Alfaisal showed great endurance, remained positive and chose to move forward and prepare whatever they could while waiting. Judges found them a step ahead when it came to sharing their material and resources with neighbouring teams. Team members donated their spare engine to a competing Philippine team whose engine suddenly broke. Judges said, "Alfaisal had demonstrated that the event is not about winning, instead reaching a common goal – driving innovation to achieve sustainable mobility."

Team Alfaisal was awarded the Perseverance and Spirit of the Event Award due to their performance, staying in high spirits, overcoming great obstacles, supporting others and showing outstanding endurance, resolve and resourcefulness.

Abdulmohsin Albabtain, driver and team leader, said, "It's not only about the competition, but shared knowledge as well. Several teams came to help us as we experienced problems with our car. It was all for one and one for all."

Dr. Nidal Nasser, Dean of College of Engineering, said, "In this project, the Team Alfaisal students made a plan, one that involved many hours of hard work and innovation. Over the past months and during the event, the students demonstrated patience and persistence in seeing that plan through. They did their best to make it to the track. I am very proud of the team spirit even in difficult situations. Their participation was a winner for the whole Alfaisal University family. It was a work well done."



Figure 3. Upper and Lower LHS: Alfaisal University Engineering Students with their ECO Vehicle at Manila-2015. Lower RHS: Alfaisal University's engineering students; "Team Alfaisal" awarded with the Perseverance and Spirit of the Event Award in Shell Eco-marathon Challenge held in Manila in February 2015

1.1.5 Product Design & Development Unit (PDDU)

Alfaisal University is currently finalizing an agreement with Ultimate Solutions Company in the Kingdom and Dassault Systems in France to establish a Product Design & Development Unit (PDDU). The Unit, in collaboration with the College of Engineering, will manage data and documentation relating to products, plants, facilities and their configuration, as well as work processes during the entire life cycle from concept, through design and manufacture, to service and disposal. This will allow industry to develop better products, giving Saudi manufacturers a better chance to compete globally and increase the quality of Saudi products and manufacturing processes. It also supports the Saudization program and will provide jobs for women. This is the first PDDU in the Middle-East region (Figure 4)



Figure 4. Product Design & Development Unit (PDDU). The unit will manage data & documentation relating to products, plants, facilities & their configuration as well as work processes during the entire life cycle from conception, through design & manufacture, to service & disposal

1.1.6 Boeing Student Research Projects & Solar Car

Boeing has taken the initiative to support student research every year at Alfaisal University through competitive awards. Alfaisal was founded by the highly reputed King Faisal Foundation as one of the first private non-profit, research and teaching universities in Saudi Arabia committed to achieving international standards of excellence. It has the support of national and international co-founders and distinguished Board Members such as Boeing, that have consistently helped the university in its mission to be a student-centred institution committed to research. The funding provided by Boeing will help to build a strong research oriented institution as envisaged by the King Faisal Foundation.

Ten student research projects from the Colleges of Medicine and Engineering were funded by Boeing in 2014-2015. The research funds are administered by the Office of Research & Graduate Studies. In 2014 half the funds given to Alfaisal were as additional support for five projects. The University is extremely grateful to Boeing for taking the initiative to support student research. Boeing can be very proud of the high quality of

our students and the initiatives taken by them to help address areas of strategic concern faced by the country. Boeing Saudi Arabia has also awarded \$50,000 USD to College of Engineering faculty and students for the design, development and manufacture of a solar car in their final year capstone projects. Senior Boeing managers from the USA visited Alfaisal University in October 2015 to discuss other areas of support for students and faculty.



Figure 5. Engineering students posing with Executives from Boeing Saudi Arabia and Alfaisal University Senior Management 15 December 2015



Figure 6. Eng. Ahmed Jazzar, President of Boeing Saudi Arabia handing over a Cheque for \$50,000 USD to HE Dr Mohammed Alhayaza, President of Alfaisal University for the support of College of Engineering students in designing, building and testing a Solar Car.

1.1.7 Joint Development of Commercial Products with Z-One Company

A major aim of successful research universities is academic engagement with the private sector in order to develop new commercial products that will help the economies of the countries in which they are situated. The Office of Research & Graduate Studies at Alfaisal University is collaborating with Z-One Company from Dubai to combine education, innovation and incubation in solar photovoltaic (PV) renewable energy, involving faculty and students. This process could result in new technology start-ups, or prototypes of novel inventions that have serious marketability both in KSA and abroad. As a case study, a Hybrid System Controller product from Z-One was chosen for further development by College of Engineering faculty and students (Figure 7).



Figure 7. New Product Development. Alfaisal faculty & students working with renewable energy company Z-One Holding Co. Dubai in development of new product: Hybrid System Controller for Renewable Energy Sources

1.1.8 MoHE 6th Students Academic Conference 2014

The Office of Research & Graduate Studies participated this year in MOHE 6th Students Academic Conference 2014. Successfully two out of three projects have won the 10th place in both categories: Medical Sciences & General Sciences PPT Presentations. The Conference strives to improve the scientific knowledge and leadership skills for students of higher education. Furthermore, it is a great opportunity for students to present and apply the knowledge that they have gained. During this conference, students are provided with the opportunity to present their creative ideas as well as their research and graduation projects. The program will include many moderated activities such as:

- Presenting scientific research, studies and papers.
- Well-designed scientific posters.
- Exhibitions which accompany students' research and scientific innovations.
- Competitive and well organized presentations of student made films and documentaries.

1.2 Internal Research Funding & Activities

1.2.1 Internal Research Grants (IRG 2015)

A total of SR 1,495,106 was awarded for 34 projects for the IRG2015 competition in two cycles (Table 5). These were competitive grant applications which were reviewed by the College Research Committees and approved by the Research & Graduate Studies Council.

Table 5. Winners of the Internal Research Grants (IRG) Competition 2015 at Alfaisal University

Name of PI	College	Project Title
Muhammad Anan	Engineering	Design Energy Efficient Computing Framework for Cloud Datacenters
Jorge Caeiro	Engineering	Investigation of an alternative method for building occupancy Sensing: Bi-directional infrared people counters
Fernando Gonzalo	Engineering	Water flow glazing and absorption chillers for solar cogeneration in buildings
Manar Al Alalfi	Engineering	A Framework for malware identification and protection in smartphone apps
Azeem Ahmad	Engineering	New parameter techniques for synchronous generators
Sai Fok	Engineering	Development of composite materials using fibers from palm trees
Samer Mansour	Engineering	A hybrid Web/Standalone internet of things framework with natural user interface and robot-enabled immersive telepresence for home automation
Zhao Yong	Engineering	Studying the mechanical properties of Leukaemia blood cells using nano-indentation and finite element modelling
Khalid Ahmed	Engineering	Studying mechanical, thermal and electrical properties of 3D printed graphene based polymer nan-composites
Liliana Braescu	Science & General Studies	First-Principle investigation of multiferroic Bi ₂ FeCrO ₆ epitaxial thin film
Saddam Muthana	Science & General Studies	Synthesis of Carbohydrate-Conjugates for Biological and Medical Applications
Faheem Ahmed	Science & General Studies	Novel Biosynthesis of ZnO nanorods using Egg white and their antibacterial properties towards wide range of micro-organisms
Volodymyr Dvornyk	Science & General Studies	Comparative Genomic analysis of nitrogen fixation related pathways in bacteria
Mohamed Zourob	Science & General Studies	Development of rapid paper based diagnostic tool for staphylococcus aureus detection
Amjad Fataftah	Science & General Studies	Assessment of some Toxic in Dry food Grains consumed in the Saudi market
Robert Zacca	Business	The Impact of Network Capabilities on Innovative Start-up Enterprises within KSA
Haitham Alzoubi	Business	Bond and option prices under continuous time spot rate models with non-stationary mean

Wei Han Liu	Business	High Frequency Data analysis of the intraday volatility pattern of Tadawul
Ahmed Alanazi	Business	Why do some IPOs perform well and some do not
AbdelMonim Shaltoni	Business	Online Review Systems in the service sector: Analysis of credibility
Saad Alhoqail	Business	The tenure of top Management Team
Maurice Murphy	Business	Corporate Social Responsibility in Saudi Arabia
Muhammad Afzal	Medicine	Determining the effect of diabetes mellitus on erythrocytes morphology using nanoindentation
Junaid Kashir	Medicine	The role played by the mammalian sperm factor in human male sbu-fertility
Muhamad Zafar	Medicine	To investigate extent of deliberate practice required to reduce stress among medical students while performing common invasive clinical procedures
Muhamad Abrar	Medicine	Expression of estrogen and progesterone receptors in kidneys with chronic pyelonephritis
Khurshid Anwar	Medicine	Comparison of Clinicopathologic and immunohistochemical features and outcome in younger patients (<40 year) as compared to older patients (>60 year) with renal cell carcinoma
Ahlam Alshedoukhy	Medicine	Clinico-pathological correlation of KIT, BRAF, NRAS and CCDN1 mutation of malignant melanoma with overall survival, in cohort of Saudi patients at KFSH over the past ten years
Santosh Kumar	Medicine	Estimation of plasma homocysteine level in young healthy population of Saudi Arabia
Peter Cahusac	Medicine	Improving drug access to mechanoreceptors in the sinus hair preparation
Dileep Rohra	Medicine	The effect of Camel Milk on dyslipidemia, A Randomized case control study
Aniko Szabo	Medicine	Interaction of RNA binding protein HuD and components of mTOR signaling in neuroblastoma
Baraa Alghalyini	Medicine	Does single nucleotide SLCO1B1 gene polymorphism increase the risk of statin induced myopathy in Vitamin D Deficient patients?

1.2.2 Strategic Research Grants (SRG 2014-2015)

Two million SAR was awarded over two years in this new strategic grants competition. Each college was awarded up to one project for a total of 500,000 SR per project (Table 6). The projects have started in February 2015. New cycle will be announced by end of 2016.

Table 6 Winners of the Strategic Research Grants (IRG) Competition 2014 -2015 at Alfaisal University

Name of PI	College	Strategic Area	Project Title
Garwin Sing	Medicine	Science & Technology / Health Biomedicine & Pharmaceuticals	An Investigation of the Antimicrobial and Toxic Effects of Reduced Graphene Oxide (rGO) and rGO/Silver nanoparticles
George Kulik	Science & General Studies	Health Biomedicine & Pharmaceuticals	System biology approach to develop personalized cancer therapy by tumor-selective functionalized nanoparticles
Ricardo Santa	Business	Business	Smart City
Tarek Mokhtar	Engineering	Science & Technology	iCE: An intelligent Classroom Environment to Enhance Education in Student-Centered Higher Educational Institutions

1.2.3 Faculty Awards

Faculty Awards for Research Excellence are made to recognize, encourage, and reward those individuals whose research or creative endeavours have been particularly successful and are recognized locally, regionally, and nationally. There may be one award in each college/school of the University annually. The awards ceremony was held in the fall 2015. Our warmest congratulations go to the winners, we wish them continued success at Alfaisal University. The winners of the Faculty Awards for Research Excellence for 2015 & 2016 are shown in Figures 8a & 8b respectively



Figure 8a. Winners of Faculty Awards for Research Excellence 2015 (LHS) Ahmed Yaqinuddin, Assoc Prof of Anatomy & Cell Biology. (RHS) Dr Redha M. Radaideh, Assoc Prof of Electrical Eng (not shown Dr Samir Brahim Belhaouari Assist Prof of Mathematics)



Figure 8b. Faculty Awards for Research Excellence 2016 (L to R): Abd-Elhamid M. Taha, Assist Prof of Electrical Eng, Abiola C. Senok, Assoc Prof of Microbiology & Immunology, & Mohammed Zourob, Prof of Chemistry.

1.2.4 Faculty Promotion

Three faculty members were promoted during 2015 (Figure 9). Dr Ahmed Yaqinuddin was promoted to Associate Professor of Anatomy & Cell Biology in the College of Medicine; Dr Nidal Nasser who is the Acting Dean in the College of Engineering was promoted to Full Professor of Software Engineering. The external review committee noted that he was promoted “with distinction” due to his very high research output. Dr Redha M. Radaydeh was promoted to Associate Professor of Electrical Engineering in the College of Engineering. All candidates were evaluated on the basis of tripartite performance, relative to the faculty member’s assigned workload as distributed among: Teaching (i.e., quality, teaching development, and pedagogy); Research (i.e., scholarship, publications and/or creative work, and grant and contract awards); and Service (i.e., University service and/or public service, including professional activity or service). The appraisal process includes peer review assessments both internal and external to the University. Special congratulations to all three candidates.



Figure 9. From left to right Dr Ahmed Yaqinuddin promoted to Associate Professor in College of Medicine, Dr Nidal Nasser promoted to Full Professor “with distinction” in College of Engineering, and Dr Redha M. Radaydeh promoted to Associate Professor in College of Engineering.

1.2.5 Patents

Over the past year a total of four new patent applications were filed as well as three new invention disclosures. Two of the invention disclosures were processed through Saudi Aramco as a result of the successful completion of three contracts as part of the UCP (University Call for Proposals) Competition. One patent was awarded to Dr Hassan Zohair Hassan Ahmed, Assistant Professor of Mechanical Engineering, entitled Modified Drag Based Wind Turbine Design With Sails (Number 9217421). The current invention, which is in the area of renewable energy, describes an improved and more efficient wind energy converter. (Figure 10) shows the Acting Dean of the College of Engineering Dr Nidal Nasser congratulating Dr Hassan Zohair. Another US patent (US 9,334,386 B2 dated 10 May 2016) on Antimicrobial Polymer-Graphene-Silver Nanocomposite was awarded to Dr Edreese Alsharaeh and his research group.



Figure 10. Acting Dean of the College of Engineering Dr Nidal Nasser congratulating Dr Hassan Zohair

1.2.6 Annual Research Day Student Poster Competition

The Alfaisal University 6th Annual Research Day Student Poster Competition was held in April 2015 received 100 applications in four categories: Business & Management, Engineering & Technology, Medicine & Health Sciences, and Science and Humanities. Twenty-nine posters received awards: eight posters were awarded first prize, nine groups won second prize and 12 groups won third prize (Table 7). The winning students were honoured in an internal ceremony in recognition of their research contribution to the University.

Table 7. Winning Posters of the 6th Annual Research Day Student Poster Competition held 9 April 2015 at Alfaisal University

BUSINESS & MANAGEMENT (Sponsored by ABB)		
Prize	Poster Number	Poster Title and Authors
1 st	UG-B02-Hasanein2015	Exploring Innovative Methods to Understand Skill Gaps, Skills Awareness and Their Impact on The Performance of Saudi Arabian Industries Malak Hasanein
2 nd	UG-B03-Alhakbani2015	Sustainable Practices in the Construction Sector in Saudi Arabia Alanoud Alhakbani
3 rd	UG-B09-Alnemer2015	A Study of the Effect of Technology on Primary Education in Saudi Arabia Tarfa Bandar AlNemer
2 nd (G)	G-B11-Almanie2015	Track me Reem Almanie
3 rd (G)	G-B06-Haririe2015	Consequences of Healthy Physical Activity in the Workplace Lujain Haririe
ENGINEERING & TECHNOLOGY (Sponsored by ABB)		
Prize	Poster Number	Poster Title and Authors
1 st	UG-E09-Shahid2015	Ultra Fuel Efficient Vehicle Rashid Shahid
1 st	UG-E14-Zafar2015	Experimental and FEM Study of Red-Blood Cells Muhammad Usman Zafar
2 nd	UG-E01-Mahmoud2015	Designing Efficient Sensor/Actuator Coordination In Humanoid Robots Reem Mahmoud
2 nd	UG-E23-Nassar2015	Building Technologies and Façade Innovations Haya Ayman Nassar
3 rd	UG-E12-Aboutaleb2015	DC Power Supply using High Frequency Wireless Power Transmission System Ahmed Aboutaleb
3 rd	UG-E13-Alghamdi2015	Raycom Mobile App Hana Saedan, Lena Alghamdi
SCIENCE & HUMANITIES (Sponsored by KACST)		
Prize	Poster Number	Poster Title and Authors
1 st	UG-S01-Kattan201	Novel CYP27B1 Gene Mutations in Patients with Vitamin D-Dependent Rickets Type 1A Walaa Kattan
2 nd	UG-S02-Alazzam2015	Synthesis of Metal (Gold and Silver)/Reduced Graphene Oxide Nanocomposites for Antimicrobial Applications Sarah Alazzam
3 rd	UG-S03-Alrashed	Investigating the Role of XIAP in the Pathogenesis of Breast Cancer Alanood Alrashed

3 rd	UG-S04-Alturki2015	Synthesis, Characterization, DNA Binding and Cleavage Studies of Concentration Dependent Fe ₂ O ₃ /Graphene Nanocomposites Meshael Alturki
3 rd	UG-S05-Mussa2015	Facile Synthesis of Cobalt Oxide Nanoparticles and Cobalt Oxide Nanoparticles supported on Reduced Graphene Oxide (RGO) & Their Antibacterial Activity Against Gram Negative, Gram Positive & Antibiotic Resistant Bacteria Yassmin Mussa

MEDICINE & HEALTH SCIENCE (Sponsored by KACST)

Prize	Poster Number	Poster Title and Authors
1 st	UG-M01-Mosher	Improving Breastfeeding in Saudi Arabia; The Baby Friendly Hospital Initiative Cynthia Mosher
1 st	UG-M17-Albulayhid2015	Determination of Baseline Levels of GSH and GSSG in C57Bl6 Mice Ghadah Albulayhid
1 st	UG-M32-Rahmatullah2015	Rapid Assessment and Treatment (RAT) of Category 2 Triage Patients in the Emergency Department Syed Hassan Rahmatullah
1 st	UG-M49-Kaadani2015	Admission Parameters & Progress Test as Indicators of Student Performance & Progression at Alfaisal University Samy Kaadan
2 nd	UG-M09-Osama2015	Utilization of Advanced Radiological Modalities to Characterize Small Animal Models of Knee Joint Degeneration Ragaa Osama
2 nd	UG-M22-Mostafa2015	Perceived Influential Factors Towards Participation in Undergraduate Research Activities Among Medical Students at Alfaisal University- College of Medicine: A Saudi Arabian Perspective Sowshan Mostafa
2 nd	UG-M45-Mustafa2015	Aberrant Methylation of RASSF1A, DKK3 and PTPRO in Breast Cancer Tissues Osama M. Mustafa
2 nd	UG-M60-Atassi2015	Knowledge, Attitude & Practice of Pre-clinical Medical Students towards Certain Infectious Diseases (HIV/TB) Jalila Atassi
3 rd	UG-M14-Abou Al-Shaar 2015	Intrathecal Baclofen Therapy for Spasticity: A Compliance Based Study to Indicate Effectiveness Hussam Abou Al-Shaar
3 rd	UG-M15-Abou Al-Shaar 2015	Endoscopic Third Ventriculostomy: Long-term Outcome. A Single Institution Experience Hussam Abou Al-Shaar
3 rd	UG-M29-Muhsen2015	Undergraduate Medical Research Courses: Adapting to The Demands of 21st Century Ibrahim N. Muhsen
3 rd	UG-M37-Mortaja2015	Role of Leptin and Central Nervous System in Regulating Peripheral Glucose Uptake Sarah Z. Mortaja
3 rd	UG-M59-Alexander2015	Novel Homozygous Mutation in SPTBN2 leads to Spinocerebellar Ataxia in a Consanguineous Saudi Family Monica Mark Alexander

1.3 Analysis of Research Output & Research Performance Indicators

Research output by Alfaisal Faculty has been assessed using both external (i.e. Scopus database) and internal sources. To summarize, Table 8 shown below which is based on Scopus data indicates that Alfaisal is doing well in terms of research output. For example, in 2015 a total of 216 publications were produced with an Alfaisal University affiliation, and total citations for the year reached 2100. In 2015 the publications per year went over 200 for the first time.

Table 8. Research Output (Based on Scopus Data)

Research Output (Alfaisal University affiliation from Scopus)									
Year	2008	2009	2010	2011	2012	2013	2014	2015	2016
Publ / Year	2	27	55	64	141	164	181	216	257
Cum Total Publ	4	31	86	150	291	455	636	852	1,109
Cit / Year	0	5	89	217	524	1055	1607	2100	2600
Cum Total Cit	6	11	100	317	841	1896	3503	5603	8,203
Publ/FT Fac/Yr est	0.1	1.0	1.2	1.0	1.3	1.3	1.1	1.5	1.7
Tot / Cit / Publ/Yr	1.5	0.4	1.2	2.1	2.9	4.2	5.5	6.6	7.4

1.3.1 US News & World Report 2016 Best Arab Region University Rankings

Alfaisal University ranked 12th out of 125 Universities in Arab Region & 5th out of 15 in Kingdom in the US News & World Report 2016 Best Arab Region University Rankings (<http://www.arabiahighered.com/index.php/home-news/all-news/78-featured-news/625-u-s-news-world-report-releases-the-2016-best-arab-region-universities-rankings>).

1.3.2 QS University Rankings for the Arab Region

As a performance indicator, a report from QS World University Rankings for Arab Region 2015 showed that Alfaisal University had a 1st ranking in Saudi Arabia for the second year in a row in the number of citations per scientific paper based on the Scopus database and that it had improved its ranking in the Arab Region from 8 to 5 (QS University Rankings: Arab Region, 2015) (Table 9).

Table 9. Comparison of Alfaisal University Ranking with National Universities using QS World University Rankings for Arab Region for period 2014 & 2015.
(Adapted from [http://www.topuniversities.com/university-rankings/arab-region-university-rankings/2015#sorting=rank+region="+country=77+faculty="+stars=false+search="](http://www.topuniversities.com/university-rankings/arab-region-university-rankings/2015#sorting=rank+region=))

Weight (%) [*]	Indicator	Alfaisal University Ranking			
		Saudi Arabia		Arab Region	
		2014	2015	2014	2015
30	Academic Reputation from Global Survey	8	9	51+	51+
20	Employer Reputation from Global Survey	NA	9	NA	51+
20	Faculty Student Ratio	8	8	51+	48
5	Proportion of Staff with PhD	1	7	25	51+
5	Papers per Faculty from Scopus	1	2	5	8
5	Citations per Paper from Scopus	1	1	8	5
2.5	Proportion of International Faculty	1	3	4	22
2.5	Proportion of International Students	1	2	24	27
10	Web Impact from Webometrics	8	11	51+	51+
OVERALL (based on weighted average*)		8	8	42	35

1.3.3 Nature Index 2016

From the Nature Index press Release:

Saudi Arabia continues to enhance its position as a regional leader in scientific research. As reported in Nature Index 2016 Saudi Arabia – published with the 28 April issue of Nature – Saudi Arabia's contribution to high-quality research papers is growing more than any other country in Western Asia. Between 2012 and 2015, Saudi's growth in contribution to the Nature Index was the eighth highest globally. (http://www.nature.com/nature/journal/v532/n7600_supp_ni/full/532S19a.html).

Excerpts from the Nature Index Link:

KFSH&RC and Alfaisal University, with which Alkuraya is also affiliated, are among the few Saudi institutions showing concerted and consistent national and regional collaborations that result in studies published in high-quality journals tracked by the Nature Index. In 2015, only six of the 16 institutions that took part in domestic or regional collaborations produced significant output in the index, with KFSH&RC leading in terms of domestic collaborations. KSU, Saudi Arabia's second largest domestic collaborating institution in 2015, has the largest output from collaborations within the region of all Saudi institutions for that year.

Between 2012 and 2015, KFSH&RC, Alfaisal University and KSU — the country's top three for domestic collaborations for that period — derived 31%, 36% and 5% of their overall collaboration scores from domestic collaborations, compared to 0.5% for both Saudi Arabia's top international collaborators King Abdullah University for Science and Technology (KAUST) and King Abdulaziz University (KAU). "I try to focus on local and regional talent because I feel the responsibility of developing the research infrastructure as a good citizen of this region," says Alkuraya.

Two of the main figures from the report are reproduced below (Figures 11 & 12). The circle sizes represent the collaboration score (CS) each institution shares with other domestic partners.

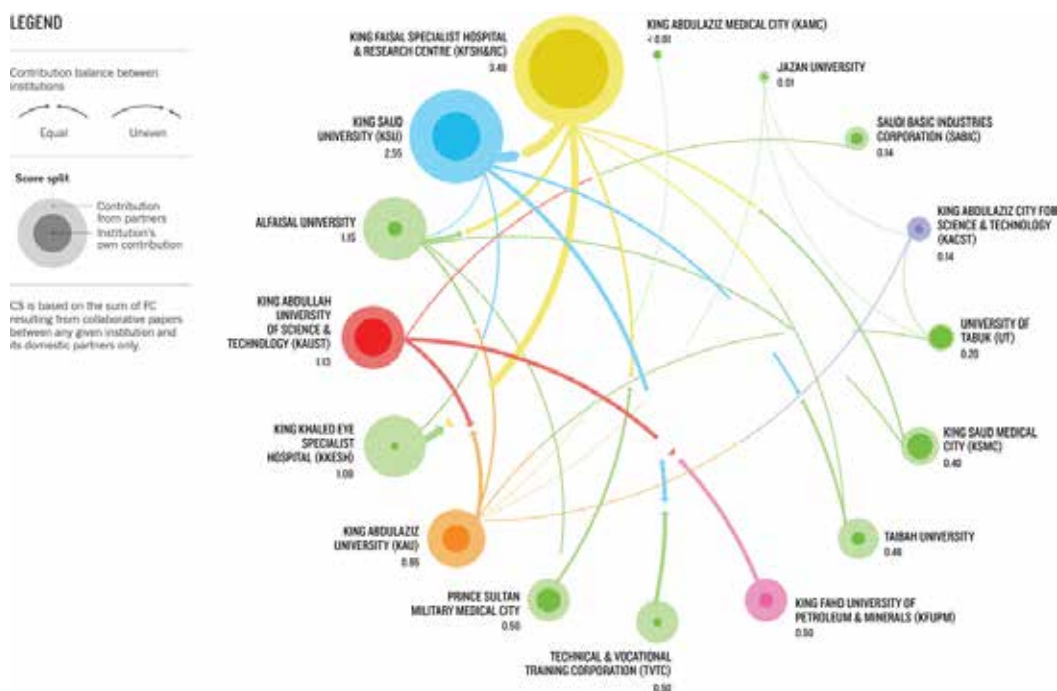


Figure 11. Saudi Arabia's domestic collaboration network in 2015. The circle sizes represent the collaborative score (CS) each institution shares with other domestic partners. (Nature Index 2016)

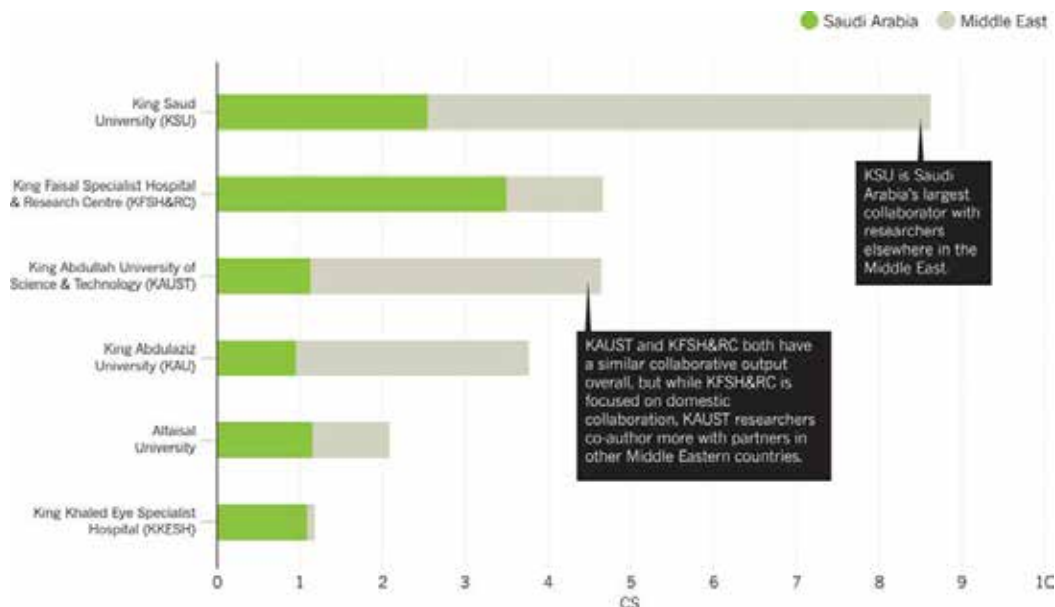


Figure 12. The bar chart below depicts each institution's CS for 2015 resulting from partnerships with counterparts in Saudi Arabia as well as in the rest of the Middle East. (Nature Index 2016)

1.4 Alfaisal Innovation & Entrepreneurship Incubator

As part of AU mission to lead in education, research & innovation programs, and as a student-centered university, Alfaisal seeks to raise knowledge in entrepreneurship field & encourage creations in this area. Part of the plan in raising awareness & knowledge for all faculties, staff, and students, is by hosting many lectures & events to help AU's faculties & students get a clear idea & concept. This is to keep up with the existing universities' activities, as most of the have entrepreneurship centers such as: KSU-KAU- Taibah University. Alfaisal rise up & be eligible to take part at many national competitions such as MOHE Annual Scientific Conference.

The Office of Research & Graduate Studies (ORG) has taken first steps in this path by approaching many leading companies in the region & by participating in several popular completions as well. ORG is in negotiations & meeting with many entities to establish an incubator that will help in achieving our goal.

ORG has participated in the following competitions:

MIT Competition MITEF by Bab Rizq Jameel: MIT competition focuses on attracting new entrepreneurial ideas of both individuals & companies at both social & commercial fields. Participating at this competition will grant AU student/faculty/staff a chance to be exposed & acknowledged locally & internationally through Global MIT Enterprise Forum. Also an acknowledgment through MIT Technology Review, which is a media company fully run & owned by MIT. Winners from AU will be invited to be part of & participate at MIT Best Startup idea in the Arab Region.

JEM Competition Jeddah Entrepreneurs Meet 2012: JEM is a competition where a platform is provided to budding entrepreneurs, venture capital, business, and government's leaders; in addition to financial and business entities to interact and move the entrepreneurship agenda forward. The competition will be in three areas: Social entrepreneurship-education & medical innovation-Production & manufacturing. They provide: workshop & boot camp that could be hosted at Alfaisal if participants from Central Region.

ORG is also in the process of establishing an entrepreneurship valley along with running a business competition as following:

Centennial Foundation Competition: One of the Centennial Fund initiatives is to achieve the vision of the Custodian of the Two Holy Mosques in the sons of the homeland service. An integrated services system that allow entrepreneurs to take advantage of existing programs specialized for the establishment of their projects and their delivery to the stage of stability. This is through existing expertise in the valley and benefiting from the valley’s partnership globally and nationally who are specialized in these areas. The Success of similar valleys that have been established at several universities encourages us to take a step into this path & use the opportunity. Minimum requirements from AU, only a place or venue, along with an employee to supervise & follow up.

BADIR Business Plan Competition: Many meetings have been conducted between AU & BADIR in this regard. ORG seeks to find or come up with a unique collaboration with them that only us is granted in the kingdom. Several options & ideas were discussed such as:

- Business Plan Competition
- Hosting one of Badir’s Start-Up weekends

1.5 Alfaisal Center for Research & Consultancy Studies

Alfaisal Center for Research and Consultancy Studies have been approved by Alfaisal BoT members on February 2015, to act as an umbrella organization for channelling research, educational training and contract projects as well as consulting studies between external organizations, both public and private, and Alfaisal faculty members. While no actual research will be done by the Center, the latter will facilitate requests for research, consultation and educational activities coming from outside agencies and organizations. Overheads from current projects, once received, will be distributed to the colleges (50%), university (30%) and ORG (20%) as shown in Figure 13.

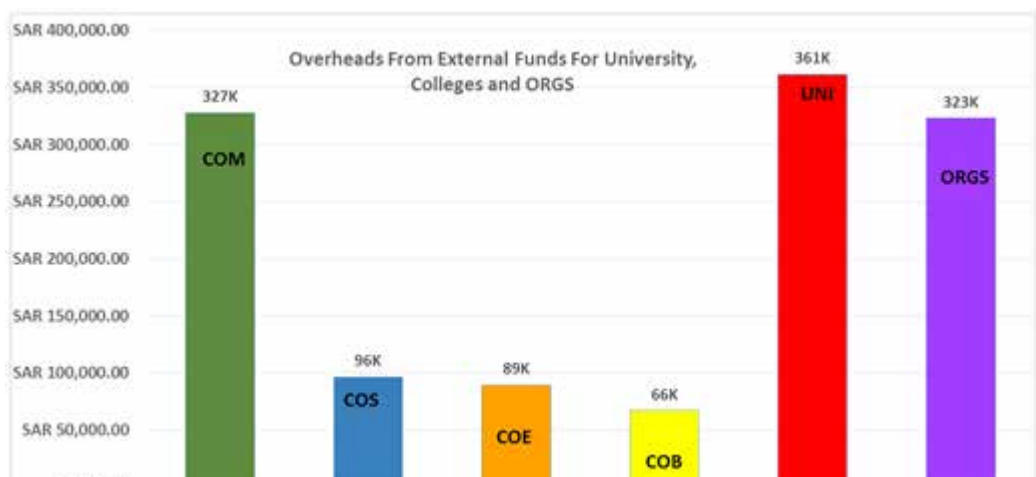


Figure 13. Overheads from External Funds for University, Colleges and ORG

1.5.1 Statistical Consulting Unit (SCU)

Statistical services are crucial to any research project. The Statistical Consulting Unit (SCU) is a professional statistical service that aims to promote and strengthen research by assisting researchers and other clients to use statistical methods in their academic, business, and government research and quality assurance projects in an optimal way. The Unit provides advice on a wide range of statistical services to enable Saudi institutions and individual researchers to conduct more effective research and to improve the ability of these clients to use statistical methods.

Staff areas of expertise are wide-ranging, with particular strengths in:

- Statistics/Biostatistics
- Public Health Research (Environmental Sciences)
- Business Statistics
- Additional expertise including Bioinformatics, Econometrics, Transportation and Geographic Information System (GIS)

1.5.2 Projects held by Alfaisal Center for Research & Consultancy Studies

1.5.2.1 SAGIA –EOS Project

PI: Dr Mohammed Kafaji (COB)

In its efforts to develop and improve effective foundation for business investments in the Kingdom of Saudi Arabia, the Saudi Arabian General Investment Authority (SAGIA) and Alfaisal University setup a partnership with the World Economic Forum (WEF) to assess the competitiveness of the economy and provide insight into the drivers of enhanced productivity and prosperity. Aligned with the formal WEF's methodology, Dr. Mohammed Kafaji and Dr. Bajis Dodin proposed a systematic approach to gather and analyze required survey data using the WEF surveying tools. Based on this approach, the data is gathered on various business management environments related to the business investment and operations.

1.5.2.2 ARABAIO

PI: Dr Abiola Senok (COM)

Alfaisal University's College of Medicine and Arabio are collaborating on vaccine research and development. The partnership is carrying out research to improve currently available vaccines for major infectious diseases and develop new vaccines for neglected tropical diseases. The vision is to collaborate on vaccine development by conducting high quality research, facilitating technology transfer, promoting public health education and providing advisory support to improve efficiency and reduce the cost of current and novel vaccines. Within this framework, there are three collaborative groups:

- Vaccine and Microbiology Research Group
- Public Health Education Group
- Advisory and Policy Development Group

1.5.2.3 Corporate Governance Index (CGI)

PI: Dr Abdulaziz Alwathnani (COB)

Dr Abdulaziz Alwathnani and in collaboration with Prof David Beatty of Clarkson Center for corporate governance at Roman School of Management and Dr Stephen Davis, a senior fellow of the Harvard University Program on Corporate Governance leads a national project to create a corporate governance index (CGI) for listed Saudi companies.

The CGI project is a partnership between Alfaisal University and Saudi Arabian Investment Authority (SAGIA) and its objective is to establish CGI assessment criteria for the listed Saudi companies. The CGI project is to assess the corporate governance practices of these companies and rank them based on their CGI scores.

2. Graduate Studies

2.1 JCEP & MIT Visit to Alfaisal University

MIT faculty site visit to Alfaisal University took place on 15-16 November 2015 (Figure 14). The aim was to meet stakeholders involve in proposed Master of Engineering & Systems Management in COE. MIT faculty and post docs will be involved in teaching some of the graduate courses and Alfaisal graduate students will spend summer internships at MIT. This collaboration was made possible through the KACST Joint Centres of Excellence Program (JCEP).



Figure 14. Upper LHS MIT Faculty giving seminar at Alfaisal. Upper RHS MIT faculty and JCEP Executives with Senior University Management; Lower; MIT Faculty with Engineering Students

2.2. Graduate Programs

Currently there are seven active graduate programs at Alfaisal University (Table 10). The oldest program is the Master of Business Administration (MBA), which has already graduated 260 students (Table 11). The second oldest is the Masters of Biomedical Sciences (MBS) which is a thesis option program. It has five tracks: Analytical Biochemistry, Biotechnology, Clinical Embryology & Reproductive Biology, Infection Control and Molecular & Cell Biology. There is also the Masters of Radiological & Imaging Sciences (MRIS) which is a courses-only option and helps to train instructors and managers. The Masters of Genetic Counseling (MGC) which is a courses-only option will help to fill a critical need for counsellors in the Kingdom and the region. The Master of Public Health (MPH). It is a courses-only option and has tracks in Mass Gatherings (Hajj and Umrah), Biostatistics & Epidemiology and Health Policy & Management. The Masters of Nanoscience and Nanotechnology (MNT) which is a thesis option program.

The newest program is Engineering & System Management. Almost 40 V students have so far graduated from the graduate Programs at Alfaisal University over the past 4 years (Table 11). Graduate enrolment has averaged 200 students per year over the previous three academic years. In the academic years 2013-14, 2014-15 and 2015-16 enrolments stood at 214, 225 and 199 respectively.

Table 10. Current & Upcoming Graduate Programs

Current	Upcoming & Status	
Master of Biomedical Sciences (MBS) (Thesis) (sub to SCFHS) <ul style="list-style-type: none"> o Analytical Biochemistry o Biotechnology o Clinical Embryology & Reprod Biology (SCFHS cert) o Infection Control (SCFHS certified) o Molecular & Cell Biology (submitted to SCFHS) 	Doctoral Program in Biomedical Sciences (COM/ COSGS/COE)	External review completed To be re-submitted to MOE
Master of Business Administration (MBA) (Courses) <ul style="list-style-type: none"> o General o Finance o Healthcare Management (submitted to SCFHS) 	Master in Accountancy (COB)	Internal approval process
Master of Engineering & Systems Management (MEM) (Thesis & Courses) <ul style="list-style-type: none"> o Decision Analysis & Data Analysis o Manufacturing & Supply Chain Management o Development of Cyber-Physical Systems 	Masters in Renewable Energy Management (COE)	Submitted to MOE
Master of Genetic Counselling (MGC) (Courses) <ul style="list-style-type: none"> o Certified by Saudi Com for Health Specialties (SCFHS) 	Master in Model & Comp Sci (COSGS)	Internal approval process
Master of Nanoscience & Nanotech (MNT) (Thesis) <ul style="list-style-type: none"> o Nanomaterials for Energy & Environmental Applic o Nanomedicine & Nanodiagnostics 		
Master of Public Health (MPH) (Courses) (sub to SCFHS) <ul style="list-style-type: none"> o Mass Gatherings (Hajj and Umrah) o Biostatistics & Epidemiology o Health Policy & Management. 		
Master of Radiological & Imaging Sci (MRS) (Courses) <ul style="list-style-type: none"> o Education (SCHS certified) o Management (SCHS certified) o Ultrasound (submitted to SCFHS) 		

Table 11. Number of Enrolled & Graduated Students from 2010 to 2016

Current Masters Programs	Number of Enrolled & Graduated Students												
	2010-11		2011-12		2012-13		2013-14		2014-15		2015-16		Sum Total Grad
	Enr	Grad	Enr	Grad	Enr	Grad	Enr	Grad	Enr	Grad	Enr	Grad	
Biomedical Sciences (MBS)	-	-	-	-	6	0	13	-	30	6	36	7	13
Business Admin (MBA)	44	-	117	46	142	55	169	88	130	71	83	58	318
Eng & Syst Managmnt (MEM)	-	-	-	-	-	-	-	-	-	-	-	-	-
Genetic Counselling (MGC)	-	-	-	-	-	-	-	-	3	-	4	1	1
Nanosci & Nanotech (MNT)	-	-	-	-	-	-	-	-	-	-	6	-	-
Public Health (MPH)	-	-	-	-	-	-	-	-	-	-	-	-	-
Rad & Imag Sciences (MRIS)	-	-	-	-	-	-	32	-	62	28	70	30	58
Total	44	-	117	46	148	55	214	88	225	105	199	96	390
Cumulative Total Graduated	-	-	-	46	-	101	-	189	-	294	-	390	390

2.3 Scholarships



The Office of Research & Graduate Studies has established a Graduate Student Fund with the aim of financially supporting up to 10 graduate students every year. Successful applicants will be appointed for a three year period as a Research Assistant. The first two years will be primarily devoted to their graduate studies and the third year they will be doing full time research. Financial support will consist of a small salary and a scholarship to cover their tuition fees in full. Donations will come from institutions/foundations including, for example, SABIC and the Alanoud Foundation.

2.4 Saudi Demonstrators

The Office of Research & Graduate Studies has developed Policies and Procedures for recruiting Demonstrators based on MOE guidelines. Successful applicants, who must be Saudi Nationals, will work at Alfaisal University before being sent overseas to complete their graduate studies after which they will return to the University as full-time faculty members.



Alfaisal University



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