

# ANNUAL REPORT 2015-2016

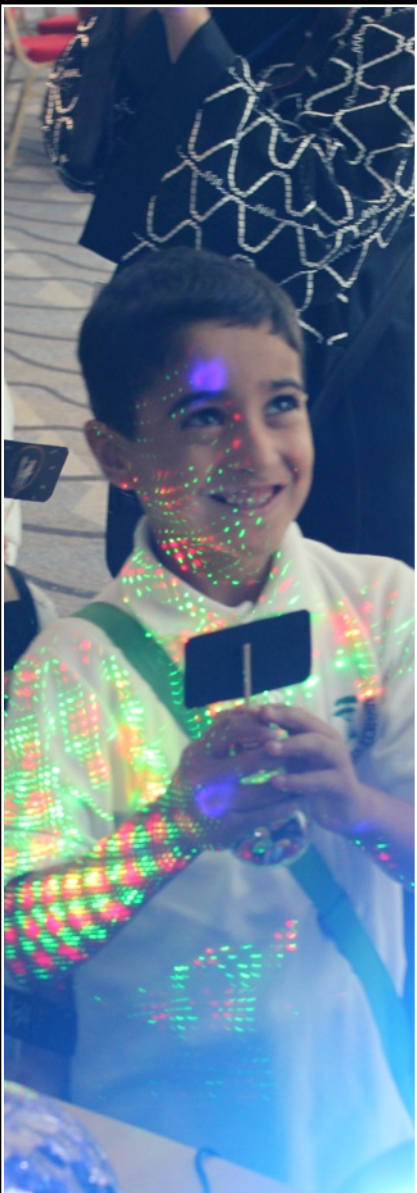


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# THE COLLEGE



# ACTING DEAN'S MESSAGE



The annual report of College of Science for the academic year 2015-2016 is a result of the efforts of all members of the College including faculty members, staff, and students who have contributed to the achievements of the College. The College of Science (COS) is a pillar college at the University. Science subjects are required by different specializations of other colleges. Since establishment of the College in 1977, the College of Science has always looked for the best and this is reflected in the quality of the programs offered. In this academic year, the Chemistry program has been re-accredited by Royal Society of Chemistry (RSC) and Biology program went through program review. Major research achievements of faculty members and students were highlighted as the importance of research to the nation.

In addition to that, the College of Science is committed to provide a high quality of education and stresses the importance of both basic and applied research. This is reflected in the research outcomes of faculty members who have published in high impact factor journals.

We will keep providing the community with leaders who can contribute to the mission and vision of the nation, and we look forward to working with our colleagues across the nation in striving for continuous improvement.

**Dr. Ahmed Ali Murad**

Acting Dean, College of Science



# ADVISORY BOARD



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# STRATEGIC PARTNERS

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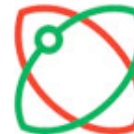
هيئة مياه و كهرباء أبوظبي  
Abu Dhabi Water & Electricity Authority

هيئة كهرباء ومياه دبي  
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DUBAI POLICE

مؤسسة الإمارات للطاقة النووية  
Emirates Nuclear Energy Corporation



وزارة الطاقة  
MINISTRY OF ENERGY



المركز الوطني للأرصاد الجوية والزلازل  
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TOTAL

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# COLLEGE ADMINISTRATION



**Dr. Ahmed Ali Murad**  
Acting Dean



**Dr. Abdulmajeed Saif Alkhajeh**  
Assistant Dean  
for Research & Graduate Studies



**Dr. Ahmed Al-Shamsi**  
Assistant Dean  
for Student Affairs



**Dr. Sulaiman Ali Alaabed Alkaabi**  
Assistant Dean  
for Professional Development

# HEADS OF DEPARTMENT



**Dr. Khaled Amiri**  
BIOLOGY



**Dr. Mohamed Alazab Alnaqbi**  
CHEMISTRY



**Dr. Khalid Mohamed Saleh Al Bloushi**  
GEOLOGY



**Dr. Mohammed Salim**  
MATHEMATICAL SCIENCES



**Prof. Maamar Benkraouda**  
PHYSICS



# MISSION, VISION, STRATEGIC PRIORITIES AND GOALS

## MISSION

The College of Science, by fostering an environment where students and faculty staff work collaboratively to expand knowledge in the disciplines of basic sciences (Biology, Chemistry, Geology, Mathematical Sciences and Physics), seeks to provide both majors and non-majors with the foundation that is appropriate to their career goals and with knowledge and skills that will allow them to function as responsible and contributing members of the society.

## VISION

The vision of the College of Science aligns itself with the UAE University's vision. The vision aims at providing excellence in teaching and learning, successful research and creative endeavors, and professional fulfillment. The College aims to attain international standards in relation to all basic sciences. We aspire to be a center for scholarship, creativity, and innovation that develops appropriate educational programs of high quality in line with international standards, including those at the doctoral level, as the emerging needs of the region dictate.

## STRATEGIC PRIORITIES (2014-2016)

For the period 2014-2016, the College has identified the following as the strategic priorities:

1. Improving students enrollment and students life
2. Continuously improving the quality of academic programs and students skills
3. Emphasizing research funding and focusing on national needs
4. Improving the operational efficiency of the College and services to community

## GOALS

The goals of the College are aligned with that of the University, which are:

1. Prepare graduates to be pioneers and leaders in their areas of specialization.
2. Develop scientific research capacity and innovation in areas of regional and national importance.
3. Achieve academic excellence in accordance with academic accreditation and institutional accreditation standards.
4. Promote the University's role in the transfer of knowledge and skills to serve the society.
5. Ensure that administrative services are provided with a high standard of quality, efficiency and transparency.

# HIGHLIGHTS OF 2015-2016

The **second and third meetings of the college advisory committee** were held this year.

Members of the college **published over 170 articles in the academic year 2015-2016**. Faculty members continue to publish in high impact journals.

**Prof. Amr Amin** received a **Khalifa Award for Education (2016)** as a “Distinguished university professor in the field of scientific research”.

The college received overwhelming response at the **student-led Think Science 2016**.

The **Chemistry BSc program was re-accredited** by the Royal Society for Chemistry.

Students have gone overseas for training, workshops and have also **won awards at several international competitions** including Imperial Barrel Awards (IBA) 2015.





# ABOUT THE DEPARTMENTS

## BIOLOGY



The Biology Department offers undergraduate programs in three areas of concentrations - Cellular and Molecular Biology (CMB), Ecological and Environmental Biology (EEB), and General Biology (GB). This academic year, the department undertook a periodic program review of the BSc program. The graduates of the Department of Biology are adequately trained to carry out the innovations required for the vision of the University. The department also has a very strong research focus. Faculty members of the department have won several highly competitive internal and external research grants. The department has a very vibrant research community undertaking both basic and applied research using modern laboratories equipped with state-of-the-art equipment and supported by experienced and dedicated personnel. Undergraduate and graduate students are routinely offered opportunities to assist in active research projects.

## CHEMISTRY



The Chemistry Department has developed a full-fledged teaching and research program since its establishment in 1977. The Department offers both undergraduate and graduate degrees, including BSc in Chemistry, BSc in Biochemistry, MSc in Chemistry and PhD in Chemistry.

The BSc in Chemistry is firmly established and is accredited by both the Canadian Society for Chemistry (CSC) (since 2007) and the UK Royal Society of Chemistry (RSC) (since 2011). In January 2016, our Chemistry program was reaccredited for the second time by the RSC. The recently created BSc in Biochemistry degree is also picking momentum and is based on European and North American standards. Our programs and curricula are periodically benchmarked and revised to ensure that we meet international standards.

The department organizes workshops for governmental and non-governmental institutions in the field of Chemistry, lab management and safety. A degree in Chemistry can prepare students for a career in industry, academia and government.



## GEOLOGY



The Geology Department is committed to providing students with a comprehensive knowledge of modern theory and geotechnical skills in a range of pure and applied geoscience fields, as a firm foundation for their future professional activities. The management of the Earth's environment and finite resources is a major concern for mankind. These latter topics are specially treated in an important group of interrelated environmental Geology courses in the revised curriculum. The Department currently offers two Tracks and is in the process of establishing one specialized geosciences track in order to meet the specific needs the employers in the UAE private and public sectors. The Geology program aims at enabling the graduates to participate fully in Geology-based industries, in the fields of education, and in scientific research. In addition to main target, the Geology program offers and will offer the students a coverage in the geological sciences, and their applications to exploration for Earth's resources, and to the solution of environmental problems in the geological context.

## MATHEMATICAL SCIENCES



Upon the inception of the University in 1976 the Department was titled Department of Mathematics and Statistics. Subsequently the Statistics program was transferred to the College of Business and Economics, and the Department was titled Department of Mathematics and Computer Science offering BSc in Mathematics and BSc in Computer Science. This stage continued until 1999 with the establishment of the College of Information Technology where the Computer Science program was eventually hosted. In 2004 the Department became the Department of Mathematical Sciences and establish tracks in mathematically related subjects such as Financial Mathematics, Mathematical Biology, Mathematical Statistics, Operations Research, and Actuarial Science. The department now offers programs of study leading to the BSc, MSc and PhD in Mathematics.

## PHYSICS



The Physics Department has a mission to prepare and equip the students with knowledge and tools to enable them not only to survive but rather to lead and innovate in nowadays evolving interdisciplinary world. The department offers a very strong program in Physics with high standard and international recognition. It promotes both teaching and research within the University as well as in the society. It makes bridges and links with well-reputed international institutions and research centers to establish research collaborations for both students and faculty members. The department strives to serve the society in upgrading and updating the prior-university educational systems and curricula as well as providing scientific insights and technical guidance to many other establishments. It has established good links for research collaborations with well-reputed international institutions and research centers, CERN is an example of such collaboration which involves students' enhanced international experience.





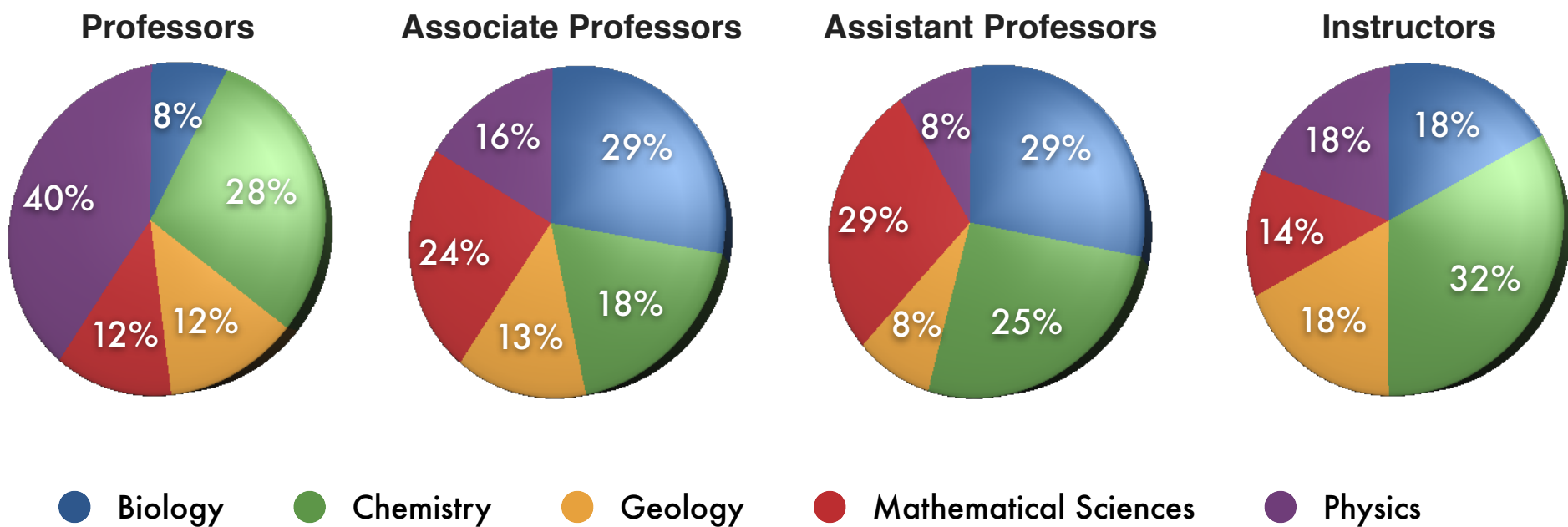
**GOAL 1: PREPARE  
PIONEERING GRADUATES**





# FACULTY NUMBERS

Department	Professors	Associate Professors	Assistant Professors	Visiting Professors	Instructors	Total
Biology	2	13	7	0	4	26
Chemistry	7	8	6	2	7	30
Geology	3	6	2	0	4	15
Mathematical Sciences	3	11	7	0	3	24
Physics	10	7	2	1	4	24
Total	25	45	24	3	22	119

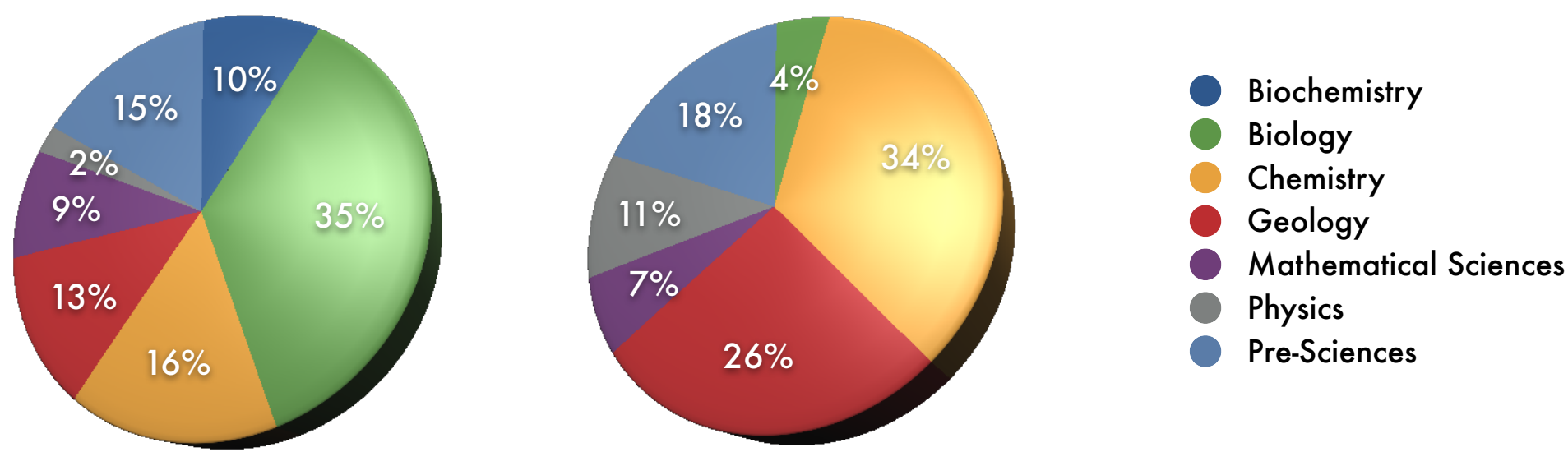






# UNDERGRADUATE STUDENT NUMBERS

Major	2013-2014		2014-2015		2015-2016	
	Female	Male	Female	Male	Female	Male
Biochemistry	66	0	82	0	90	0
Biology	303	11	325	9	324	8
Chemistry	115	58	129	66	144	61
Geology	107	58	118	62	120	47
Mathematical Sciences	97	11	85	13	84	12
Physics	23	24	19	27	21	19
Pre-Sciences	200	121	191	29	142	32

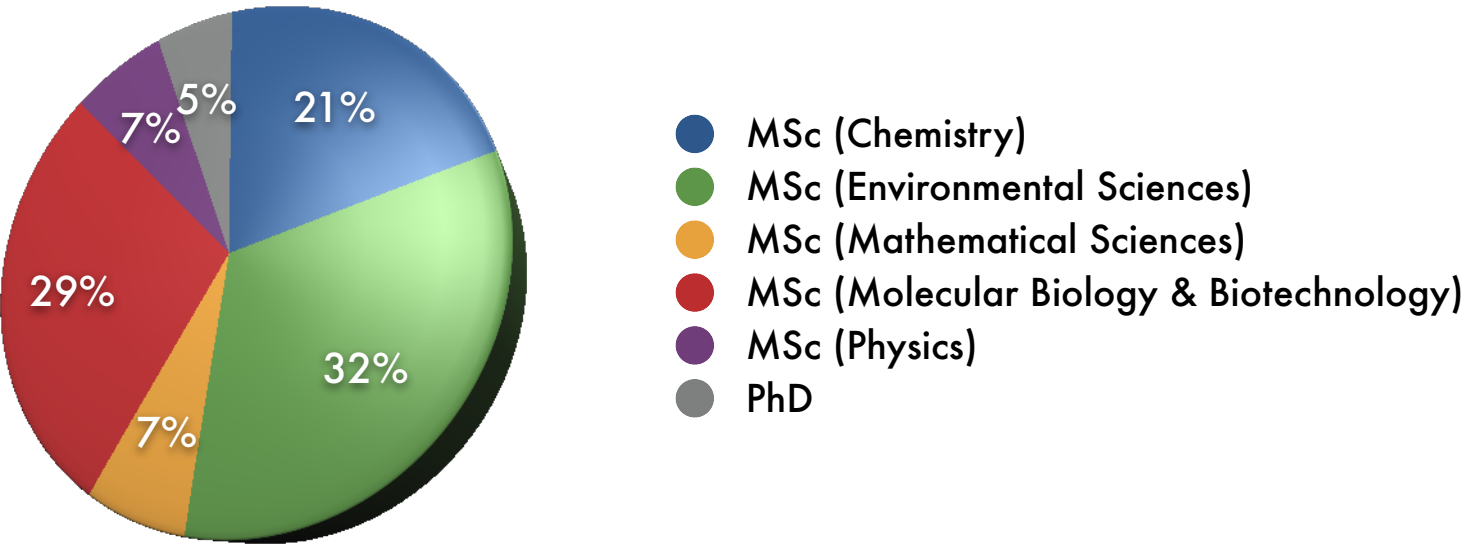






# GRADUATE STUDENT NUMBERS

Program	Number of students
MSc (Chemistry)	16
MSc (Environmental Sciences)	24
MSc (Mathematical Sciences)	5
MSc (Molecular Biology & Biotechnology)	22
MSc (Physics)	5
PhD (9 tracks)	4







## PHD STUDENTS

Currently 4 graduate students are registered on the PhD program.

#	Student Name	Department	Main supervisor	Thesis title
1	Heba Ahmed Ghanim	Chemistry	Dr. Ibrahim Abdou	Challenging in cancer therapy: Design and synthesis of novel nucleosides with proapoptotic effect
2	Mouza Rashid AlRashidi	Geology	Dr. Sulaiman Al-Kaabi	Geochemical and radiological baseline mapping and environmental impact of the area surrounding Barakah nuclear power plant, UAE
3	Rashed Bin Huzaim Al Rumaithy	Chemistry	Dr. Mohamed Meetani	Fast and sensitive detection and quantitation of cathine and related stimulant compounds from Khat
4	Shaikha Saif Saeed Alneyadi	Chemistry	Dr. Ibrahim Abdou	Design, synthesis and biochemical evaluation of some novel pyrimidine analogues for combating diabetes



# STUDENT EXPERIENCES

## Internship and international experiences

Several students from the College of Science attended local, regional and international conferences.

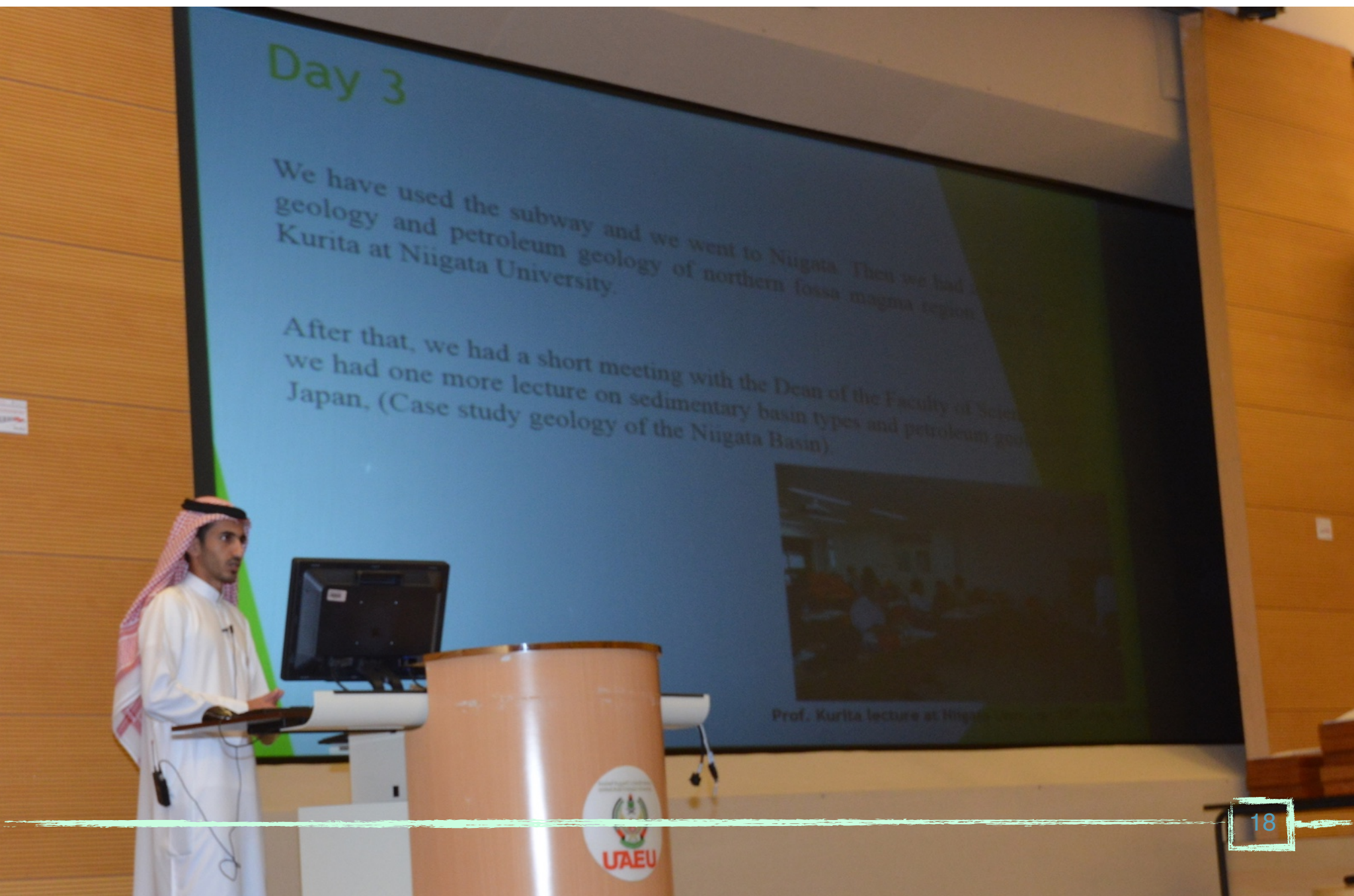
A number of students from the Department of Geology are competitively selected to undertake their internship in Japan. This internship started in 1993 and is still being organized by Japan Oil Development Company (JODCO).

The Department of Physics sent undergraduate students to participate in a very competitive international summer program in high-energy physics organized by CERN in Switzerland. The department gets funds for this summer program from external sources.

The Department of Biology sent students to the University of Hong Kong for summer training between July 25 - August 12, 2015.

## Undergraduate and graduate students in research activities

Undergraduate and graduate students are involved in research projects as part of their core curriculum. Additionally, they are provided opportunities to work as research assistants on funded research projects.



# SUMMER UNDERGRADUATE RESEARCH EXPERIENCES 2016

The College of Science received 20 Summer Undergraduate Research Experiences (SURE) 2016 initiative awards. Teams of 3-5 graduate and undergraduate students received an opportunity to work on projects with an experienced faculty member for around 5 weeks during the summer break.

#	Project Title	PI	Department
1	Red Palm weevil in the UAE: genetic barcoding using molecular markers, morphometrics, and molecular characterization of GST insecticide detoxifying enzymes.	Dr. Mohammad Al-Deeb	Biology
2	Advanced reduction processes as a tool for degradation of pharmaceutical drugs in waste water, comparison study	Dr. Mohammed Meetani	Chemistry
3	Evaluation of relative permeability of gas perm-selective membranes for some selected gases: Towards a new approach for gas identification	Prof. Sayed Marzouk	Chemistry
4	New innovative hair test to determine glucocorticoid levels in racing camels' health and disease	Dr. Iltaf Shah	Chemistry
5	A prototype system for online monitoring and removal of lead from wastewater	Prof. Thies Thieman	Chemistry
6	Synthesis and biological evaluation of novel benzimidazole-piperazine derivatives	Dr. Haythem Ali Saadeh	Chemistry
7	Amino-acid based sensor for fluorometric quantification of zinc ions in waste water	Dr. Soleiman Hisaindee	Chemistry
8	Creation, uses and analysis of a high resolution digital elevation model (DEM) for selected areas in the UAE	Dr. Salem Essa	Geology
9	Dimension effect on the ultrasonic pulse velocity	Prof. Hasan Arman	Geology
10	Stratigraphic studies of the surface upper eocene Dammam formation (38-34mya) as a groundwater aquifer and for oil exploration	Dr. Osman Abdelghany	Geology



#	Project Title	PI	Department
11	Divisibility properties for binomial coefficients by means of q-series	Dr. Mohamed El Bachraoui	Mathematical Sciences
12	Design and applications of stochastic numerical solvers for Bio-informatics problems using neuro-heuristic methodologies	Dr. Muhammed I. Syam	Mathematical Sciences
13	The fractional Laguerre equation: Series solutions and fractional Laguerre functions	Dr. Mohammed Al-Refai	Mathematical Sciences
14	A numerical algorithm for solving higher-order nonlinear boundary value problems (BVPs) with engineering applications on heat transfer characteristics of fluid flow over a shrinking permeable cylinder	Dr. Qasem Al-Mdallal	Mathematical Sciences
15	Mathematical modeling of the possible super-spreaders of the Middle East Respiratory Syndrome Coronavirus (MERS-CoV) during the Hajj season.	Dr. Abdessamad Tridane	Mathematical Sciences
16	Mathematical modeling of fate and dynamics of an oil spill	Prof. Fathi Mahmoud Allan	Mathematical Sciences
17	Fabrication and characterization of Aluminium Nitride nanoclusters for possible optical applications	Prof. Nasir Qamhieh	Physics
18	Low cost gas sensor fabrication for petroleum industry applications	Prof. Saleh Thaker	Physics
19	Data processing with optical solitons in waveguide arrays	Prof. Usama Al Khawaja	Physics
20	Electronic and optical properties of Aluminium nitride nano-clusters.	Prof. Nouredine Amrane	Physics

# THINK SCIENCE 2016

The Emirates Foundation for Youth Development's Think Science Fair 2016 was held between April 17-19, 2016 at the Dubai World Trade Center. Groups of students from the Biology and Physics departments represented the College of Science at the fair attracting a large number of visitors to their exhibits, posters and hands-on demonstrations.





# SMART LEARNING INITIATIVE

The COS has been at the forefront of adopting and embracing the UAEU “Smart Learning Project”. As part of this initiative, each of the five departments of the COS has selected an entry level course and a willing faculty member to “transform” these five courses into “Smart Courses”, by adopting various technological and pedagogical approaches to enhance student learning. The five courses that have been selected are:

Department	Course code	Course
Biology	BIOC210	Basic Biology II
Chemistry	CHEM111	General Chemistry I
Geology	GEOL105	Physical Geology
Mathematical Sciences	Math120	Contemporary Mathematics
Physics	PHYS220	Thermal Physics

Currently, innovative and interactive contents has been created for most of the courses and it is planned that these new approached and content will be used in classes in the Fall 2016 as part of the Smart Learning Project. In this regard, the COS also held a brainstorming session on 11 Feb 2016, to discuss the various issues and challenges and to listen to the concerns of the COS faculty members.







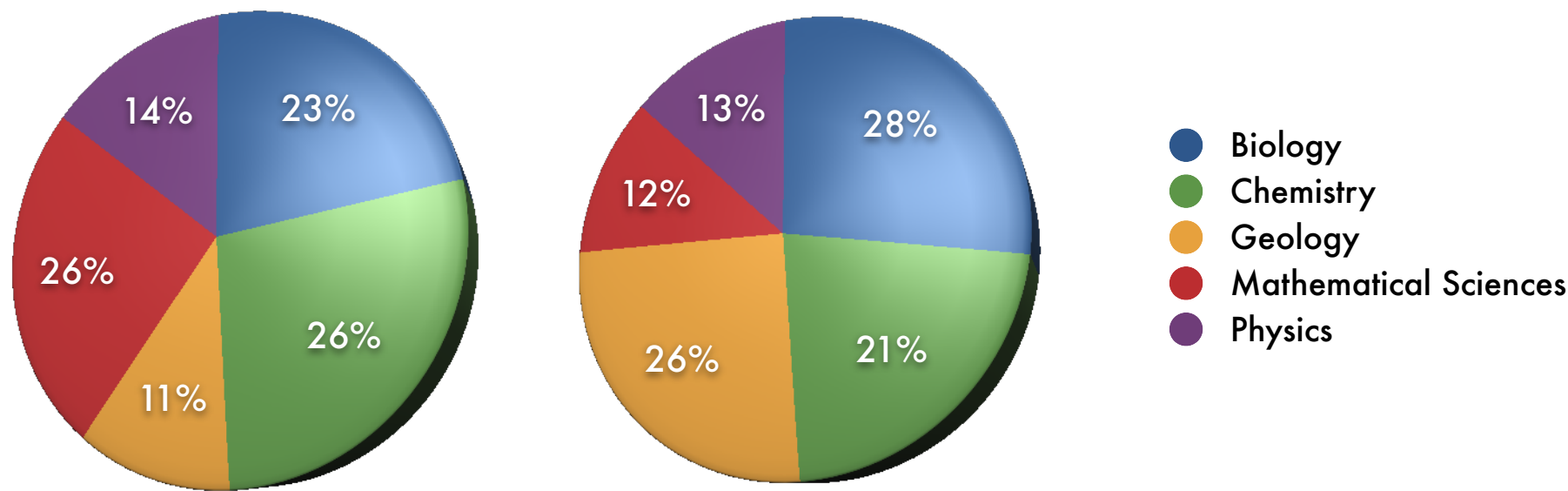
**GOAL 2: DEVELOP  
SCIENTIFIC RESEARCH  
CAPACITY & INNOVATION**



# PUBLICATIONS AND CONFERENCE PARTICIPATION

The college continues to undertake research of high caliber which are routinely published in leading international journals and presented at international conferences.

Department	No. of scientific research articles published in international journals	No. of scientific presentations at international conferences
Biology	39	37
Chemistry	45	28
Geology	19	35
Mathematical Sciences	44	16
Physics	24	17
Total	171	133



Journal publications (left) and conference presentations (right) by department



# UAE UNIVERSITY RESEARCH GRANTS

#	Project Title	PI	Department	Grant Type
1	Expression profiling and mutant analysis reveals complex regulatory networks involved in Arabidopsis response to biotic, abiotic and hormonal stress	Dr. Synan Abu-Qamar	Biology	Centre-Based
2	Targeting Histone Acetyl Transferases (HATs) in Breast Cancer by Carnosol	Dr. Rabah Iratni	Biology	Centre-Based
3	Molecular mechanisms controlling rostral migratory stream in mammalian brain	Dr. Rasheed Al-Hammadi	Biology	Startup
4	Development, characterization and application of multi-detector flow injection systems based on parallel and serial flow configurations for simultaneous determination of clinically important biochemicals	Dr. Jody Daniel Haddow	Chemistry	UPAR
5	Comparative analysis of various AOP-enzyme approaches for efficient aromatic pollutant degradation	Prof. S. Salman Ashraf	Chemistry	Centre-Based
6	Development of fibrous sorbents from recycled polymeric waste and their application in the removal and retrieval of crude oil spills	Dr.Mohamed Al-Azab	Chemistry	Centre-Based
7	Design, synthesis and pharmacological evaluation of new multipotent anti-alzheimer disease agents	Dr.Mohamed Khasawneh	Chemistry	Centre-Based
8	Development and characterization of gas analyzers of commercialization potential	Dr. Sayed Marzouk	Chemistry	Centre-Based
9	Correlation of antioxidant and antiproliferative activities of five medicinal plants used in the United Arab Emirates with phenolic and flavonoid contents	Dr. Bayan Al-Dabbagh	Chemistry	Startup
10	New hair test to determine Vitamin D status in humans	Dr. Iltaf Shah	Chemistry	Startup
11	Forced convection from a cylinder undergoing controlled circular motion placed in a uniform stream	Dr. Qasem Al Mdallal	Mathematical Sciences	UPAR
12	Metric properties of linear operators	Dr.Mohamed Salim	Mathematical Sciences	UPAR
13	Algebraic structure of crossed products	Dr. Victor Bodi		Startup
14	Optical data processing with solions in waveguide arrays	Prof. Usama Al Khawaja	Phyiscs	UPAR
15	Inert gas condensation of aluminum nitride nanoclusters for optoelectronic applicaitons: UV-light emitting diodes (LEDs)	Prof. Naser Qamhie	Phyiscs	UPAR
16	First-principle investigation of suitable materials for detection of CO <sub>2</sub>	Prof. Nacir Tit	Phyiscs	Centre-Based
17	Growth of III-Nitride nanowires (InGaN, InAlGaN, and GaN) via low cost photoelectrochemical method for photonic applications	Dr. Adel Najar	Phyiscs	Startup



# COLLEGE OF SCIENCE RESEARCH GRANTS

#	Project Title	PI	Department
1	Anti-tumor growth and anti-metastatic effect of carnosol, a natural polyphenol, on breast cancer	Dr. Rabah Iratni	Biology
2	Transcriptome analysis of farm cultivar date palm fruit native to United Arab Emirates: A pilot study	Dr. Fatima Al-Ansari	Biology
3	Transcriptional regulation of satellite cells distribution in anterior latissimus dorsi (ALD) and posterior latissimus dorsi (PLD) avian skeletal muscles	Dr. Rasheed Al-Hammadi	Biology
4	A novel combined “Enzymatic-advanced oxidation process” approach for efficient degradation of aromatic pollutants	Prof. S. Salman Ashraf	Chemistry
5	Development of amperometric dual-channel flow injection analysis systems for the determination of clinically important free-, bound- and total sialic acid in biomedical samples	Dr. Jody Haddow	Chemistry
6	Antioxidant characteristics and cytotoxicity potential of extracts from medicinal plants used in the United Arab Emirates	Dr. Bayan Al-Dabbagh	Chemistry
7	Surface acid sites characterization of aluminum-transition metal bulk mixed oxides studied by adsorption of pyridine using DRIFTS	Dr. Abbas Khaleel	Chemistry
8	Geological, mechanical and physical properties of the Peridotite rocks in the North Hatta area, UAE	Dr. Mohamed El Tokhi	Geology
9	Stochastic numerical solvers for problems in bioinformatics using neuro-heuristic approaches	Prof. Muhammed Syam	Mathematical Sciences
10	Numerical investigation of flow past a circular cylinder undergoing figure-eight-type motion	Dr. Qasem Mdallal	Mathematical Sciences
11	Analytical and numerical methods for fractional diffusion equations: Maximum principles and applications	Prof. Mohammed Al-Refai	Mathematical Sciences
12	A SABR model driven by normal martingale: Theory and application	Dr. Youssef El-Khatib	Mathematical Sciences
13	Geometry of quasiconformal groups	Dr. Jianhua Gong	Mathematical Sciences
14	Early transcendental analysis: A novel proposal for deriving intuitively yet rigorously the definition and properties of the exponential and logarithmic functions, and a comparison of student learning using our method versus the traditional method	Dr. Simon Cowell	Mathematical Sciences
15	Polynomial Invariants and Symmetries of Graphs and Knots	Dr. Nafaa Chbilli	Mathematical Sciences
16	Generalizing some Ramanujan's Theorems and their q-analogues	Dr. Mohamed El Bachraoui	Mathematical Sciences
17	Students based screen casting as a learning practice in general physics education	Dr. Hamad Alyahyaei	Physics
18	Electronic properties of molybdenum disulfide (MoS <sub>2</sub> ): A carbon-free nanomaterial	Prof. Nouredine Amrane	Physics

## PUBLICATION IN TOP JOURNALS

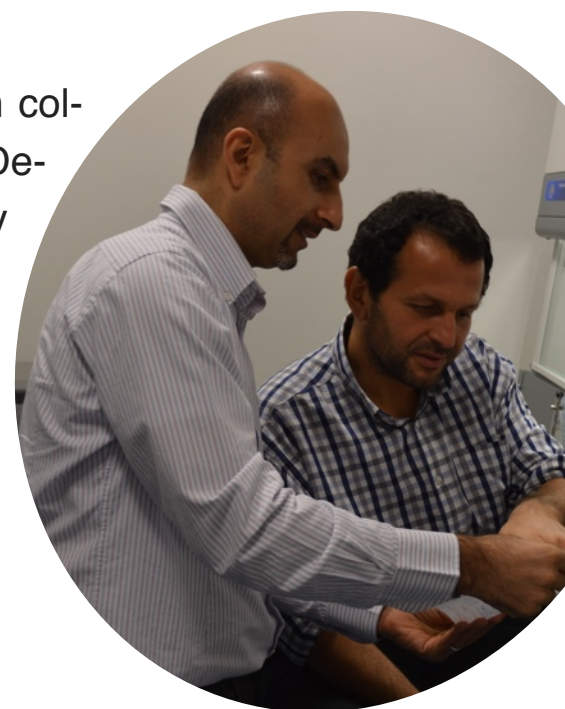
**Prof. Ala Aldhahan**, from the Department of Geology, was a member of a team of researchers led by Lund University (Sweden), together with researchers from the United Arab Emirate University (UAE), Uppsala University (Sweden), Paul Scherrer Institute and ETH Zürich (Switzerland), Niels Bohr Institute (Denmark), Space Sciences Laboratory, Berkeley and Purdue University (USA). They published in Nature Communications data supporting remnants of two powerful solar storms that dated more than 1000 years ago in ice from Greenland and Antarctica.

More details can be found at <http://dx.doi.org/10.1038/ncomms9611>



A research team led by **Dr. Rabah Itratni** from the Department of Biology in collaboration with **Dr. Synan AbuQamar**, another faculty member from the Department of Biology found that the fruit extract from a widely used culinary herb Sumac (*Rhus coriaria*), inhibits the growth of the highly aggressive and highly metastatic form of breast cancer (triple negative breast cancer). Their findings were published in the Scientific Report.

More details can be found at <http://www.nature.com/articles/srep13013>





# PATENTS

A group of researchers at the Department of Chemistry including **Dr. Mohamed Alazab Alnaqbi**, **Dr. Yaser Greish** and **Ms. Afra Al Blooshi**, applied for a non-provisional patent “Removal and Retrieval of Crude Oil Spills Using Synthetic and Recycled Polymeric Micro and Nanofibers” US Non-provisional Patent Application # US 15/065,547 which was filed in March 2016.



# INFRASTRUCTURE AND EQUIPMENT FOR TEACHING AND RESEARCH

## BIOLOGY

The Department of Biology is in the process of provisioning several new labs in the E3 building to cater for both teaching and research requirements. The Genomics and Biocomputation Study Unit (GBSU) has developed the capability to sequence and analyze genomes of a variety of different organisms.

The Computational Biology & Bioinformatics Lab led by Dr. Ranjit Vijayan is currently building a second high performance computer based on graphic processing units (GPUs)

## CHEMISTRY

Dr. Na'il Saleh established the Photochemistry research Lab 011 in F2 building. The ultrafast picoseconds time-resolved fluorescent method, which is useful to characterize the structures and dynamics of molecules, and is the first of its kind in UAE.

## GEOLOGY

The Geology Department has acquired licenses for a number of specialized software e.g. PETREL software for hydrocarbon reservoir characterization and stratigraphic correlation.

The Geology Department acquired a new Frantz Magnetic Separator for mineral separation and identification.

Fifteen binocular microscopes (Nova) were added to Paleontology lab.

## MATHEMATICAL SCIENCES

All the laboratories are equipped with facilities for meeting education and safety requirements.

## PHYSICS

The Department of Physics has modernized its teaching lab equipment and purchased very important research instruments including an X-ray machine, an atomic force microscope and a planetarium.



# FEDERAL AUTHORITY FOR NUCLEAR REGULATION LICENSES

The College was granted two licenses from the Federal Authority for Nuclear Regulation (FANR), for using radioactive sources and X-ray units .

1. The first license is for radioactive materials that emit gamma rays and alpha and beta particles in student and scientific research laboratories. These are considered controlled substances under Federal Law No. (6) of 2009 on the peaceful uses of nuclear energy. This license was granted for the possession, use, import, export and storage of radioactive sources for the purposes of scientific research, education and training of students of the College of Science. The license also covers the use of X-ray generators of up to 40 kV for use within student and scientific research labs.
2. The second license is for nuclear materials and to control the use of nuclear materials in accordance with Federal Law No. (6) and (28). This license was granted for the peaceful uses of nuclear energy from thorium and plutonium sources that do not exceed the limit in the license which is 1 kg of thorium and 1 gram of plutonium. These materials can be used in teaching and scientific research.

The obtaining of these licenses will help researchers and students in using measurement of radiation dose, neutron sources and X-ray generators.





Training at the University of  
Hong Kong

from 27<sup>th</sup> July to 11<sup>th</sup> August, 2015



**GOAL 3: ACHIEVE  
ACADEMIC EXCELLENCE**



# HIGHLIGHTS OF THE DEPARTMENTS

## BIOLOGY

- ★ The BSc program of the department underwent a periodic program review. The department is currently considering the reviewers comments.



- ★ Undergraduate and graduate student intake is at an all time high.
- ★ Prof Amr Amin received a Khalifa Award for Education 2016 as a “Distinguished university professor in the field of scientific research”.
- ★ Faculty members continue to be awarded several grants and published in top tier journals.

## CHEMISTRY

- ★ The Chemistry BSc program was accredited by both the Canadian Society for Chemistry (since 2007) and the Royal Society of Chemistry-UK (since 2011).

- ★ Reaccreditation of the Chemistry program by the UK Royal Society of Chemistry (RSC) in January 2016. This is the second time the Chemistry program was reaccredited by the RSC. An accreditation team from the RSC came and visited the department on the 4th of November 2015 and were really impressed and pleased with our program, faculty, staff, labs and above all our students.



- ★ One PhD degree and two MSc degrees have been awarded.
- ★ The Chemistry Department have secured grants in excess of AED 3 million for 2015-2016.

## GEOLOGY

- ★ The UAEU team achieved the second place at the 7th IBA-2016 (Imperial Barrel Award Competition) of the Middle East Region 2015 organized by the American Association of Petroleum Geologist (AAPG).
- ★ Dr. Osman Abdelghany successfully organized and guided a field trip to RAK emirate for geoscientists, engineers and geologists from the Total Oil Company, Abu Dhabi.



- ★ A number of Geology students were competitively selected to spend their internship at Japan. This internship program was started in 1993 and is organized by the Japan Oil Development Company (JODCO).
- ★ Several students were encouraged to participate in international conferences and local field trips.

## MATHEMATICAL SCIENCES

- ★ The Department organized the 5th International Conference on Mathematics and its Applications (5th ICM2016) during March 21-24, 2016. Around 120 participants from 50 different countries presented 90 contributing talks covering various branches of pure and applied mathematics.



- ★ The Department has taken the lead to contribute to the SMART teaching and learning initiative through the transformation of its Contemporary Mathematics Course MATH 120.
- ★ The Department has completed the Periodic Program Review task. The evaluating team expressed their positive support of the program and the self-study report presented to the team.



## PHYSICS

- ★The department successfully organized the “Lighting Our Future 2015” event which was well-received by everyone.



- ★Prof. Saleh Thaker and Dr Salah Nasri received the 2015-2016 College of Science Faculty Excellence Award for teaching and scholarship respectively.
- ★Members of the department have been in contact with the Ministry of Education and the Abu Dhabi Education Council with significant contributions in the area of curricular development.
- ★Students were called for a general open forum with the chairman of the Department during which they discussed various issues.
- ★Faculty members received several grants and a number of students continue to be engaged in research projects.

# REVIEW OF CURRICULUM

## BIOLOGY

The Department of Biology's BSc program underwent a periodic program review (PPR) this year. A self-study report (SSR) was prepared for the review process. The SSR was sent to three external reviewers - Prof. Vincent Hilser from John Hopkins University, Prof. Cole Gilbert from Cornell University, and Prof. Bruce Bowerman from University of Oregon - and two internal reviewers from UAEU - Prof. Sulaiman Al-Zuhair and Dr. Tom Loney. The reviewers came to the UAEU campus on a three-day visit (March 9-11, 2016), which included meetings with faculty members, stake-holders and UAEU administrators. During the visit, course content were evaluated and discussed with faculty members and laboratory instructors. The reviewers report was received in April and the department is currently in the process of preparing the response to be submitted to the university administration. By the end of this process the BSc program will capitalize on all of its strengths and will make improvements in order to provide students with cutting-edge knowledge by using the state of art teaching tools and modern pedagogical methods.

## CHEMISTRY

The Department has reviewed thoroughly the Chemistry and Biochemistry curricula and has proposed considerable changes which should improve the depth, the breadth and flexibility of both programs. The Department shared the newly proposed Chemistry curriculum with the delegates of the Royal Society of Chemistry during program reaccreditation site visit on November 2015. The

Department was pleased to receive endorsement from the RSC for the newly proposed Chemistry curriculum. Also, the Department is seeking the opinion of the Canadian Society of Chemistry for the newly proposed Biochemistry curriculum. The Department intends to submit the proposed curriculum changes through the CurricNET portal during Spring 2016.

## GEOLOGY

The Department of Geology plans to merge the presently offered two programs tracks into a single program track with a BSc degree in geosciences. The main reason for this step is to offer the students both enough specialty subjects' coverage and depth that was not possible with the program structure as two tracks. Additionally, the two tracks program structure resulted in discriminated patches of students without academically relevant motivation and without a logical scientific background. The reflection from the students was also strongly positive as they feel that they are not getting adequate geoscience education with the present two tracks program structure. It was therefore agreed by all the department faculty members that a single track program will focus the students in the subject and give them comprehensive education to graduate with a solid geoscience degree. The single track program will have coverage amenable to allow the graduate to serve in all jobs of geosciences or to continue in the postgraduate education.



## MATHEMATICAL SCIENCES

The Periodic Program Review (PPR) of the BSc program was conducted and reviewers report was received. The Department carefully considered the evaluators comments and recommendations. The Department's response report was prepared and submitted to the University Administration. The PPR site visit was conducted during the period from Monday 4th of May 2015 to Thursday May 7th, 2015. The team of reviewers consisted of Prof. J. Scott Carter from South Alabama State University, and Prof. Xiaofeng Ren, from Washington State University.

The content of all undergraduate courses were updated with the course learning outcomes (CLOs) and their assessments. These assessments will be combined to develop the overall program learning outcome (PLO) assessment.

The courses assigned credit hours were set to comply with international Credit Hour Standards and Policies in particular WASC policy on credit hours.

The graduate committee reviewed the course description and the content of the graduate courses offered by the department. The PhD program was also updated to be applicable for those students with a master's degree.

## PHYSICS

Two proposals for creating a minor in Electrical Engineering and Mechanical Engineering for Physics students were created with the help of the College on Engineering. Currently, the two proposals are at the College of Engineering for finalization and approval.

The curriculum committee is addressing the different recommendations of the periodic program review review for possible improvement of the program. A new proposal has been discussed in the department on how to implement the new changes. Further approvals by the College of Science and the University will be under way.

# PROGRAM IMPROVEMENT PLAN

Three programs of the College of Science - MSc (Environmental Sciences), BSc (Mathematical Sciences) and BSc (Physics) are currently implementing the approved program improvement plan after these programs underwent a periodic program review.

## **MSc (Environmental Sciences)**

This Program Improvement Plan has been an integral part of “closing the loop” within the review process of the MSc in Environmental Sciences program. The review committee recommended changes to the program which brings it up to the 21st century international MSc programs. The new program name (ie. Master of Science in Environmental Sciences and Sustainability) is also another highlight of this process. A revised list of learning outcomes have also been developed. All of these changes were made, with the adopted UAEU-wide MSc curriculum structure intact: It is based on 30 Credit hours and the college core courses are kept the same. The review committee, however, has recommended to offer non-thesis option, but the College of Science strategic plan emphasizes the involvement of students in research. As such, this latter recommendation has not been implemented.

## **BSc (Mathematical Sciences)**

The BSc program was reviewed in May 2015. The site visit was conducted during the period from mar 4-5 May 2015. Based on the recommendation of the reviewers, it was decided to increase the major requirements from 42CH to 51CH. The course MATH205 Set Theory was included as part of major compulsory requirements and also made a prerequisite for several major courses. A new course MATH312 Advance Calculus will be started to incorporate some of the topics suggested by the reviewers.

## **BSc (Physics)**

A panel consisting of external and internal reviewers reviewed the department's BSc program in March 2015 for possible improvement of the program. The main concerns/recommendations of the reviewers have been implemented under the control of the department. Further approvals by the College of Science and the University are currently underway. Furthermore, two proposals for creating a minor in Electrical Engineering and Mechanical Engineering for Physics students were created with the help of the College of Engineering. Currently, the two proposals are at the College of Engineering for finalization and approval.



# WASC BENCHMARKING

The College of Science hosts five academic departments which offer six undergraduate BSc programs. These include Mathematics, Physics, Chemistry, Biochemistry, Biology and Geology. Given the recent university pursuit to obtain institutional accreditation from the Western Association for Schools and Colleges (WASC), the College of Science has conducted a study to benchmark the undergraduate programs to the corresponding programs offered by universities which have already been accredited by WASC in the United States such as Stanford University, University of Hawaii at Manoa, San Francisco State University, University of California - Los Angeles, University of California - Berkeley, and San Jose State University. The benchmarking study involved the total credit hours required for graduation, major requirements, courses, supporting requirements and general education requirements. Although the benchmarking study revealed that the academic programs in the College of Science, UAE University are updated and comparable to such high international standards, the College aims to further enhance the offering of its academic programs by seeking, during this academic year, further curricular improvements to adopt some recent changes in the University policy regarding the minor programs and also to benefit from the recommendations resulted from the recent review of Mathematics and Physics programs, by international review teams, and by the re-accreditation of the Chemistry program by the Royal Society of Chemistry.

# BENCHMARKING

## BIOLOGY

The modified undergraduate curricula for the three tracks (Cellular & Molecular Biology, Ecological & Environmental Biology and General Biology) was benchmarked against two leading Universities from the United States - Stanford University and University of California, Berkeley.

## CHEMISTRY

The Chemistry and Biochemistry programs were benchmarked against five universities accredited by WASC. The Universities chosen for the Chemistry program were University Hawaii at Manoa, Stanford University, San Francisco State University, University of California Los Angeles, and University of California Riverside. The universities chosen for the Biochemistry program were University Hawaii at Manoa, Mount St Mary's University Los Angeles, San Francisco State University, University California Los Angeles, and California State University, Long Beach.

## GEOLOGY

The Department of Geology has included in its new one track program plan the Seismology and Seismic Risk Analysis and to make use of the Seismology Data Center.

## MATHEMATICAL SCIENCES

Benchmarking with other universities at the regional and international level was conducted for the undergraduate program.

The PhD program was compared with similar program offered by other international universities such as University College London, University of Florida, and University of Delaware.

## PHYSICS

After the CAA recommendations, the department has benchmarked its MSc and PhD programs with the international graduate programs.



# ACCREDITATION

## WASC accreditation

The College of Science actively supported the University's efforts in seeking WASC accreditation. **Prof. Sayed Marzouk** (Chemistry) and **Prof. Maamar Benkraouda** (Physics) served on UAEU's WASC Institutional Accreditation Committees and **Dr. Ranjit Vijayan** (Biology) served as the College Liaison Officer.

## BIOLOGY

The Department of Biology has setup a committee to look into the processes and procedures involved in being accredited by The Society of Biology, UK. Furthermore, the department is also considering the accreditation of the MSc (Environmental Sciences) program.

## CHEMISTRY

The Department of Chemistry has been accredited by the UK Royal Society of Chemistry (RSC) in January 2016. This is the second time our Chemistry program is reaccredited by RSC. In fact, the second accreditation showed even a stronger Department than the first one. RSC assessors thought Chemistry curriculum, laboratories, and students are exemplary. They also thought that the Department was impressive over all. This only proves that the Department is moving forward in the right direction.

The Department of Chemistry maintains another strong international accreditation by the Canadian Society of Chemistry (CSC), seven years for now. The Department of Chemistry is up for accreditation renewal in about four months by the CSC. It is anticipated reaccreditation by CSC. It is anticipated that it will obtain accreditation again by the CSC.

## GEOLOGY

The restructuring of the Geology programs will strengthen the accreditation position that the department has initiated.

## MATHEMATICAL SCIENCES

The Department of Mathematical Sciences is preparing for a full international accreditation.

## PHYSICS

The search for an accreditation body is still underway. One possible organization has been contacted. However, the department is still search for a better possibility of accreditation body.

# COLLEGE EXCELLENCE AWARD

The following faculty members have won the competitive College Award for Excellence 2015-2016 considering their outstanding contribution to teaching or scholarship.

## TEACHING



**Prof. Saleh Thaker**  
Physics

## SCHOLARSHIP



**Dr. Saleh Nasri**  
Physics



## PUBLICATIONS IN TOP JOURNALS

The following faculty members were honored in a special ceremony on April 28, 2016 for publishing in top journals in 2014.

Name	Department
Dr. Rabah Iratni	Biology
Dr. Synan AbuQamar	Biology
Dr. Na'il Ibrahim Saleh	Chemistry
Dr. Abdulrahman Fowler	Geology
Prof. Ala Aldahan	Geology
Dr. Qasem Mdallal	Mathematical Sciences
Prof. Usama Al Khawaja	Physics
Dr. Salah Nasri	Physics
Prof. Nacir Tit	Physics
Prof. Bashar Issa	Physics

## AWARDS RECEIVED BY FACULTY MEMBERS



**Prof. Amr Amin** (Biology) received a **Khalifa Award for Education** as a “Distinguished university professor in the field of scientific research” from HH Sheikh Mansour bin Zayed.



### CHANCELLOR'S AWARD FOR INNOVATION

**Dr Khaled Amiri** (Biology) was awarded the first place in the 2015 **Chancellor's Award for Innovation**.



### UNIVERSITY AWARD FOR EXCELLENCE IN SCHOLARSHIP

**Prof. Usama Al Khawaja** (Physics) was awarded a **University Award for Excellence in Scholarship 2016**.





# STUDENT AWARDS SUPPORTED BY FACULTY MEMBERS

## TAMAIZ & FALAK TAYYEB AWARDS

**Ms Asma Al Haddad's** was awarded the second prize at the 8th **Tamaiz & Falak Tayyeb Awards** based on her master's project supervised by **Dr. Ranjit Vijayan** (Biology).



## 4TH UAE UNDERGRADUATE STUDENT RESEARCH COMPETITION (UGSRC) 2016

A group of students supervised by **Dr Yaser Greish** (Chemistry) won the 1st place in UGSRC 2016. The winning presentation was about a SURE project that was carried out in Summer 2014. The title of the work was “Development of ceramic-polymer nanofibrous composites with potential biomedical applications”. The students participated in the project were **Ms Amani Abdulraheem Mohsen Al Yafeai** (Chemistry), **Ms Sidra Ahmed** (Chemical Engineering), **Ms Sumiyya Rabbani** (Chemical Engineering) and **Ms Farah O. S. Abuhatab** (Chemical Engineering).

## IMPERIAL BARREL AWARD 2016

**Dr Khaled Saleh** (Geology) and **Dr Amir Gabr** (Geology) led a group of students to the 2nd place in the Imperial Barrel Award 2016 organized by the American Association of Petroleum Geologist (AAPG). The competition was held in Manama, Bahrain on March 7th, 2016.. The team comprised of students **Ms Latifa Abdulla Almazrouei**, **Ms Serin M Darwish**, **Ms Reem Al Sbakhi**, **Ms Shamma Mosabbah Alyileili** and **Ms Fatmah Sultan Sulaiman**.

## BEST POSTER AWARD

**Ms Alaa Abdel Rahim H. Al Hroust** and **Ms Badriya Mahmood Ahmed Baig**, **Prof Amr Amin's** (Biology), graduate students won the best poster award at the Genomics and Systems Biology Conference organized by New York University, Abu Dhabi.



**GOAL 4: SERVE THE SOCIETY**



# CONFERENCES

## INTERNATIONAL CONFERENCE ON ENGINEERING GEOPHYSICS (ICEG)

**November 15-18, 2016**

The Department of Geology of Uand Al Ain City Municipality (AAM) in partnership with the Society of Exploration Geophysicists (SEG) organized the third edition of the International Conference on Engineering Geophysics (ICEG).



## THE FIFTH INTERNATIONAL CONFERENCE ON MATHEMATICAL SCIENCES (ICM)

**March 21-24, 2016**

The Department of Mathematical Sciences organized the 5th International Conference on Mathematical Sciences (ICM2016). This conference is held every 4 years. The conference enhances research by bringing together local talents and leading mathematicians from around the world. More than 150 researchers from 21 countries participated in this useful occasion this year.





Images from ICM2016





# COS DISTINGUISHED LECTURE SERIES



Date	Speaker(s)	Title
27/10/2015	<b>Dr. Sang-Mook Lee</b> Marine Geology and Geophysics School of Earth and Environmental Sciences Seoul National University, Republic of Korea	Meaning of existence and our place in the universe: A personal perspective from a scientist on a wheelchair
01/11/2015	<b>Prof. Chad Staddon</b> Department of Geography & Environmental Management University of the West of England, UK	Thirsty cities: Can urbanisation solve the world's water woes?
04/11/2015	<b>Dr. Thani Ahmed Al-Zeudi</b>	Climate change and the road to Paris
16/02/2016	<b>Prof. R. V. Krishnamurthy</b> Department of Geosciences Western Michigan University, USA	"Lake effect" on precipitation: Implications to regional climate and atmospheric dynamics
17/02/2015	<b>Dr. Juan José Gómez Alday</b> University of Castilla-La Mancha, Spain	Irrigation return flows and hydrothermalism: Impact on groundwater quality
23/02/2016	<b>Mrs. Alya Al Mazroui &amp; Mr. Sufian Farrah</b> National Center for Meteorology and Seismology Ministry of Presidential Affairs, Abu Dhabi, UAE	An introduction to the UAE research program for rain enhancement science
02/03/2016	<b>Ms. Nicola Albett &amp; Mr. David W. Hastings</b>	Making career matches & life choices

# SEMINARS AND WORKSHOPS



Date	Speaker(s)	Title
18/10/2015 - 22/10/2015	Prof. Serge Vivet	TPA Workshop Series: Great Industrial Sites Restitution
25/11/2015	Dr. Hani El-Nezami	Lecture on Toxicology: The Science of Poisons
11/02/2016	Prof. Hassan M. Selim	Brainstorming Session on “Smart Course Transformation Plan”
22/02/2016	Advisory Board Members	Let’s Talk: The COS Advisory Board Open Forum
16/03/2015	Ms. Nicola Albett	Role of Faculty Members & Academic Administrators in Facilitating Students Informed Career Choices -





# WORLD WATER DAY ACTIVITIES



Date	Title
22/03/2016	International Postgraduate Seminar on “Innovative Water Tracing Technology and Management”
22/03/2016	Water Sports Competitions
23/03/2016	Preparation Meeting for Blue Jobs Report of UAE
23/02/2016	Water Amusement (Exhibition of Water-related Demos)

## espresso Science

The college launched **espresso Science** which is an initiative to create a drop by station for all UAEU students for one-to-one academic support with Science problems including Biology, Chemistry, Geology, Mathematics and Physics.



## Graduate Studies Open Day

A graduate studies open day was organized on April 19, 2016 at The St Regis, National Towers, Abu Dhabi. The purpose of this event was to introduce UAE undergraduate students, and the community at-large to the graduate programs offered by the College of Science at UAE University, and to provide an opportunity to prospective graduate students to seek information and inquire about graduate education at the College of Science, such as programs offered, admission requirements, financial support, etc. Representatives from all programs were available to respond to inquiries.





## SCHOOL VISITS

### CHEMISTRY

Students from Um Al Fadhel Bint Al Hareth School visited the Department on October 28, 2015. They visited the E4 labs and attended demonstrations of experiments.



Students from Al Ain Club Academy visited the Department on November 24, 2015. They visited the E4 labs and attended demonstrations of experiments.

### GEOLOGY

The Geology Museum and laboratories has received more than five public and private high school visits totaling at least 150 students. These visits were conducted this year for the purpose of informing students and teachers of the scope and importance of geosciences. These schools are from the Abu Dhabi, Al Ain, Dubai, Sharjah and Fujairah educational zones. The visitors were very impressed by the scope of the Geology Museum collection, which has several donations of minerals, rocks samples and fossils for teaching purposes.







## CHEMISTRY DAY AND EXHIBITION

The Department of Chemistry held its “Chemistry Day and Exhibition” on the 2nd and 3rd of May in the IT auditorium and the G2 building. This event was a huge success with the participation of many companies from the region who exposed their state of art equipment and gave seminars on diverse topics related to Chemistry. This was the first of its kind event in the university, where almost 20 major chemical and lab instrument companies participated in this exhibition and offered special prices and deals to the university community.

Furthermore, the students of the Chemistry Department explained their experiments to the audience and to the high school students from various visiting schools. About 200 female and 100 male students attended this event and got exposed to ‘Science’ (Chemistry) in a fun and informal environment. Judging from the feedback from the teachers who accompanied the students, this was an absolutely amazing opportunity for the high schoolers.









## CONCEPTUAL PHYSICS DAY

The Department of Physics organized an exhibition on the Concepts of Physics on Monday, May 9, 2016. Students from various science and humanities fields in the university were involved in this scientific exhibition. Innovative projects covered topics in energy generation, roads and engineering methods, physical properties of different materials, and recycling.

The aim of this exhibition was to encourage students to think creatively and to encourage them to do scientific research. More than 80 students who were enrolled in the Conceptual Physics course took part with their projects.







**GOAL 5: HIGH QUALITY  
ADMINISTRATIVE SERVICES**



# MEETING OF THE COLLEGE ADVISORY BOARD



The College of Science advisory board consists of the Chancellor and Deputy Vice Chancellor for Academic Affairs (Provost) of UAE University, Acting Dean of the College of Science and several prominent leaders of the industry, governmental institutions and the community.

The second and third meetings of the college advisory board was held this year. The strategic plan of the University and the major achievements of the University and the College were presented. It was decided to align the objectives of the College with the University's strategic plan.

Two working groups - Marketing and Recruitment chaired by Mr Sultan AlHajji and co-chaired by Eng. Suhail Al Muhairi and Quality & Benchmarking chaired by Dr Mohammed Murad and co-chaired by Dr Mohammed Al-Mulla - would be established. A think tank workshop would be organized to prepare the mission and propose action ideas. Each working group would prepare a plan for the next 3-5 years.

It was mentioned that STEM education is a priority and the Ministry of Education requires COS graduate to teach.

Members also acknowledged the efforts of the University to establish the Science and Innovation Park and the WASC accreditation efforts.





# STUDENT ACTIVITIES



# BIOLOGY

Ms Deema Al Husairi took part in the 3rd Eco Club Summit, an initiative of the Environment Agency, Abu Dhabi.



Supported by the Istiqtaab initiative, students from the Biology department underwent summer training at the University of Hong Kong between July 25 - August 12, 2015.





# CHEMISTRY

Students took part in a Basic Emergency Response Course given by SANID and organized by the Chemistry Department and the student activities committee between January 1 to February 4, 2016 (Dr. Mohammed Al-Azab, Dr. Bayan Al-Dabbagh, Ms. Afa Alblooshi & Ms. Khaula Al-Shamsi).



Dr. Bayan Al-Dabbagh was in charge of the female students during the Colleges & Departments Exhibition organized by the Student Affairs Deanship on August 31, 2016.



A student gathering was organized with the members of the Royal Society of Chemistry on November 4, 2015.



The Chemistry Club organized a scientific movie screening entitled: “Organic light emitting diodes (OLED)”. This event was arranged by the Sheikh Mohammed Bin Khalid Al Nahyan Cultural Center in collaboration with Goethe Institute on December under the supervision of Dr. Muna Bufaroosha. Over 35 male students attended.





# GEOLOGY

1. The Geology Department team participated in the 7th IBA-2016 (Imperial Barrel Award Competition) of the Middle East Region 2016, organized by the American Association of Petroleum Geologist (AAPG). The competition held in Manama - Bahrain on March 7th, 2016. Eight Universities participated in the Competition from the Arab and Gulf regions. The UAEU team achieved the 2nd Place in this international Competition.
2. They attended the young Professionals and Students Summit (Challenge Bowl Competition) held in Manama, Bahrain during the period 7-10 March, 2016.
3. Two female students of the Geology Department participated in the Poster competition of the 4th SEG/DGS (Middle East Geosciences Student Symposium), 7-10 March, 2016, Bahrain.
4. The Geology Department female and male students were invited to attend the Spring field trip entitled "Winter of Applied Geoscience Experience (WAGE) – 4" which was held at Mundassah, Al Ain area from 26-28 February, 2016 for females students; and in Dubai coastal area (near Bab Al Shams Hotel) from 29 February - 4 March, 2016 for male students.
5. The Geology Department also encourages its students to take part and organize extra-curricular activities, such as involvement in the local workshops and organization of the Third International Conference on Engineering Geophysics (ICEG) from November 15-18, 2015.





# PHYSICS

In celebration of UNESCO's International Year of Light, the students of the Physics Club proudly organized '**Lighting Our Future 2015**', an event which showcased various interesting light-based experiments, as well as several enlightening talks.

The meticulously organized event targeted people of various age groups, including, but not limited to, primary school children, various high school students and of course University students.



Several esteemed speakers enlightened the audience with remarkable presentations.



Dr. Iyad Seyd Darwish explaining the Development of Light



Khalid Al Ameri's talk titled 'Lighting Our Future'



Prof. Saleh Thaker talking about 'Laser & Optical Technologies'

The Physics Club invited Dr. Ilias Fernini to give a talk on Astronomical Misconceptions in the female hostel

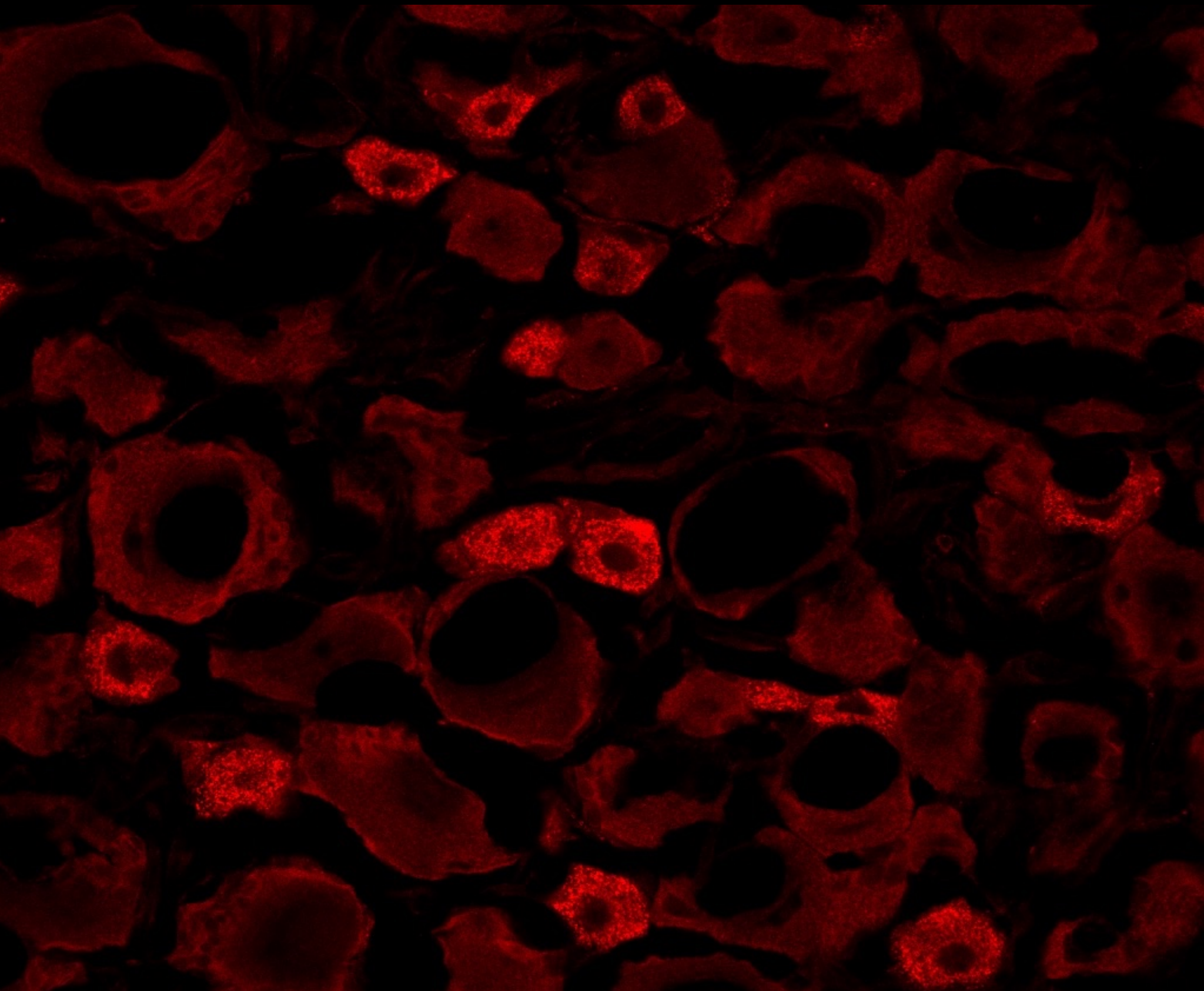




## **Annual Report Committee**

**Produced by Dr. Ranjit Vijayan**

Dr. Ranjit Vijayan (Biology) (Coordinator)  
Dr. Bayan Al-Dabbagh (Chemistry)  
Dr. Osman Abdelghany (Geology)  
Dr. Fathalla Rihan (Mathematical Sciences)  
Dr. Adel Najar (Physics)



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