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Dean's Message



Welcome to *scilights* Fall 2021, the College of Science Newsletter!

Although the COVID-19 pandemic still puts restrictions on our day-to-day activities, members of the College of Science were able to carry out a number of distinguished activities, cover new lands of opportunities, as well as break new records in scientific achievements!

Here are some of the key highlights:

The College organized the **“International Conference on Engineering Geophysics”** in October 2021 in collaboration with the City of Al Ain and the Society of Exploration Geophysicists, where a number of well-known speakers participated in the conference. And right after this conference, an international symposium on **“21st Century Materials: Emerging Scholars at the Frontiers”** was organized with the University of California Berkeley, USA and the Basque Center for Materials, Spain was organized in November 2021. In this symposium, distinguished speakers participated and the renowned **Nobel Laureate Fraser Stoddart** delivered the opening presentation. For the year of 2021, the College of Science was the **lead College in terms of scientific research publications** based on research journals indexed in the Scopus database. Members of the College published **491 papers, at an average of 4.7 papers per faculty!** The College also came on **top in terms of the number of papers published in top international journals**. The College also received more than **AED 12 million as research funding** for 2021! During Fall 2021, the College witnessed several important visits, chief among them was the **visit of the Chancellor to the labs of the Department of Biology** to encourage the research taking place at the College. **Prof. Andreas Hoecker, Spokesperson of CERN/ATLAS, Geneva** visited the University and met with the Chancellor after the signing of an MoU. **Prof. Plinio Innocenzi, from the University of Sassari, Italy**, a distinguished materials scientist visited the College to explore possibilities of collaboration. The College also hosted a **delegation from the University of Belgrade** to establish collaboration in the field of materials science. Furthermore, members of the College **led the scientific committee of the International Junior Science Olympiad**, which took place in Dubai in December 2021. Faculty and students from the College were **recipients of distinguished university and national awards and a number of very competitive external grants**.

The College of Science will continue to excel in its mission as the driving force in educating the next generation of scientists, carrying out research in cutting-edge topics and developing some of the most needed practical solutions for the development of the country.

Prof. Maamar Benkraouda
Dean, College of Science

COS Advisory Board

The College Advisory Board, composed of eminent individuals with governmental and non-governmental background, guides the College in attaining its mission and assists the College with its role in serving the nation. The Advisory Board meets at least once a semester and reviews College plans and achievements. The Fall 2021 meeting was held on 18 November 2021.

The members of the Advisory Board are:

- Mr. Sultan Al Hajji** (Vice President for Public Affairs and Alumni Relations, Mohamed bin Zayed University of Artificial Intelligence; Chairman, Advisory Board of COS)
- Eng. Suhail Thani Al Muhairi** (Infrastructure & Services Coordination Division Manager, Al Ain Municipality)
- Dr. Mohamed Murad Abdulla** (Director, Decision Support Center, Dubai Police)
- Mr. Saeed Mohammed Al Muhairi** (Executive Director, Emirates Metrology Institute, Abu Dhabi Quality Conformity Council)
- Ms. Sheikha Al Maskari** (Communications Advisor, Chief Innovation Officer & Founding member, UAE Space Agency)
- Mr. Salem Rashed Almatrooshi** (Retired from ADNOC)
- Ms. Aayda Al Shehhi** (Director, Radiation Safety, Federal Authority for Nuclear Regulation)
- Dr. Abdulla Ahmed Al Mandous** (Executive Director, National Center of Meteorology)

Editors

- Dr. Asma Al-Menhali (Vice Dean, COS)
- Dr. Ranjit Vijayan (Biology)
- Dr. Soleiman Hisaindee (Chemistry)
- Dr. Kamal Ali (Geosciences)
- Prof. Mohamed Ibrahim Syam (Mathematical Sciences)
- Prof. Mofreh Ramadan Zaghoul (Physics)
- Mr. Mohamed Shahid (Dean's Office)

Design

- Dr. Ranjit Vijayan (Biology)

✉ cos.office@uaeu.ac.ae

🌐 <https://cos.uaeu.ac.ae>

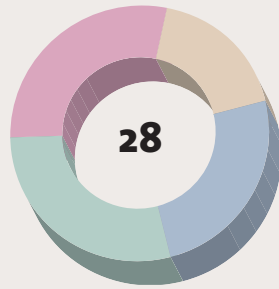
The College

DEPARTMENT

FACULTY

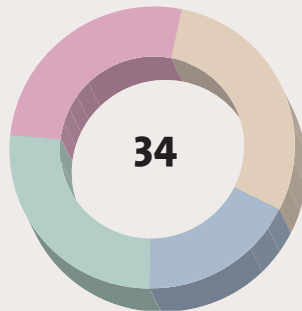
PROGRAMS

Biology



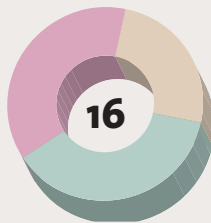
BSc (Biology)
 Cellular & Molecular Biology Track
 Ecology & Organismal Biology Track
MSc (Environmental Science)
MSc (Molecular Biology & Biotechnology)
PhD (Ecology & Environmental Sciences)
PhD (Cellular & Molecular Biology)

Chemistry



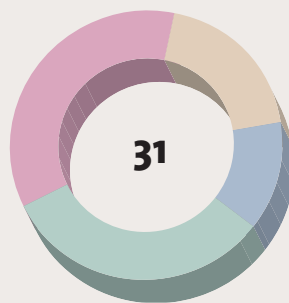
BSc (Chemistry)
BSc (Biochemistry)
MSc (Chemistry)
PhD (Chemistry)

Geosciences



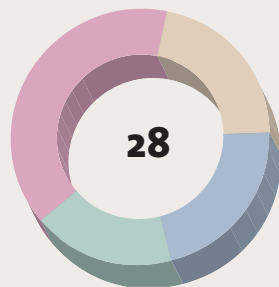
BSc (Geosciences)
MSc (Geosciences)
PhD (Geosciences)

Mathematical Sciences

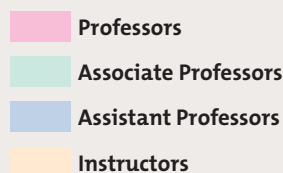


BSc (Mathematics)
MSc (Mathematics)
PhD (Mathematics)

Physics

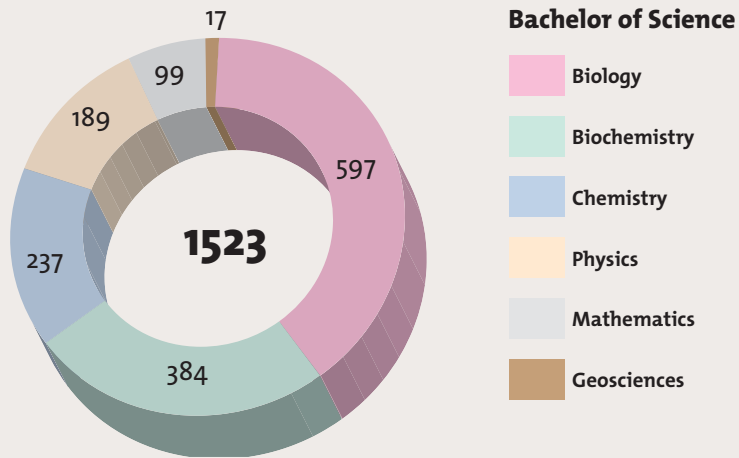


BSc (Physics)
MSc (Physics)
MSc (Space Science)
PhD (Physics)



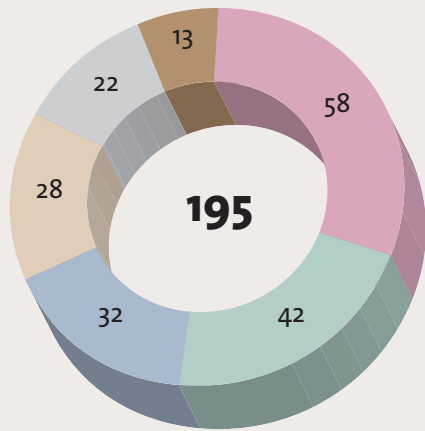
Student Enrollment

Undergraduate Programs

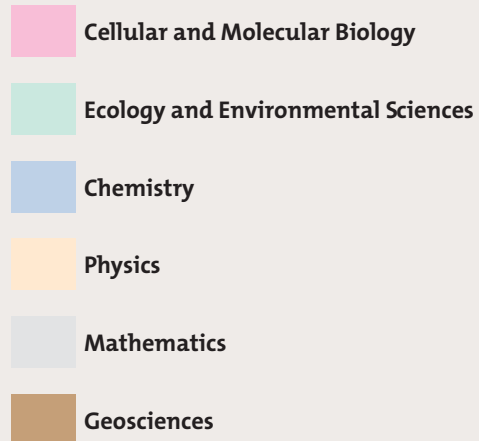
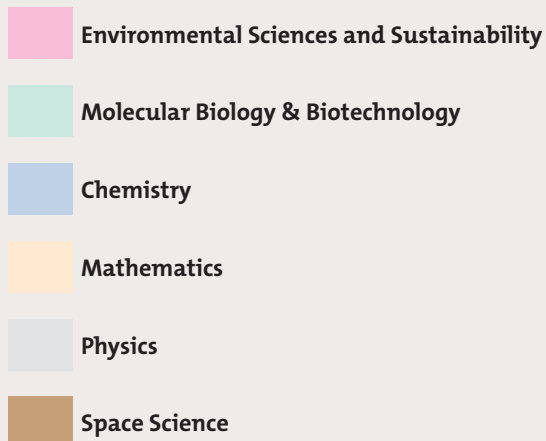
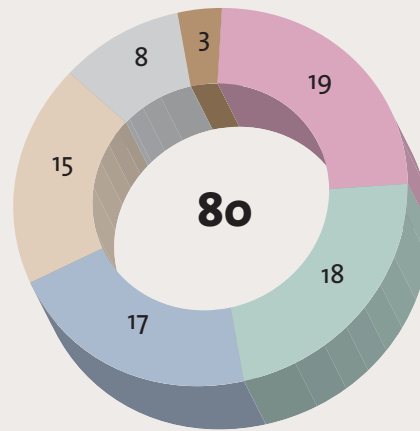


Graduate Programs

Master of Science



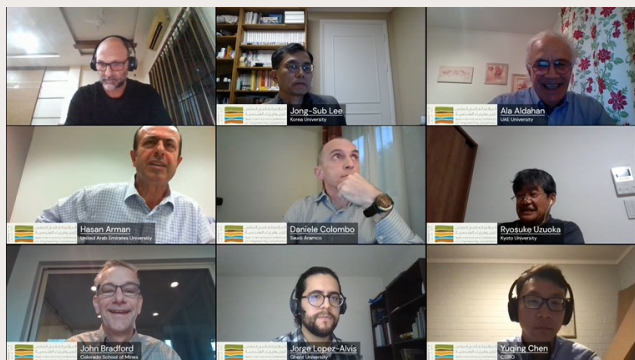
Doctor of Philosophy



Events

International Conference on Engineering Geophysics

25–28 October 2021



Under the patronage of H.H. Sheikh Tahnoun bin Mohammed Al Nahyan, the Ruler's Representative in Al Ain region, UAEU and Al Ain City Municipality (AAM), in partnership with the Society of Exploration Geophysicists (SEG), organized the 6th edition of the International Conference on Engineering Geophysics (ICEG) between 25-28 October 2021. The conference was organized virtually for the first time since its launch in 2011. It was opened by H.E. Zaki Anwar Nusseibeh, Cultural Advisor to the President of the UAE and Chancellor of the UAEU. ICEG2021 received a total of 111 paper submissions. The Technical Committee accepted 91 submissions - 71 as oral presentations and 20 as posters. There were 209 participants from 29 countries representing 38 universities and 68 international companies.

Breast Cancer Awareness Month

25-26 October 2021



As part of the Breast Cancer Awareness Month, the Biology Club organized several events and activities over a 2-day period. This included an open discussion about breast cancer hosted by Dr Shamsa Alawar (Department of Obstetrics and Gynecology, CMHS, UAEU), a talk on immunotherapy by Dr Khalid Muhammad (Biology, UAEU) and an exhibition in the corridor of E1 building. Brochures and badges were distributed to spread awareness about breast cancer and to emphasize the importance of self-examination. The event received a lot of positive feedback and successfully achieved the main goal of spreading awareness.

21st Century Materials: Emerging Scholars at the Frontiers Symposium

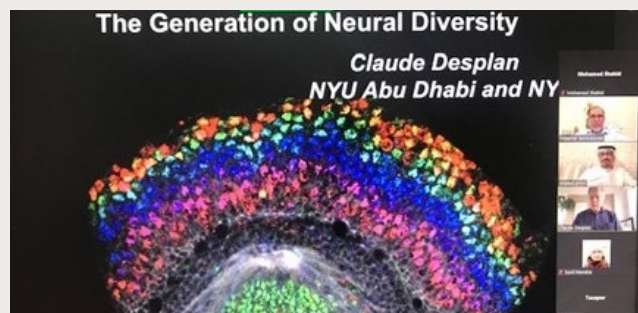
8-10 November 2021



This symposium was held virtually between 8-10 November 2021 with the aim of discussing recent advances in materials science in the 21st century. It was delivered by 22 distinguished scholars from 15 countries, including UAE, who are at the frontier of materials science. The event included a keynote speech by the Noble laureate Sir Fraser Stoddart from Northwestern University, USA. The symposium was moderated by 5 prominent material scientists. It was jointly organized by the Berkeley Global Science Institute (Prof. Omar Yaghi, USA), BC Materials (Prof. Stefan Wuttke, Spain), and UAEU (Prof. Maamar Benkraouda, UAE).

Science Colloquium

17 November 2021



In Fall 2021, the College initiated the Science Colloquium – a series of talks from distinguished researchers from across the globe. The first colloquium was presented by Prof. Claude Desplan (Center for Developmental Genetics, New York University, USA). He delivered a talk on “The Generation of Neuronal Diversity” that illustrated how complex neuronal organization can be implemented by simple rules using a fruit fly (*Drosophila*) model.

Biology Graduate Research Day

25 November 2021

The Department of Biology organized a Biology Graduate Research Day where students from the two PhD programs based in the department presented their research work virtually. Ms Subha Chandran and Ms Shaima Raji from the Cellular and Molecular Biology program and Ms Nour El Houda Debouza from the Ecology and Environmental Science program were adjudged as the best presenters.

18th International Junior Science Olympiad 2021

12 - 21 December 2021



The International Junior Science Olympiad (IJSO) is an international event that involved more than 60 countries. The UAE hosted this international event for the first time. The Ministry of Education, UAE was the lead organization for the event and the UAEU was in charge of leading the scientific committee. The UAEU was represented by Dr. Ehab Malkawi, Dr. Mayank Gururani, Dr. Sabir Bin Muzaffar and Dr. Fathy Hassan from the COS. Since late August 2021, the team from UAEU worked closely with the MOE and IJSO's international advisory board meeting weekly virtually to prepare for the event. A camp held in COS Labs in September 2021 hosted students and the international committee. A second camp was organized by COS to train our graduate students who acted as moderators and graders.

COS at Expo 2020

19-23 December 2021



The College of Science was represented at the UAEU pavilion at Expo 2020 between 19-23 December 2021. The College exhibition showcased several distinguished achievements related to research, inventions and intellectual property held by members of the College in various fields. This is expected to create awareness and demand among investors and students wishing to join the college programs. It is also likely to increase opportunities for research cooperation between COS and other entities. Over 14 professors and 17 graduate students represented the COS in the exhibition. Each section included video clips highlighting prominent projects and research activities in the COS that addresses key challenges, including environmental, health and technological, faced by the UAE and the wider world.

Departmental Seminars

This term, a number of thematic seminars (Biology: 3; Chemistry: 15; Physics: 3; Mathematical Sciences: 7) were organized by the constituent departments of the College. These were delivered by scientists from around the world as well as our own faculty members and students covering a very broad range of topics.

Visitors

H.E. Dr. Zaki Nusseibeh, the Chancellor of UAEU's visit to Biology Labs

28 November 2021



H.E. Dr. Zaki Nusseibeh, the Chancellor of UAEU, visited the Department of Biology in F1 and E3 buildings on 28 November 2021. He was accompanied by Prof. Ghaleb Alhadrami (Acting Vice Chancellor, UAEU), Prof. Mohammed Hassan Ali (Acting Provost, UAEU), Prof. Ahmed Murad (Associate Provost for Research, UAEU) and Prof. Maamar Benkraoud (Dean, COS). Members of the Department, including faculty, staff and students, gave the guests a tour of key research facilities and important projects that the Department has undertaken.

Visit of Serbian Delegation

9-11 November 2021



Prof. Petar Uskokovic, Dean, and Prof. Dorde Janackovic from the Faculty of Technology and Metallurgy, University of Belgrade visited UAEU between 9-11 November 2021. This visit aimed at initiating academic and research collaboration between University of Belgrade and UAEU, especially in the area of Materials Science. The delegates presented their research interests and capabilities, met with faculty members from the College of Science (Chemistry and Physics) and Engineering (Chemical and Mechanical) who are undertaking research in this area and visited research laboratories in buildings E3, E4, E6 and F2.

Visit of Prof. Plinio Innocenzi, University of Sassari, Italy

10-12 October 2021



Prof. Plinio Innocenzi, from the Laboratory of Materials Science and Nanotechnology, University of Sassari, Italy, visited the College between 10-12 October 2021. He is also an Associate Researcher at the National Instituto of Nuclear Physics (INFN) and the Director of the Laboratory of Materials Science and Nanotechnology. During his visit, Prof. Innocenzi met with Prof. Ahmed Murad, Associate Provost for Research, Prof. Maamar Benkraouda, Dean of COS, and the Chairs of Chemistry and Physics Departments. He delivered a lecture titled "From oD Nanostructures to Complex Materials" and discussed his research and possible collaborations.

Visit of Prof. Andreas Hoecker, spokesperson of ATLAS collaboration at CERN

22 November 2021

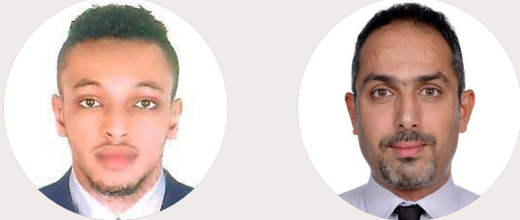


The UAEU recently joined the ATLAS Collaboration [CERN-Large Hadron Collider (LHC)], as part of a cluster of three UAE Universities: United Arab Emirates University (UAEU), University of Sharjah (UoS), and New York University Abu Dhabi (NYUAD). A delegation from ATLAS collaboration at CERN led by Prof. Andreas Hoecker visited UAEU on 22 November 2021 and held discussions with H.E. Dr. Zaki Nusseibeh (Chancellor, UAEU), Prof. Ahmed Murad (Associate Provost for Research, UAEU), Prof. Maamar Benkraouda (Dean, COS), Prof. Usama Alkhawaja (Chair, Department of Physics), and Prof. Salah Nasri (Department of Physics). He also discussed research opportunities with faculty members and students of the Department of Physics.

Faculty and Student Achievements

Chancellors Award

Student Category



Mr. Ahmed Elsir Ahmed Ali and Dr. Na'il Saleh Ibrahim received the award under the student category in the Technology competition area for research on innovative polymers for enhancing plant productivity.

Faculty Category



Prof. Khaled El-Tarabily and Prof. Synan AbuQamar received the innovation award under the Water Resources competition area.



Prof. Salem Issa and Dr. Basam Dahy received the award under the Space competition area.



Prof. Ihab Obaidat received the award under the Renewable Energy competition area.

UAE Innovation Award



Dr. Abdessamad Tridane from the Department of Mathematical Sciences was awarded the UAE Innovation Award in August 2021.

Fellowship of the Higher Education Academy of the UK



Dr. Ranjit Vijayan from the Department of Biology was awarded a Fellowship of the Higher Education Academy of the UK in recognition of teaching and learning support in higher education.

Planet X Youth Aerospace Award

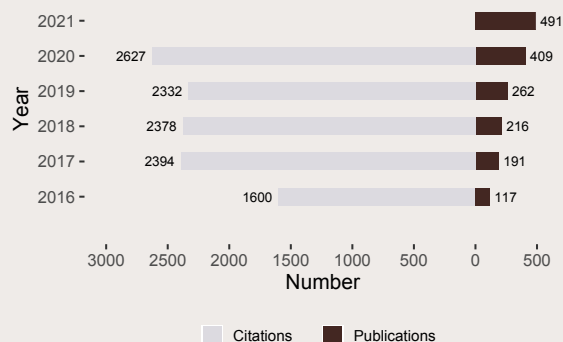


Ms. Rayah Ali Abualsboua Alkhateri (Department of Biology) and Ms. Jawher Ali Almoutar Alnuaimi (Department of Physics) won the 3rd place in the Planet X Youth Aerospace Challenge organized by the Emirates Planet Discovery Project in partnership with the Dubai Airshow (2021).

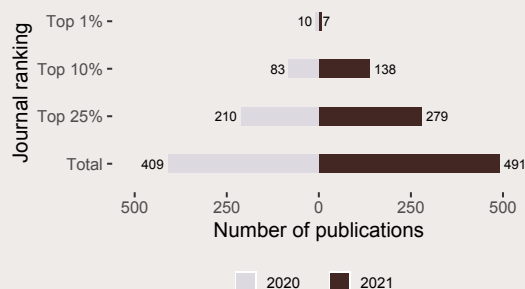
Scholarly Activities

The faculty and students of the College of Science are at the lead of advanced research in several scientific and technological disciplines. Several significant scholarly accomplishments were achieved during Fall 2021 in terms of publications, granted patents, recognition awards, research funding, and graduating MSc and PhD students in addition to signing MOU agreements for scientific collaboration with other regional and international institutions.

Number of Publications and Citations (2016-2021)



Ranking of Publications



External Research Grants



Dr. Oliver Manlik from the Department of Biology was part of a team that was awarded a research grant from the Swiss National Science Foundation for the project titled "From genes to culture: estimating the adaptive potential of a marine top predator to rapidly changing environments".



Dr. Sunil Mundra and Dr. Youngwook Kim from the Department of Biology received competitive research grant from the Department of Education and Knowledge (ADEK).

World's Top 2% Scientists and Patents

8 faculty members figured in the list of world's top 2% Scientists by Stanford University and Elsevier.

8 US patents were granted to members of COS: Prof. Ihab Obaidat - 3, Prof. Amr Amin - 2, Prof. Yaser Greish - 1, Prof. Adel Najjar - 1, Prof. Alaa Salem and Ms. Shaikha Al Neyadi - 1.

Memorandum of Understanding between CERN and UAE ATLAS Cluster

On 2 July 2021, UAEU was granted full membership of the ATLAS Collaboration at CERN- Large Hadron Collider (LHC), as part of a cluster of institutions representing the UAE. This is the first initiative to develop the field of high energy physics in the Gulf Cooperation Council (GCC) region. The UAE-ATLAS Cluster is formed by United Arab Emirates University (UAEU), the University of Sharjah (UoS), and New York University Abu Dhabi (NYU AD). The three institutions are led by Prof. S. Nasri (on behalf of UAEU), Dr. R. Soualah (UoS; and Cluster Leader), and Prof. M. Losada (NYU AD). UAEU has a full time postdoctoral researcher working onsite at ATLAS, CERN since October 2021.

Graduate Degrees Awarded



In Fall 2021, 4 PhD candidates and 12 MSc candidates successfully defended their thesis.

Program Accreditation



In Fall 2021, the BSc Chemistry program was accredited by the Royal Society of Chemistry and the BSc in Geosciences and BSc in Mathematics were accredited by ABET (ANSAC).

Student Activities

Meta Excellence Program



The Meta Excellence Program is organized with the cooperation of UAEU's Science and Innovation Park. Since the launch of the program in Fall 2020, 102 COS students were offered a place on the program of which 93 joined the program. This program consists of four phases, which are mindset shift, private sector engagement, employability or entrepreneurship, and incubation and acceleration. The main aim of this program is to empower a student to find a meaningful job in their field of interest or to create their own job. Furthermore, it aims to improve a student's soft-skills and allows them to develop a clearer career vision aligned to their personal purpose. It also facilitates meetings with external mentors and to build a career roadmap. A survey undertaken by participants who completed the first phase showed that 98% developed a sense of purpose while 88% understood the link between their purpose and their career plan. In addition, 83% of the participants had a clearer vision for 2031 through the visualization exercise.

Expo 2020



The College organized several visits to Expo 2020 for the students and organized several activities under the supervision of Dr. Aquib Moin (Department of Physics). The first activity was "Human Spaceflight" in the Swiss Pavilion on 20 October 2021. A workshop on Youth Empowerment in the Space Era was organized on 21 October 2021. A third workshop - the Liberal Arts & Science for Space Exploration (CLASSE) Event – was held at the French Pavilion on 22 October 2021.

Chess Club

To promote extracurricular activities in the COS, a Chess Club will be established for the students. Several students are interested in this game and the College would like to encourage this. A proposal was submitted to the Department of Student Activities in November 2021 for the approval of the University.

