

# OUR SCHOOLS: VIBRANT GROWTH

## A. The School of Arts and Sciences

The School of Arts and Sciences (SAS) stands at the core of LAU's liberal arts tradition. While it houses some of the university's oldest programs, it constantly adapts its offerings to the professional market and the communities it serves by regularly reassessing the existing programs and creating new ones.

### 1. ACADEMICS

- **A Flourishing Academic Environment**

This year, the Department of Communication Arts has launched three new B.A.s, in multimedia journalism, television and film, and the performing arts.

Another success lies in the registration of a new M.Sc. in applied and computational mathematics with both the Lebanese government and the New York State Department of Education.

Additionally, SAS is introducing several new minors, in philosophy, nutrition, food science management, social work and community development, and gender studies.

- **Professional Accreditation**

The B.Sc. in computer science submitted a self-study for re-accreditation by ABET (the Accreditation Board for Engineering and Technology), in anticipation of a visit from the ABET team in October 2016. Meanwhile, the B.A. in education and the coordinated B.Sc. in nutrition and dietetics are both exploring professional accreditation, with the Council for the Accreditation of Educator Preparation and the Accreditation Council for Education in Nutrition and Dietetics, respectively.

- **Partnerships**

SAS continues to provide students and faculty with stellar opportunities for learning and career advancement through ever-expanding partnerships with other universities (both in Lebanon and abroad), NGOs, social and government institutions, and international corporations.

Since 2015, the Department of Communication Arts has signed a Study Abroad agreement with the Salzburg Academy (Austria), while the B.A. in Arabic language and literature has signed exchange agreements with the Kyiv National Linguistic University (Ukraine) and Aarhus University (Denmark).

Existing partnerships with outside universities include – but are not limited to – an exchange program between the Social Sciences Department and Sciences-Po (Paris); an exchange agreement between the B.A. program in translation and the University of Manchester (Great Britain); a collaborative Ph.D. agreement between the Department of Social Sciences and Ruhr University (Germany); and a collaborative Ph.D. agreement between the Department of Natural Sciences and the University of Newcastle (Great Britain).

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*“The realm of gender studies encompasses many political issues, from unequal pay to forced early marriages and genital mutilation. I believe a minor in gender studies will complement my major in that it will give me a better understanding of the context of these issues and help me present these topics in a comprehensive and informed way.”*

*Paula Naufal, SAS political science and international affairs major*

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In Lebanon, the Department of Education has signed a Memorandum of Understanding with Sacré Cœur School (Gemmayze-Beirut) to help the 7 Frères Schools improve their newly-established English program and turn the schools into feeder schools for LAU.



Six LAU journalism students attended the Arab Reporters for Investigative Journalism (ARIJ) conference in Amman, Jordan, in December 2015, in the framework of a Memorandum of Understanding between LAU and ARIJ.

### 2. TRANSFORMING SOCIETY THROUGH RESEARCH AND OUTREACH

#### • A Flourishing Academic Environment

SAS promotes a culture of encouraging and fostering research, discovery and independent inquiry, reflecting LAU's commitment to serving the broader society. Through research and other initiatives, often supported by international competitive grants and other outside funding, our faculty and students are changing the world for the better. Presented here are some highlights:

#### • Research Projects

The Team	The Project
The Nutrition Program and the "Diet Center," Middle East	Investigating the efficacy of a novel modified and complete detox diet on body composition, blood profile, stress, sleeping habits, appetite, and gastrointestinal functions in overweight and obese individuals
The Computer Science Program and the Internal Security Forces	Developing a software that serves the ISF in managing traffic
The Department of Education and the British Council	Developing a school improvement system in Lebanon, including the necessary training

#### • Engaging Students in Research

A group of LAU professors and students has been leading an effort to synthesize the beneficial neurological effects of the BDNF protein, produced by the body during exercise. With the support of NYU, Cornell University and a grant from the National Council for Scientific Research-Lebanon, the team has published a paper unveiling the mystery behind the protein's production.

A team of SAS biology students examined the carcinogenic and neurotoxic risks of acrylamide and heavy metals contained in the potato and corn chips consumed by the Lebanese population. The project led to publishing the results in the *Journal of Food Composition and Analysis*, a first-tier scientific journal, as well as achieving wide online and national media recognition.

#### • Workshops and Symposia

SAS provides its faculty and students with myriad opportunities for sharing research results, expanding creativity, and exchanging ideas with each other as well as with local and international experts, often leading to new intellectual discoveries.



In April 2016, the Nutrition Program hosted a conference bringing together several hundred nutritionists and food scientists in Lebanon. The participants discussed the rising obesity levels in the MENA region, the carcinogenic risks in potato chips, gluten mislabeled products, the nutrition of Syrian refugees, and the risk of pesticide residues, among other topics.

For example, in March 2016, SAS brought together budding translators from both LAU and other Lebanese universities for a conference on the role of translators in cultural mediation. In April 2016, the school teamed up with the Department of Design (School of Architecture and Design) to sponsor a workshop in which students worked in teams to come up with new ways of narrating a story.

In August 2016, the Department of Communication Arts hosted the Media and Digital Literacy Academy (MDLAB), focusing on spreading media literacy to counter growing extremism among young people. The ten-day event included a wide variety of lectures that tackled the need to raise awareness of media language and stimulate civic engagement, while hands-on workshops taught the participants how to produce multimedia content.

A seminar by renowned mathematician Professor Robert Devaney — on the Fractal Geometry of the Mandelbrot Set — was broadcast live from the LAU NY Academic Center to mathematics students in Beirut.

#### • Active and Expanding Institutes

SAS is home to several research and policy institutes serving as platforms for research and debate both in Lebanon and beyond.

In 2015, two previously existing institutes housed in SAS — the Institute for Peace and Justice Education and the Institute of Diplomacy and Conflict Transformation — merged to form the Social Justice and Conflict Resolution Institute (ISJCR) at LAU. ISJCR's purpose is to develop a research-based public policy forum addressing contemporary issues of social justice and conflict resolution in the Arab world.

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In April 2016, ISJCR and the Department of Social Sciences cohosted a roundtable titled “Debating the Post-2011 Middle East: Old or New Paradigms,” an event that brought together LAU students and faculty with experts from the University of Leeds and the University of Exeter.

In recognition of the fact that software and information technology sectors in Lebanon are key elements of the country’s economic development, the Software Institute seeks to promote the Lebanese software industry and services, raising its regional competitiveness and international visibility.

**In March 2016, the ISJCR brought together three dozen researchers, donors, civil society members and journalists at LAU to discuss Syrian refugees’ access to justice.**



**In the fall of 2015, the Software Institute at SAS held a workshop series on computing and programming, teaching high-school teachers and students from across the country how to create mobile applications. The series took place in collaboration with the UNESCO Beirut Office and the Lebanese National Commission for UNESCO.**

Established nine years ago, the Institute for Migration Studies (IMS) has developed into an interdisciplinary research institute as well as a resource center for graduate students and scholars studying migration and its effects on Lebanon, the region and globally. The IMS also works closely with the government and nongovernment organizations in addressing issues related to diaspora migrant communities and migrant workers in the region.

Faculty affiliated with the Institute for Migration Studies published a seminal article this year in the journal *Immigrants and Minorities*, assessing the extent to which the Lebanese diaspora is active in the development and politics of Lebanon.

### • Reaching Out

Outside of classroom walls, SAS faculty and students reached out to the community in a variety of ways over the past academic year.

The Department of Social Sciences collaborated with the Center for Lebanese Studies and the Fetzer Foundation on “Healing the Wounds of History,” a community mental health project intended to address the deeper roots of cyclical violence.



In April, more than 1,000 people participated in various workshops as part of the Sixth Annual Dance Day Festival in Lebanon, hosted by LAU every year since 2011.



In May, the Communication Arts Department organized the 18th International University Theatre Festival, showcasing the best student productions from LAU, Lebanon more broadly, and the region as a whole.



Thanks to a grant from the U.S. Embassy in Lebanon the Writing Center held a series of workshops aimed at establishing writing centers in Lebanese schools.

### 3. STUDENT ACHIEVEMENTS

As always, SAS students garnered abundant acknowledgments this past academic year for their scholarly and extracurricular achievements. Among many other examples, in September 2015, students from the Computer Science and Math Department-Byblos won first prize at PeaceHack Beyrouth. Their colleagues Paul Hallak and Siba Hajar from the Beirut campus won first and third place respectively in the 2016 Science Olympics at Rafic Hariri University. Meanwhile, mathematics student Rami Masri won this year's National Public Speaking Competition, sponsored by the English Speaking Union of Lebanon. From the Chemistry Department, students Hussein Khalifeh and Abulrahman Kotob scored better than their peers from other Lebanese institutions in the International Organic Chemistry Competition, coming in fourth.



Undergraduate chemistry student Ali Safadi presented a paper on the potential use of various plants with a high water-use efficiency at the 2nd South-East European Sustainable Development of Energy, Water and Environment Systems (SDEWES) conference in Piran, Slovenia on June 15-18, 2016.

Undergraduate mathematics student Lara Kassab presented a research paper titled Understanding the Center for the  $2 \times 2$  Linear Iterative Systems at the Summer MathFest of the Mathematical Association of America (August 2016).

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## B. The School of Architecture and Design

LAU's School of Architecture and Design (SArD) has emerged as a national and regional role model in terms of its educational standards. It is renowned for fostering a creative, open, multi-disciplinary and proactive design culture. In 2015-2016, the school maintained its role as a pioneer in expanding exchange opportunities, based on the conviction that students should be provided with maximum international exposure while remaining faithful to their roots.

### 1. ACADEMICS

- **New Graduate Programs**

Over the past academic year, SArD moved ahead with instituting graduate-level degrees, starting with the Mutaz and Rada Sawwaf M.A. in Islamic Art and Architecture. Moreover, the school registered recently a new M.A. degree in visual narrative with the New York State Education Department, to be launched in spring 2017.

- **Pursuing Accreditation**

SArD is pursuing accreditation for our architecture program, working closely to that end with the National Architecture Accrediting Board (NAAB). The B.A. in architecture is now at an advanced stage in the process of obtaining NAAB accreditation. Meanwhile, all other SArD programs have initiated the process of accreditation by the National Association of Schools of Art and Design (NASAD) and are currently in the self-study phase.

- **Partnerships**

In December 2015, SArD signed an agreement of cooperation with the School of Architecture of the Cracow University of Technology (Poland), aimed at developing academic exchange and other areas of mutual interest.



SArD's Urban Planning Institute works with 12 other organizations from seven countries bordering the Mediterranean Sea on developing a touristic/cultural itinerary highlighting the Umayyad history shared by their countries, through a significant grant from the European Union. In May 2016, the institute hosted representatives of all the project partners and Lebanese tour operators for a presentation of the work completed so far.

In January 2016, the School's Urban Planning Institute signed a Memorandum of Understanding with GAIA-Heritage (sal) to establish an urban observatory with the purpose of developing research initiatives on cities around the Mediterranean.

In May 2016, SARd's Institute of Islamic Art and Architecture signed a Memorandum of Understanding with the Fundación Pública Andaluza El Legado Andalusi (Spain). The agreement promotes collaboration on issues related to Islamic cultural heritage, including the exchange of scholars and students and the organization of common exhibitions.

## 2. RESEARCH AND THE TRANSFORMATION OF SOCIETY

### • Adding to Intellectual Capital

SARd's faculty continually add to the global store of knowledge through an ever-increasing number of publications.



#### Publications

Authoritative Design: Azad Collaborative Design Project – selected contemporary posters from Azad Art Gallery/ Tehran/ Iran [2008 – 2016]/ Department of Design

Follow Me to the Moon: Annual Graphic Design Senior Student Catalogue [2015 – 2016]/ Department of Design

Selected Fashion Design Projects: Developing Creative Identity for Lebanon and Beyond [2015 – 2016]/ Department of Design

Living in Buenos Aires [2015]/ Department of Architecture and Interior Design

Architecture Final Year Project: Student Works [2015]/ Department of Architecture and Interior Design

Two Thousand 16: Fine Arts Alumni Biennial [2016]/ Department of Fine Arts and Foundation Studies

Loquis: Triennial Faculty Exhibition [2016]/ Department of Fine Arts and Foundation Studies

Foundation Works 2: Foundation Studies Student Work Catalog [2015]/ Department of Fine Arts and Foundation Studies

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- **Expanding Horizons**

Over the course of 2015-2016, SArd hosted a variety of exhibitions, lectures and conferences organized by its constituent departments and institutes on topics ranging as far afield as censorship in the comic arts, storytelling in the digital age, or the interconnections between fashion, design and identity.

*A few of this year's highlights:*

In October 2015, the Department of Design organized "TypeTalks," bringing together local and international expert designers, typographers and calligraphers to share insights about their work with students and colleagues, followed by an exhibition displaying the speakers' works at the Municipal Cultural Center in the Old Souk of Byblos.

In October 2015, the Institute of Islamic Art and Architecture hosted a symposium and exhibition titled "Celebrating Cultural Landscapes," which discussed the various aspects and challenges of the international Agha Khan Award for Architecture (one of the most respected awards given to distinguished contemporary projects in the Islamic world).

**The Department of Fine Arts and Foundation Studies held the 2016 Alumni Biannual Exhibition in March, titled "16 Works on Display." The event showcased the creative talents of LAU graduates.**



**In April, SArd held a panel discussion about comics and censorship, bringing together artists, academics, legal experts and free speech activists who engaged in a heated open discussion about the acceptable limits to free speech.**

In March 2016, the Department of Architecture and Interior Design welcomed a symposium on the topic of the "New Frankfurt" social and urban experiment, which pioneered new systems of housing in post-war Germany.

- **Deep Connections with the Community**

Throughout the year, the School of Architecture and Design engaged deeply with the community outside university walls, in line with LAU's overall mission.

Several Fine Arts faculty members and students participated in the SOS (Save Our Souls) ART Exhibition hosted by UNESCO in February 2016, an exhibition that inspired the public to think more deeply about the meaning of peace and injustice while providing artists with an occasion to connect and benefit from each other's work.

In July 2016, SArd collaborated with the Hariri Foundation in Sidon to develop workshops for high-school students on photography, fine arts, and graphic design.

### 3 – RECOGNIZING OUR STUDENTS

At LAU, SArd students are known for accumulating stellar local and international recognition for their creative endeavors prior to graduation. As always, in 2015-2016 our students – across departments – brought home numerous awards and prizes.

This year, LAU was selected as the University of the Year by the Dubai Lynx International Festival of Creativity, in which graphic design students Chelsea Abi Saab and Nadia Khabbaz won first and second place respectively. More than half of the shortlisted contestants were LAU students.

In December 2015, interior architecture students Marc Azzi and Huda Rawwas seized a prize offered by the Boutique of the National Museum of Beirut, whereby their designs will be exhibited by the boutique throughout the year. In June 2016, architecture students Julia Aridi and Samer Awad took first prize in Fransabank’s U-Design competition.

The work of recent graphic design graduates Jad Abou Zeki and Loyal El Wazzan was featured on billboards across Beirut throughout September 2015, as part of a program initiated by Fondation Saradar.

Jad Abou Zeki's artwork



Loyal El Wazzan artwork

*"I first saw my poster displayed on a billboard in Sassine and was shocked and surprised and happy. It felt great. It's good to show that we have talent in Lebanon. And, yes, it's also good for my portfolio."*

Jad Abou Zeki, Graphic Design

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## C. Adnan Kassar School of Business

The Adnan Kassar School of Business (AKSOB) is home to high quality graduate and undergraduate business and economics programs, whose goal is to develop ethically responsible professionals committed to civic engagement. Our graduates tangibly contribute to economic development in Lebanon and the region, an achievement of which AKSOB can be justly proud.

### 1 - ACADEMICS

- **Accreditation**

We are thrilled to announce the accreditation of AKSOB by the Association to Advance Collegiate Schools of Business (AACSB), which was announced in April 2016 (see the full story in the Special Feature on page 4 of this report).

- **New programs**

AKSOB is constantly innovating and reinventing itself. In the 2015-2016 academic year, we expanded the portfolio of programs to include a Master of Laws (L.L.M.) and a Master in Legal Studies (M.L.S.). Plans are in the works to introduce an M.Sc. in Human Resources Management and an M. Sc. in Finance by 2017.

Curricular improvements inspired by the AACSB accreditation include the creation of a new core course in Innovation and Entrepreneurship, and the mandating of the Operation and Production Management course as a core requirement for all business students.

In AY 2015-2016, AKSOB attracted the highest number of new students in its M.B.A. and E.M.B.A. programs since the school's founding, with more than 250 and 100 students respectively.

In October 2015, AKSOB teamed up with the Arab Banker's Association of North America (ABANA) to send two top LAU students to participate in ABANA's fellowship program in New York for M.B.A. students at top-tier business schools in the region, as part of our commitment to preparing graduates for the real world.

### 2 - FACULTY DEVELOPMENT AND SCHOLARSHIP

AKSOB continued its tradition of sponsoring various research faculty development initiatives in the 2015-2016 academic year through the School Research and Development Council. The school also provided faculty with practical development training. For example, two senior professors were invited to share with faculty tips on publishing in top-tier journals, while the Department of Information Technology and Operations Management organized a "Train the Trainer Workshop" on SAP ERP software.

The results of this investment in faculty outputs have been truly impressive. AKSOB faculty research has appeared in prestigious international refereed journals and edited books, with significant contributions in a wide range of areas, from banking and finance, to debt and exchange rate management as well as strategic management, among many others. Many of our faculty serve as referees for peer reviewed journals and conferences, and as editorial board members of journals and book series on the Middle East.

- **Addressing Regional Realities**

In the spirit of LAU's mission of directly engaging with and positively transforming the society in which we live, AKSOB's faculty devote much attention to studying the realities of Lebanon and the MENA region and sharing their insight with the community, both at conferences hosted at LAU and at outside events by invitation.

Researchers from AKSOB and the University of Lethbridge (Canada) teamed up to study variables that correlated positively with female employment. They found that foreign and privately owned manufacturing and export companies hire significantly more women in the MENA region than do publicly owned companies.



Thirty researchers and academics from 15 Arab and European institutions gathered in Beirut in January 2016 to discuss the progress of the ambitious cross-country SAHWA project, which is funded by the EU and focuses on youth prospects and perspectives in the context of the Arab Spring. Three AKSOB faculty members are participants in the project.



The academic executive director of the LAU New York Academic Center joined prominent practitioners, thought leaders, academics and entrepreneurs at the Wharton School of Business in a discussion about the latest developments and trends in the MENA region, in fields ranging from energy to entrepreneurship, real estate, and healthcare.

### 3 – INVESTING IN OUR STUDENTS

AKSOB this past year continued its tradition of bringing the expertise of real-world entrepreneurs to LAU students in order to provide them with a holistic professional education. As before, we hosted the Business Summit lecture series, bringing numerous top business and industry leaders to the Beirut and Byblos campuses to share their knowledge with students who may one day join their firms. Meanwhile, the school continued to offer our students the opportunity to attend courses at LAU NY offered by top professors from leading U.S. institutions.

Within AKSOB, various structured environments are geared toward fostering student development. At the Cooperative Learning Center (CLC), undergraduates are tutored by experienced M.B.A. graduate assistants and attend workshops designed to increase their employability. The Business Computer Lab continually trains students in the use of the latest software required for their courses and in real-world situations.

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This investment in our students is clearly paying off. Indeed, AKSOB's transformation into a leading regional business school has no greater proof than the stellar achievements of our students even prior to graduation. Examples are many, of which we present a few highlights.

In June 9, 2016, five teams from the Department of Management Studies "Strategic Planning" course ranked in the highest decile of a simulation by Capsim (a global leader in business simulation technology), beating thousands of other teams from around the world.

AKSOB finance and accounting students competed in an inter-university finance competition in April 20, 2016 at Notre Dame University (Louaize), taking third place.

*"This was more than just a class project as we were given training and a qualification."*

*Anas Ghattas, marketing and hospitality senior*

Students enrolled in AKSOB's Integrated Marketing Communications course took part in the "Unleash Your Creativity" competition launched by the Fernand Hosri Group over the summer of 2016, bringing home the Building Capacity Award instituted by the Ministry of Labor.

**AKSOB's hospitality management students organize a five-star dinner for the AACSB Peer Review Team in March 2016.**



**AKSOB student Cecilia Bouri collected the first prize in a food competition organized by Le Councours des Ecoles Hôtelières in June 2016.**

AKSOB has developed a program jointly with the university's Outreach and Civic Engagement Department, whereby civic engagement is successfully integrated into the curriculum of the B.Sc. in business studies program. Civic engagement is now a core requirement of the program, allowing students to bond intellectually and emotionally with their community through guided volunteering activities, and preparing them to graduate as socially responsible citizens. Over the 2015-16 academic year, 630 AKSOB students participated in civic engagement activities, between them logging nearly 9,400 hours of volunteering in various NGO sectors.

## D. The School of Engineering

Our School of Engineering's (SOE) core values — integrity and transparency, academic excellence, inclusiveness and diversity, environmental stewardship, and effective leadership — permeated every aspect of the school's life over the past academic year.

### 1 – ACADEMICS

SOE continues to develop programs preparing new generations of engineering leaders to address complex and emerging challenges.

- **New program offerings**

In the fall of 2015, the Department of Civil Engineering launched a minor in construction management.

In an effort to continually improve SOE's academic profile, we are converting ever more courses for online delivery across departments. Meanwhile, the Department of Civil Engineering added a set of new topics to its list of Final Year Projects, exposing students to the design requirements and challenges of large infrastructure projects.

- **Maintaining ABET Accreditation**

SOE is well on the way to achieving re-accreditation by the Accreditation Board for Engineering and Technology (ABET) for its electrical, computer, civil, mechanical and industrial engineering programs, having submitted five self-study reports to ABET's Engineering Accreditation Commission.

- **International Partnerships**

The School of Engineering is proud of its ever-expanding exchange agreements with internationally renowned universities and corporations, providing our students with scholarly exchange and internship opportunities.

Among many other examples, in 2015-2016 we partnered with the Dubai Contracting Company (DCC) to create an elective course in construction engineering practice, featuring site visits and guest lectures by experienced DCC industry experts.

- **Giving Education a Chance**

The best educational programs in the world are worth nothing if deserving students cannot attend them due to financial constraints. SOE, in partnership with LAU's University Development team, launched this academic year the Engineering Students' Emergency Relief Campaign, with the goal of raising \$250,000 for the Engineering Dean's Fund. The campaign exceeded the target, allowing the school to respond to urgent situations and dispense funds to our needy students in a timely manner, permitting them to study without concern for financial constraints (see the Development section of this report).

Applications to SOE continue to skyrocket. This year the demand for our programs grew by 14.6 percent, with a record-breaking number of 920 applicants. Our graduation rates are reaching record highs as well: in 2016, we granted 184 bachelor's of engineering degrees, an increase of 8.4 percent over the previous year.

# OUR SCHOOLS: VIBRANT GROWTH

## 2 – RESEARCH AND THE TRANSFORMATION OF SOCIETY

### • Projects

As ever, SOE's researchers continue to do outstanding work dealing directly with some of the world's most significant challenges.

In AY 2015–2016, faculty in the school of engineering published 37 journal papers, 12 conference papers and gave numerous presentations at local and international professional events.

While individual research projects are always important, we at SOE stand by the principle that collaborative research has extra added value and, as such, we are particularly proud of the increasing number of school researchers involved in collaborative projects with colleagues outside LAU. Such projects involve partners from both Lebanese and international universities, including the University of Texas, Austin, the American University of Beirut, and Wishard Health Services, among others.

Research does not occur in a vacuum and requires significant financial outlays. Recognizing the importance of financial support for its faculty's and students' endeavors, the SOE increased research funding from \$164,000 in the academic year 2014-2015 to \$225,000 this year. Moreover, our faculty has been highly successful in attracting outside resources, as international and local funders increasingly recognize the social impact of SOE-based research. A few examples include:

Faculty	Faculty	Project Title	Amount
Department of Civil Engineering	PEER	"Landscape Risk Mapping For Lebanon"	\$76,000
Department of Electrical and Computer Engineering	CNRS and SOERC	"Similarity-based Data Search and Exploration on the Semantic Web: Applied on Biomedical and Health Data"	16,000,000 LBP and \$5,000
Department of Industrial and Mechanical Engineering	PSA Groupe	"Design of a Tool for the Energy Management Optimization of PSA Hybrid Electric Vehicles Considering Engine Start and Gearshift Costs"	10,350 Euros

### • Institutes

In an effort to enrich the minds of students and enhance their employment opportunities, the School of Engineering this past year revitalized its affiliated CISCO institute, a globally-connected IT skills and career-building program. The technical programs offered by CISCO complement the school's regular curricula. During the 2015-2016 academic year, 37 students received Cisco Certified Network Associate (CCNA) I certification, while 12 others received the more advanced CCNA II certification.

## 3 – STUDENT LIFE

### • Research and Outreach

Students enrolled in LAU's engineering programs find themselves engaging in cutting-edge research alongside their faculty mentors, with the results of their work finding its way increasingly

into academic journal articles. They also compete successfully in local and international events, winning prestigious awards for their designs and ideas. And of course, in the spirit of LAU's mission to engage with the community, they volunteer in various activities aimed at bettering society around us, both individually and through student clubs. Here are only a few out of many possible examples of these activities in 2015-2016:

Three student projects were awarded funds by the Lebanese Industrial Research Achievements Program.

- "Search and Rescue Fire Fighting Robot" - Department of industrial and mechanical engineering. Students: Eddy El Khoury, Jean Pierre Chebat, and Ephrem El Chemaly.
- "Deep Learning Waste Sorting Machine" - Department of industrial and mechanical engineering in collaboration with Phoenix Machinery. Students: Mohammad Hammad, Amani Saleh, Mahmoud Abassi, and Jad Abdo.
- "Smart Exoskeleton for Paralyzed Persons" - Department of industrial and mechanical engineering in collaboration with Phoenix Machinery. Students: Mohammad Houmani, Abdulrahman Abu Ammu, and Ahmad Tabbara.

*"Research experience teaches you to ask yourself the right questions."*

Hussein Bassma, senior in the Department of Industrial and Mechanical Engineering in 2016, worked on a research project formulating a new hybrid vehicle that consumes 20 percent less fuel than hybrids currently on the market. The department prioritizes student collaboration with faculty members, providing such opportunities to seniors with a minimum GPA of 3.0.



The American Society of Civil Engineers (ASCE) student chapter — which was awarded the prize for the most active student club at LAU — organized lectures, field trips, seminars, and an annual retreat over the year, among other activities.

A team of students from LAU participated in "Girls Got IT," a workshop bringing together 400 girls from public and private schools for a full day of hands-on activities in the STEAM fields, organized by computer engineering alumna Fatima Hamdan.



SOE has its own Career and Placement Office, which supports our students in finding both internships and matching their skills with potential employers. In 2016, 98 percent of our graduates were employed or pursuing postgraduate degrees within one year of graduation.

#### 4 – FACILITIES UPGRADES

The SOE received \$475,000 as part of a larger grant awarded to LAU from American Schools and Hospitals Abroad (ASHA) in 2015. The funds have been used toward the purchase of a traffic driving simulator, an X-ray diffraction system, electrical measurement tools (digital multimeters), and a smart grid workbench.

# OUR SCHOOLS: VIBRANT GROWTH

## E. The Health Sciences Schools

LAU's three schools devoted to the health sciences — the Gilbert and Rose-Marie Chagoury School of Medicine (SOM), the Alice Ramez Chagoury School of Nursing (ARCSON), and the School of Pharmacy — boast state-of-the-art research and training facilities. Together, the schools position LAU as an emerging leader in health sciences education, practice and research.

### 1 - ACADEMICS

#### • Expanding the Frontiers of Learning

In January 2016 the SOM, via the state-of-the-art Clinical Simulation Center (CSC), inaugurated a Clinical Simulation Diploma in collaboration with the University of Illinois, Chicago. LAU is the first institution in the MENA region to provide such academic certification in simulation-based education.

The School of Medicine added two residency programs this year, in emergency and family medicine, bringing the total number of residencies to 15, with a total number of residents to 88. This year, the school also boasts a very competitive entry class, having been joined by 55 new students with the highest GPA average and MCAT scores since SOM's founding.

The School of Pharmacy has finalized the program for an M.Sc. in pharmaceutical sciences with a specialty in pharmaceutical development and management. It is pending approval of the Ministry of Education and Higher Education and the New York State Education Department. Meanwhile, ARCSON continued progress toward the launching of a new master's degree program.

At the School of Nursing, 20 percent of the offered clinical courses include clinical simulation as part of the teaching and learning experience.

Our university is the only institution of higher learning in Lebanon to run a program in social medicine, teaching our students to care for the whole person, not just the disease. Recognizing that social status influences the development of disease, the program sends students to refugee camps and other non-privileged areas and dispensaries in Lebanon for hands-on experience in this field.

#### • Interdisciplinary Education

Research has shown that collaborative practice contributes to safer and more cost-effective, patient-centered care. In recognition of this, Interprofessional Education (IPE) forms a mandatory component of LAU's curricula in medicine, nursing, pharmacy, nutrition, and social work. LAU's pioneering, student-oriented IPE program is based on "Steps": a progressive series of case-study workshops that build communication and teamwork skills. In the spring of 2016, a new initiative called Practice IPE was launched to bring learning activities out of the classroom. Teams of students led by full-time faculty members conduct community awareness campaigns, interprofessional simulations in the CSC, and interdisciplinary presentations of real-life patient scenarios at the LAU Medical Center-Rizk Hospital (LAUMC-RH).



#### IPE in the classroom

- **Partnerships and Affiliations**

The health sciences schools continue to expand their list of affiliations with other universities, hospitals and similar institutions in Lebanon, the region and internationally, all with the goal of providing our students and faculty with learning and career opportunities second to none.

The SOP has signed agreements for academic collaboration with teaching hospitals in Lebanon, namely St. Georges Hospital Medical Center, Keserwan Medical Center, and the Lebanese Hospital-Geitaoui, providing students with new sites for experiential education. The school also added opportunities for its students to gain hands-on training at community pharmacies and the pharmaceutical distributor MERSACO, and has reached a new research collaboration agreement with the Cleveland Clinic Foundation.

In 2016, the School of Pharmacy renewed its partnership agreement with Houston Methodist Hospital. Our Pharm.D. students have the opportunity to train twice at the Texas institution, which was ranked the no. 19 hospital in the United States (out of 4,667) and no. 1 in the state of Texas.

We are proud to report that the School of Medicine has established its affiliation with the Rafik Hariri University Hospital, providing key training opportunities for both our students and residents. In addition, the SOM has signed an agreement with Charité University in Berlin that envisions collaboration to map the medical curriculum, the only Lebanese medical school to do so. ARCSO, for its part, has renewed its affiliation this year with numerous institutions – including the Clemenceau Medical Center, AUB Medical Center, and the Bekhazi Medical Group, among others – providing our nursing students with the opportunity to practice at a variety of clinical sites.

LAU's partnership with the Makhzoumi Foundation continues to expand, and now allows students from both the School of Medicine and School of Pharmacy to pursue hands-on training in offering services to the community at the Foundation's facilities.

# OUR SCHOOLS: VIBRANT GROWTH

*"I have completed other rotations, but this is the first one that has brought me in contact with people from a different socio-economic level. This will help me grow in my community."*

*Samar Hayek, Pharm.D. student*

## 2 – LEADING THE WAY IN ADVANCING HEALTHCARE KNOWLEDGE

In addition to publishing their research in peer-reviewed journals, faculty from LAU's three health sciences schools engage deeply with the medical community both in Lebanon and abroad, based on the conviction that knowledge-sharing is the key to the development of healthcare professions.

LAU has become known throughout Lebanon for showcasing international conferences on frontline health-related issues. For example, in November 2015, SOM hosted for the second time an International Conference on Medical Education, bringing together several hundred participants from all of Lebanon's medical schools and from regional institutions to discuss the move toward evidence-based teaching practices. A third conference, this time on the role of simulation in patient care, is planned for the next academic year.

In the same spirit, April 2016 saw 150 healthcare professionals gather in Beirut under the auspices of LAU's Interprofessional Education program for a conference dedicated to the benefits

of interprofessional collaboration, an event that also included a full day of hands-on workshops at the Clinical Simulation Center in Byblos.



**In May 2016, LAU signed a memorandum of understanding with the Al Hamidi Charity Medical Center in Tripoli, aimed at promoting collaborative research projects and strengthening the local community.**

Our faculty has the full support of the schools in their professional endeavors. For instance, the SOP sponsored this past year a series of seminars and workshops on topics related to pedagogy, research and practice, all aimed at strengthening the faculty's competencies. All three schools provide faculty with funds for research and professional development.

## 3 – OUR STUDENTS: BRILLIANTLY ENGAGED

### • Academic Successes

More and more, our health sciences schools are being recognized as leaders in the medical, pharmacy and nursing fields, demonstrated by the rising number of applications to our programs. As an example, applications to the nursing school have nearly doubled since ARCSON opened its doors a mere six years ago. ARCSON attracts a high rate of male applicants, which is unusual in the profession and a clear sign that a degree from the school is viewed as a roadmap to professional success.

All three schools are committed to providing our students with exceptional opportunities to practice their skills prior to graduation. The many options include but are certainly not limited

to practice with community pharmacies, on-site practice in several hospitals across Lebanon as well as at our own LAUMC-RH at pharmaceutical industries, and various training and certification activities. Just to take one example, the graduating 2015-16 Pharm.D. class received training and certification in Basic Life Support from the American Heart Association, as well as a Pharmacist Immunization Certification from the American Pharmacists Association.

Pharm. D. students receiving their academic hoods.



This past year, senior SOM student Mohammad Hassan Nouredine published a book on neuroscience suitable for academic teaching with Elsevier, a world-leading provider of scientific, technical and medical information products and services.

Eleven of the 12 students graduating from the School of Medicine this past year obtained medical residencies at the institutions of their choice, and were matched in competitive disciplines such as internal medicine, family medicine, neurology, obstetrics and gynecology with John Hopkins, Beth Israel, Tufts, and Mayo Clinic, among other institutions. They were joined by seven SOP graduates who obtained general and specialized pharmacy residencies in American post-graduate settings. Moreover, all nursing graduates passed the colloquium with 100 percent pass rate.

#### • Serving the Community

Fully embracing LAU's mission to serve the society around us, students from the health sciences school can be found volunteering throughout the country. Here are only a few highlights:

The School of Pharmacy's professional societies were, as always, highly active, conducting lung cancer and drug awareness campaigns, a blood drive, a fair for orphans, and participating in mobile Clinics, among many other initiatives.

In September 2015, ARCSO brought their time and expertise to Byblos, organizing a health fair aimed at raising awareness about topics such as hypertension, diabetes, breast cancer, a healthy diet, healthy lifestyles, and the importance of regular checkups. ARCSO students also conducted home visits in the Jdeideh area, where they were able to assess people in their homes and raise awareness about different health related topics, according to individual needs.

## OUR SCHOOLS: VIBRANT GROWTH



In February, students from the Pharm.D. program worked with the Makhzoumi Foundation in Beirut to bring information about vaccination to Syrian refugee children, as part of a series of awareness workshops focusing on various healthcare related themes.

#### 4 - THE CLINICAL SIMULATION CENTER

All three health sciences schools work closely with the university's Clinical Simulation Center (CSC) to provide its own students and working professionals in Lebanon and the region with unparalleled opportunities to develop and refine their skills in a safe and realistic environment.

In 2016, the CSC celebrated its 6th year and welcomed its 6,515th learner.

The CSC is certified as an American Heart Association (AHA) International Training Center, offering LAU students and the wider community a variety of courses in subjects such as Basic Life Support, Advanced Cardiac Life Support and Heart Saver.

The CSC also serves the community, offering skills-enhancing workshops with Lebanese and international partners. Most recently, the center utilized funds from ASHA (American Schools and Hospitals Abroad) to acquire a complete pediatric setting, allowing LAU and other Lebanese and Arab healthcare providers to obtain simulation training to upgrade the level of pediatric medicine.

The CSC is on track to achieve accreditation from the Royal College of Physicians and Surgeons in Canada.

#### Simulation Center workshops



EMPODAT and certification workshops

In December 2015, the Center received a certificate of appreciation from the regional AHA Office for its role in increasing awareness about life support initiatives in the community.

## 5 – STATE-OF-THE-ART HOSPITAL LEARNING ENVIRONMENT

In order to meet the highest standards of the hospital industry, LAUMC-RH is undergoing a meticulous administrative restructuring that will serve a new five-year strategic plan harmonized with the School of Medicine.

Our mission is centered on the benefit of the patient while providing our students with stellar opportunities to practice their craft. Over the past year, the hospital's facilities have been improved noticeably in a number of areas, including but not limited to upgrades to the laboratories, physiotherapy treatment areas, operating rooms, the ER, and the ICU. The hospital also acquired a new urodynamics unit, and a complete sleep lab, and has invested in equipment that can be used by medical students taking courses in endocrinology, nephrology, and urology.

Meeting the academic requirements of the university complements the goal of meeting the clinical needs of the hospital. LAUMC-RH continues to strengthen its centers of excellence in fields ranging from orthopedics to cardiovascular diseases, hemato-oncology, nephrology, kidney diseases and ophthalmology, among others.

The SOP supports clinical faculty services at the hospital, in a model of interprofessional collaborative care unique to Lebanon.

For us, patients are human beings, not mere cases or numbers. Throughout, the students, residents, physicians, nurses and the staff of the hospital are trained in a consciously patient-centered approach, one that takes into account the needs of our community.

Plans are afoot at the LAU Medical Center-Rizk Hospital to start offering OPD services at the ophthalmology department, whereby our professionals will be offering reduced-price ophthalmology exams to the community at large.

