



FAFS — ANNUAL REPORT

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American University of Beirut
Faculty of Agricultural and Food Sciences

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I. Executive Summary

Dear FAFS Family and Friends,

The academic year of 2018-2019 marked a year of eminence and outstanding achievements for FAFS. During this period, FAFS engaged in a dynamic strategic planning process and completed its FAFS 2025 strategic plan. The pillars of FAFS 2025 are: interdisciplinary research, expanded learning portfolio, and multi-tiered engagement strategy. The Faculty was heavily engaged in research (\$3,183,520), learning, and outreach activities. FAFS is also expanding its current offerings to include experiential service-learning through introducing a Capstone Course. This experience will integrate knowledge across the curriculum, and include analysis of practical problems, project feasibility, design philosophy, teamwork, communication, economics, product liability, and reliability.

At the administrative level, Formal input and feedback from FAFS' departments, Strategic Plan committee members, and faculty members, whether through individual member input, surveys, faculty meetings, or the formal retreat held in October 2018, helped shape the faculty's new **Strategic Plan FAFS 2025**. The plan fosters excellence in teaching and research and synergy in the development of new and existing programs to produce graduates who become leaders and agents of change in the society. FAFS 2025 has two tiers for implementation: TIER 1) *Excellence in Learning, Discovery, and Engagement*; and TIER 2) *Impacting and Synergizing FAFS-Related Sectors through Partnership*. Under Tier 1, six goals were identified, including: 1) *integrated research in support of water, food, energy, and health securities*; 2) *delivering outstanding student experiences*; 3) *increased undergraduate enrollment in all programs, especially in agriculture*; 4) *establishing AREC masterplan across the university for research, education, and outreach*; 5) *effective engagement with communities and stakeholders in Lebanon and the region*; and 6) *advance faculty and staff*. FAFS 2025 six goals align to AUB's VITAL and are critical to the transformation of FAFS programs, partnerships and activities for the coming five years.

Throughout AY 2018-19, FAFS rigorously worked on the development and initiation of a three-tier **Student Recruitment Plan** to increase enrollment at the faculty. The plan consists of a revitalized marketing campaign, a communication plan with social media activities, mailers, and emails to prospects, securing additional scholarships as well as targeted school visits in coordination with AUB Office of Admissions. In addition, a **Fundraising Strategy** was devised, the pillars of which included fundraising for 1) FAFS specific scholarships, which culminated in the development of the Scholars of Agriculture, Food and the Environment (**SAFE**) with the approval of the upper administration. SAFE scholarships are merit ones that aim at providing a maximum of 50% coverage from FAFS, through FAFS named scholarships, while the rest, i.e. maximum of 50%, is secured from AUB's financial aid system. The other pillars were fundraising activities related to 2) AREC facilities for upgrading its infrastructure, 3) Engagement activities at AREC and the main campus, and 4) Naming opportunities for facilities, endowed Chairs, centers and lectureship series.

During this year, FAFS played a leading role in spearheading partnerships across AUB faculties/units and establishing new ones across Campus. Such efforts included establishing the AUB-AREC Taskforce (**AAT**) that developed an updated Master Plan for AREC as a center that serves the whole university, the **Colistin project**, leading the Water-Energy-Food-Health Renewable Resources (**WEFRAH**) initiative, leading the **Transforming Higher Education project** and forming a Transformative Education Taskforce comprising deans of faculties (MSFEA, HSON, FHS, and FAFS), and directors of centers (CCECS, CTL, and OGC) to leverage the momentum created by the project and work together on transforming the higher education at AUB, as well as leading AUB's Sustainable Development Goals (**SDG**) Initiative.

FAFS **Communication Plan** was updated during this period and it included communicating all news and updates with FAFS community and stakeholders through a monthly newsletter "FAFS Dean's Updates" to keep them up to date with the latest activities, initiatives, and achievements at the faculty. In addition, FAFS social media presence became noticeably stronger in relation to number and quality of posts as well as to number of social media channels.

The role of the FAFS External Advisory Board (**EAB**) was re-vitalized and EAB members were re-engaged whereby an EAB Strategy was developed to contribute in increasing FAFS' outreach activities and connections with local, regional, and international stakeholders, as well as emphasizing experiential learning and entrepreneurial educational experiences in FAFS programs.

Last but not least, many FAFS facilities were renovated, revamped, finalized and planned during AY 2018/2019 including but not limited to computer lab, Geographic Information System (**GIS**) lab, Soil Characterization lab, seminar room, ASHA funded **Food Safety labs** (on campus and at AREC), Iodine Lab, Animal Physiology and Pathology Lab, the greenhouse area, as well as the first clean technologies innovation unit, the green-energy poultry house, established at AREC.

At the academic level, The BoT in its meeting held on March 15, 2019, approved the revised BS in Agriculture Program which meets the Accreditation Board for Engineering and Technology (**ABET**) requirements for accreditation. The Bachelor of Landscape Architecture (**BLA**) program also secured re-confirmation and registration at NYSED in March 2019. The BLA program has commenced the process of applying to accreditation by ASLA/LAAB (Landscape Architecture Accreditation Board). Moreover, the Nutrition and Food Science (**NFSC**) Department secured NYSED registration for the new Food Science and Technology (**FSTC**) undergraduate degree. The formal launch of the program is expected once the Lebanese Ministry of Education and Higher Education (**MEHE**) registration is finalized. In addition, the Food Security Program (**FSP**) continued its review and re-design of the graduate-level diploma in food security and its conversion from a traditional delivery method to an online one tailored to the needs of active professionals based in the MENA region and beyond. The Capstone Course was developed at FAFS based on the Global Design Team (**GDT**) model, which focuses on high-impact, interdisciplinary, hands-on, and global service-learning student experiences.

As part of AUB's ongoing process of reaccreditation, Dr. John DiNardo, Chair of the evaluation team from the Middle States Commission on Higher Education (**MSCHE**), visited AREC on October

12 to review the multidisciplinary research conducted, proposed future plans, as well as AREC's significance and use by AUB faculties.

In line with FAFS 2025, during this period, FAFS accomplished hiring of three new faculty members: Drs. Sandra Yanni (Agroecology/Soil/Water), Walid El Kayal (Horticulture) and Kassahun Wondim (Animal Health and Nutrition) at the Department of Agriculture.

At the research level, a FAFS Research Support Unit was created and mandated with an agenda to provide support in identifying funding opportunities and facilitating local and external research partnerships and development of proposals. Faculty members remained substantially engaged in a range of applied and theoretical research activities. Notably, several FAFS faculty members were involved in many outreach and societal impact activities during AY 2018-2019. During this period, FAFS received a total of \$3,183,520 in local, regional, and external funding and an agreement was signed between AUB and Food and Agriculture Organization (**FAO**) for a Pilot Study on the Evapotranspiration, and Trade-offs in the Water-Energy Food Nexus in Bekaa Valley in Lebanon.

During the calendar year 2018, a total of 71 papers were published in international refereed journals by FAFS faculty members: 10 by the Dean, 43 in NFSC (8 FM), 14 in AGRI (7 FM), 3 in LDEM (2 FM) and 1 in RCOD (1 FM).

Under FAFS Lecture Series, FAFS had twenty one (21) invited speakers and conducted seven (7) panel/launch events including the IFPRI 2019 Global Food Policy Report: Revitalizing Rural Areas in Lebanon.

Academic recognition was granted to several faculty members for their noteworthy contributions to advances in scientific research. In addition, students were also recognized (LDEM students won the Ladybug Hotel Design Competition by the AUB Botanic Garden).

At the engagement level, FAFS Environment and Sustainable Development Unit (**ESDU**) with its long standing engagement in sustainable development continues to support local and marginalized communities, rural women, youth and refugees through building their capacities on sustainable agricultural practices and empowering local and small-scale agro-food processors and engaging them through its marketing network and its farmers' markets "Souk aal Souk".

In addition, during this period FAFS continued with its expansion at the various levels of local, regional and international partnerships (total of 16) and collaborations to promote faculty and student exchange, provide excellence in education and participate in the advancement of knowledge through research and outreach. Moreover, this year witnessed the birth of the "**Mashreq Digital Transformation of the Agricultural Sector**" initiative: a project in partnership with World Bank (**WB**), **FAO**, **ESCWA**, and Center for Mediterranean Integration (**CMI**) to revitalize the agriculture sector in Lebanon, Jordan and Iraq through the use of digital technologies.

The remaining of this document is a detailed account of what made AY 2018-19 such a successful one for FAFS. I would like to thank all FAFS faculty and staff for their continued efforts and hard

work, which resulted in advances at the academic, administrative, research, and engagement levels. Finally, I also thank FAFS' large family of alumni and friends as none of this would have been possible without their continued support.

Rabi H. Mohtar
Professor and Dean

II. Office of the Dean

A. Non-Academic Personnel

Thirteen non-academic employees serve the Dean's office (Table1):

Table 1: Non-Academic Personnel

Name	Title
Alameddine, Alia	Career Services Officer
Chediac, Rola	Communications Officer
El Ashi, Dania	System Administrator
El Labban, Sibelle	Executive Assistant for Research Services
Haddad, Tharwat	Students Record Officer
Haidar, Imad	Junior Clerk
Houri, Laila	Financial and Facilities Officer
Khoury, Wafa	Executive Officer
Koubayssi, Rabia	Assistant for Student Services
Nakib, Nisrine	Administrative Officer
Nabhani, Maya	Director of Continuous Academic Improvement
Shaib, Houssam	Laboratory Manager
Shamseddine, Alhan	Assistant to the Dean

B. Standing Committees

1. The Administrative Committee

Prepared by: Ms. Laila Houry, Financial and Facilities Officer

Membership:

Rabi Mohtar, Chairperson
 Laila Houry, Secretary
 Wafa Khoury, Ex-Officio
 Maya Nabhani, Ex-Officio
 Ammar Olabi, Ex-Officio
 Issam Bashour
 Mustapha Haidar
 Imad Toufeili
 Rami Zurayk

Actions:

- Approved Capital Budget Requests for 2019-2020.
- Approved relocating the Weeds Lab to AREC.
- Approved limiting research publications fees for faculty members funded by the operating budget to \$3,000.

- Approved setting the Iodine Lab in the pilot plant.

Recommendations:

- Recommended not renewing for the Nestle Toll House under its current administration.
- Recommended a stricter mentioning and evaluation process for junior faculty.
- Recommended relaunching creamery operations at AREC under proper management.
- Recommended the appointment of a student recruitment consultant.
- Recommended PhD Stipend Coverage be limited to 4 years instead of 5.
- Recommended the appointment of Dr. Mounif Nasrallah as an associate to the faculty.
- Recommended leave with pay be voted upon in face to face meetings and not through circulars.

2. The Advisory Committee

Prepared by: Ms. Wafa Khoury, Executive Officer

Membership:

Rabi Mohtar, Chairperson
Youssef Abou Jawdeh
Mohamad Farran
Omar Obeid
Ammar Olabi
Salma Talhouk
Imad Toufeili
Rami Zurayk

Actions:

- Approved the appointment of new Chairperson for the NFSC department effective September 1, 2019.
- Approved the appointment of BLA Coordinator effective Fall 2018/2019.
- Approved the appointment of members on the Faculty External Advisory Board (EAB).
- Approved appointment of new Assistant/Associate Professors at the Departments of AGRI, NFSC and LDEM.
- Approved departmental recommendations for appointment of part-time instructors and lecturers during fall, spring, summer terms.
- Approved departmental recommendations for renewal of appointments of full time instructors and lecturers.
- Approved multiple summer contracts for faculty across different departments.
- Approved special leave with pay, short term development grants, and periodic paid research leaves.
- Approved the visit of Visiting URB Scholars to FAFS for the spring semester 2019.
- Approved one request for leave without pay for AY 2019/2020.

3. The Academic and Curriculum Studies Committee (ACC)

Prepared by: Ms. Tharwat Haddad, Students Record Officer

Membership

Ammar Olabi, Chairperson

Yaser Abunnasr

Isam Bashour

Mohamad Farran, Coordinator of Undergraduate Studies

Samer Kharroubi

Imad Toufeili

Rami Zurayk

Maya Nabhani Zeidan, Director of Continuous Academic Improvement

Registrar's Representative

Student Representative

Rabia Koubayssi, Secretary

Actions

- Course offerings and introduction of new courses
The Committee reviewed and approved the lists of course offerings submitted by the respective departments for spring 2018-19, summer 2018-19 and fall 2019-20. Also, the committee approved the following new course in Agriculture:
 - AGSC 303 "An Introduction to the Lebanese Economy" (3 cr.)
- Eligible students to go to AREC
Seventeen students from the Agriculture program were deemed eligible by the ACC to go to AREC during the spring semester of 2018-19.
- Academic status
Based on AUB probation rules and regulations, the Committee placed seven students on strict probation whereas one was removed from probation
- Approval of New Master of Landscape Architecture (MLA).
- Freshman courses for Agribusiness
Agribusiness students are not required to take CHEM 101, CHEM 101L, CHEM 102 and CHEM 102L during their freshman year unless those graduates would like to enroll in a 2nd BS in Agriculture.
- Awarding BS degrees
The Committee recommended to the Faculty to award BS degrees to 124 students distributed as follows: 29 in Nutrition and Dietetics, 9 in Nutrition and Dietetics – Coordinated Program, 25 in Food Science and Management, 21 in Landscape Architecture and Diploma of Ingenieur Agricole, 22 in Agriculture and Diploma of Ingenieur Agricole, and 18 in Agribusiness.

4. The Undergraduate Admissions Committee (UAC)

Prepared by: Ms. Tharwat Haddad, Student Records Officer

Membership:

Ammar Olabi, Chairperson

Isam Bashour (Faculty representative on University Admissions Committee)

Ali Chalak

Samer Kharroubi

Nayla Al-Akl

Admission's Representative

Registrar's Representative

Student Representative

Tharwat Haddad, Secretary

Actions:

The Committee held two meetings during the academic year 2018-2019 and took the following actions:

- Acceptance of Transfer Students: The committee accepted a total of 87 transfer students from within AUB as well as from other universities:
 - During the Spring semester 2018-2019, a total of 21 transfer students were accepted 11 of which have registered.
 - For the Fall semester 2019-2020, a total of 66 transfer students were accepted 21 of which have registered.
- Enrollment Target and Strategy: The committee voted to approve the departmental chairs' recommendations on composite scores and enrolment targets for the academic year 2019-2020:

Table 2

	AGRI	AGBU	LDAR	FSMT	NTDT
Number of new incoming fall 2019 undergraduate students the Faculty can accommodate in various majors	25	25	25	35	40
Number of undergraduate transfers (from within / from outside AUB)	10	10	10	15	15
Total number of undergraduate students that the Faculty can admit in various majors during the fall and spring 2019-2020	35	35	35*	50	55
Minimum cumulative average for transfer students	70	70	75	72	76.5

* The cut-off composite scores that LDEM Department would like to adopt for new sophomore acceptances: between 540 and 525 (a portfolio is required for students with composite score between 525-530).

5. The Graduate Studies Committee (GSC)

Prepared by: Ms. Tharwat Haddad, Students Record Officer

Membership:

Ammar Olabi, Chairperson

Isam Bashour (Coordinator for Graduate Studies)

Lara Nasreddine

Hadi Jaafar

Martin Keulertz

Maya Nabhani Zeidan, Director of Continuous Academic Improvement

Admission's Representative

Registrar's Representative

Student Representative

Rabia Koubayssi (Secretary)

Actions:

- Program of study and thesis titles
The Committee reviewed and approved the program of study and thesis titles for 30 students.
- Acceptance of graduate students
The Committee accepted 192 students out of 335 applicants. Of the accepted candidates, 43 students enrolled as follows: 5 Nutrition; 7 Food Technology; 5 Food Safety; 1 Animal Science, 1 Agricultural Economics, 1 Plant Protection; 2 Irrigation; 8 Food Security; 7 Ecosystem Management, 5 Rural Community Development, 1 Public Health Nutrition.
- Awarding the MS degree
The Committee recommended awarding the MS degree to 32 students in their respective majors: 11 in Nutrition, 6 in Food Technology, 1 in Agricultural Economics, 1 in Irrigation, 2 in Plant Protection, 1 in Poultry Science, 1 in Ecosystem Management, 7 in Food Security and 2 in RCOD.
- Approval of New Master of Landscape Architecture (MLA).

6. The Faculty Research Committee (FRC)

Prepared by: Dr. Hadi Jaafar, Chair of FRC

Membership:

Dr. Hadi Jaafar, Chairperson, Faculty Representative on the University Research Board

Dr. Giuliano Martiniello

Dr. Omar Obeid

Dr. Salma Talhouk

Actions:

During the academic year 2018-2019, the Faculty Research Committee (FRC) held several meetings during which it took a number of actions

- Approval of faculty research leave requests in August 2019:
 - Dr. Shady Hamade for the Spring 2020 semester

- Taking note of several external proposals approved by the FRC Chairperson and forwarded to the Dean for required processing and submission.
- Reviewing the corresponding year FAFS research proposals and submitting recommendations to the Dean. FRC has received and approved five applications for renewals of proposals (three applications from AGRI Department, one application from LDEM, and one from NFSC). Furthermore, the committee reviewed, ranked, and approved the funding of fourteen new proposals (10 from NFSC, 3 from AGRI, and 1 from LDEM).

7. The Student Affairs Committee (SAC)

Prepared by: Dr. Mohamad G. Abiad, Chairperson

Membership:

Mohamad G. Abiad, Chairperson

Mustafa Haidar

Lamis Jomaa

Ismat Kassem

Maria Gabriella Trovato

Student Affairs Representative

Student Representative

Tharwat Haddad, Secretary

Actions:

The Committee met twice during the Academic year 2018 –2019. There were no disciplinary actions during this academic year. On the other hand, the Committee members discussed FAFS awards and acted on the following items:

- FAFS Awards:

The Committee recommended the following students to receive FAFS awards:

- **Joana Haidar Award:** The Committee recommended to FAFS Dean and Faculty granting **Ms. Joy Attallah** the Joana Haidar award.
- **Edgcombe Memorial Prize:** The Committee recommended to FAFS Dean and Faculty granting **Mr. Jad Kaj** the Edgcombe Memorial Prize.
- **Kashadurian Award:** The committee recommended to FAFS Dean and Faculty granting **Mr. Abdul Razaak Doughan** the Kashadurian award.
- **The Dr. Musa Najib Nimah Endowed Award for Academic Excellence:** The committee recommended to FAFS Dean and Faculty granting **Ms. Rhea Khoury Helou** Dr. Musa Najib Nimah Endowed Award for Academic Excellence.
- **The Nehme Moujaess Student Award in Landscape Architecture:** The committee endorsed the recommendation of the Chair of the LDEM department granting **Ms. Tara Kanj** the Nehme Moujaess Student Award in Landscape Architecture.
- **Abdul Hadi Debs Award:** The committee recommended to FAFS Dean and Faculty granting **Ms. Nivin Nasser** the Abdul Hadi Debs Endowment Award.

- **Dean Thomas Thuserland Prize for Graduate Excellence:** The committee recommended to FAFS Dean and Faculty granting **Ms. Lara EL-Gemayel** the Dean Thomas Sutherland Prize.
- **The Dean Nuhad Dagher FAFS Graduate Student Award:** The committee recommended to FAFS Dean and Faculty granting **Mr. Majd Kais**, Poultry Science, the Dean Nuhad Dagher FAFS Graduate Student Award.
- **Penrose Award:** The committee voted to endorse these nominations and recommend to the Dean and FAFS faculty the four nominees (**Ms. Daou, Ms. Ghamloush, Mr. Omar Bahlawan, and Ms. Tara Kanj**) for the Penrose Award to present during the Faculty meeting so that faculty members evaluate and vote for one recipient.
- **FAFS Alumni and Friends Award for Academic Excellence:** New Annual award granted to a graduating student at the undergraduate level. The awardee's gender and discipline is to be decided upon on an annual basis by the donor. The awardee must be in the top 20% of his/her discipline and be engaged and/or demonstrate extra-curricular involvement, leadership, entrepreneurship and teamwork skills. For this year, the donor requested the awardee to be a female Nutrition and Dietetics Student. The committee recommended to FAFS Dean and Faculty granting **Ms. Zahraa Hourany** the FAFS Alumni and Friends Award for Academic Excellence.
- **Outstanding Contribution Award to the Wellbeing of the Faculty:** New Award Awarded by FAFS Dean to the most active students and who delivered real and positive change in the Faculty's environment for the Academic Year 2018-2019. The committee recommended to FAFS Dean and Faculty granting **Mr. Omar Bahlawan** the Outstanding Contribution Award to the Wellbeing of the Faculty.

III. The Faculty

A. FAFS Strategic Plan FAFS 2025

The Faculty's new vision and strategy provide a roadmap for prioritizing resource allocation and preparing FAFS to meet future challenges and opportunities in water and food security spheres for Lebanon, the region and beyond. FAFS 2025 states six goals that align to AUB's VITAL and that are critical to the transformation of FAFS programs, partnerships and activities for the coming five years. The plan has two tiers for implementation: 1) *Excellence in Learning, Discovery, and Engagement*; and 2) *Impacting and Synergizing FAFS-Related Sectors through Partnership*. Under Tier 1, six goals were identified, including: 1) *integrated research in support of water, food, energy, and health securities*; 2) *delivering outstanding student experiences*; 3) *increased undergraduate enrollment in all programs, especially in agriculture*; 4) *establishing AREC masterplan across the university for research, education, and outreach*; 5) *effective engagement with communities and stakeholders in Lebanon and the region*; and 6) *advance faculty and staff*. Since its approval by the faculty during a one day retreat at AREC, in October 2018, FAFS has initiated and has been heavily

engaged in the implementation of several of its strategic initiatives and activities such as planning for a three-tiered student recruitment plan, initiating stakeholder's engagement plan, revision of programs, planning for new accreditations, active faculty hires in specialty areas in alignment with FAFS vision, and developing a Faculty-wide engagement plan which includes launching a new capstone course with a community service component. In addition, FAFS has been focusing much effort on Interdisciplinary research activities, increasing visibility and revitalizing the role of AREC, as well as fundraising activities during this period. Highlights of these initiatives and activities are presented in this report.

B. FAFS Activities

1- Academic Matters

a. Accreditation, Program Reviews, and New Programs

- **AUB Accreditation Team at AREC:** As part of AUB's ongoing process of reaccreditation, Dr. John DiNardo, Chair of the evaluation team from the Middle States Commission on Higher Education (MSCHE), visited AREC on October 12 to review the multidisciplinary research conducted, proposed future plans, and review AREC's significance and use by AUB faculties. Presentations were conducted by faculty members from FAFS, FAS, MSFEA, HSON, in addition to FAFS' Executive Advisory Board and ICARDA.
- **Dr. Stephen Searcy at FAFS for program evaluation and synergies:** Dr. Stephen Searcy, President of the American Society of Agricultural and Biological Engineers (2017-2018), Senior Professor and Head, Department of Biological and Agricultural Engineering at Texas A&M University, visited FAFS in October 2018. The main purpose of his visit was to review the existing FAFS curricula; and identify possible synergies between FAFS departments and programs in terms of research, teaching of the Senior Capstone course, and other activities especially with respect to the Water-Food-Energy-Health nexus.
- **Bachelor of Landscape Architecture (BLA):** The BLA program secured re-confirmation and registration at NYSED in March 2019. The program started the process of applying to accreditation by ASLA/LAAB (Landscape Architecture Accreditation Board). A site visit for external review by the accrediting body is scheduled for spring 2020. The BLA program is the first program outside of the USA to apply for and to be considered by ASLA/LAAB accreditation.
- **The Food Security Program (FSP)** continued with its review and re-design of the graduate-level diploma in food security and its conversion from a traditional delivery method to an online one tailored to the needs of active professionals based in the MENA region and beyond. A redesigned online diploma in food security is tentatively targeted for launch in 2020.
- **Food Science and Technology (FSTC):** The NFSC department secured NYSED registration for the new FSTC undergraduate degree. The formal launch of the program is expected once MEHE registration is finalized. The program is aligned to IFT requirements and the process of securing its accreditation will be initiated upon MEHE registration.

- **Revised BSc in Agriculture:** The BoT in its meeting held on March 15, 2019, approved the revised BS in Agriculture Program which meets ABET requirements for accreditation. The approved program capitalizes on hands-on experiences during a two semester (spring and summer) stay at AREC, an internship component as well as a final year project designed to include a community service component. Over half of the courses in the revised curriculum are new courses to be developed. It offers specialization in either of two tracks: 1) sustainable / organic / conservation agriculture, or 2) agriculture technology. The program was approved by NYSED, and is pending MEHE registration. The process of applying for ABET accreditation of the revised AGRI program will be commenced once the first cohort of students graduates.
- **Masters in Landscape Architecture (MLA):** The Department of Landscape Design and Ecosystem Management (LDEM) completed the proposal for a graduate professional degree in landscape architecture: the MLA. The Department secured internal faculty approval for the new program and will forward it for university approvals once the Board of Graduate Studies reconvenes in fall 2019-2020.
- **Capstone Course with Community Service Component:** A team from FAFS was granted a funding from Scholarship on Teaching and Learning (SOTL) Grants Program of the Center for Teaching and Learning (CTL) to develop capstone courses at FAFS based on the Global Design Team (GDT) model, which focuses on high-impact, interdisciplinary, hands-on, and global service-learning student experiences. The courses were developed and have been aligned to already existing FAFS courses; a pilot will be launched in the fall 2019-2020. The effectiveness of this course in teaching and learning will be assessed and revisions will be implemented accordingly before being offered as required course for all FAFS students.
- **Transforming Higher Education Project (Kellogg Project):** The launch of the project took place in September 2018 in partnership with GCHERA, EARTH University and the W.K. Kellogg Foundation. The project resulted in a transformational commitment at AUB through a joint effort with CTL, GE, CCECCS and other faculties, to introduce new service and participatory learning options that would strengthen experiential learning and community engagement at AUB. The project is led by Dean Mohtar who formed a Transformative Education Taskforce including deans of faculties (MSFEA, HSON, FHS, and FAFS), and directors of centers (CCECS, CTL, and OGC) to leverage the momentum created by the project and work together on transforming the higher education at AUB. This taskforce is also collaborating with the GE Taskforce.
- **LDEM Joins ECLAS:** As reaffirmation of its commitment to the highest standards of academic scholarship in landscape architecture, LDEM was accepted as an official member of the European Council for Landscape Architecture Schools (ECLAS) in March 2019. ECLAS is a community working on fostering and developing scholarship in landscape architecture at the European and international levels.

b. Faculty Affairs

- **Faculty Recruitment and Count:** The Faculty Full-Time Equivalent (FTE) for the AY 2018-19 (based on fall data) included those full-time faculty with professorial rank: 11 professors,

7 associate professors, and 12 assistant professors. The distribution of FTE's by department is shown in Table 3.

Table 3: FTE Distribution by Department

		AGRI	LDEM	NFSC	RCODE	FS	Total
Full-time	Professorial Rank	11	7	11	0	1	30
	Lecturer and Instructor	2.5	1	3	0	0.5	7
Part-Time		2.80	3.28	1.39	0	0	7.47
Total		16.3	11.28	15.39	0	1.50	44.47

- **New and Promoted Faculty:**

Faculty Recruitment: The Provost approved the appointment of Drs. Sandra Yanni, and Walid El Kayal as Assistant Professors in Agroecology/Soil/Water and Horticulture, respectively, at the Department of Agriculture. In addition, the appointment of Dr. Kassahun Wondim as Associate Professor in Animal Health and Nutrition at the Department of Agriculture was also approved.

Tenured Faculty Members: Dr. Lara Nasreddine received the rank of Tenured Associate Professor at the NFSC department, effective September 1, 2019.

- **Academic Appointments:**

Chairpersons of FAFS Departments: Dr. Imad Toufeili continued to serve as Chairperson of Nutrition and Food Sciences (NFSC), Dr. Rami Zurayk continued as Chairperson of Landscape Design and Ecosystem Management (LDEM) & Dr. Bashour continued as Interim Chairperson of the Agriculture Department (AGRI).

Other Academic Appointments: Dr. Mustafa Haidar continued to serve as AREC Director and Dr. Shady Hamadeh continued as Director of ESDU.

- **Recognitions:** During this period, Dean Mohtar was one of 13 new Fellows elected by the American Society of Agricultural and Biological Engineers (ASABE). He was also elected as Governor for the World Water Council (WWC), as Executive Board Member of International Water Resources Association (IWRA) for the 2019-2021 term as well as Chair of IWRA Awards Committee. Dean Emeritus Nuhad Daghir was honored at the American Society for Nutrition (ASN) 2019 flagship meeting for completing 50 years of being a member of the society and for his support of ASN during his entire career. Dr. Daghir also received the Golden Medal of Education from President Michel Aoun, represented by Dr. Ghattas Khoury, caretaker Culture Minister, in recognition and appreciation of Dr. Daghir's contributions to the agricultural sphere in Lebanon. Dr. Hwalla received the 2019 Medallion Award by the US Academy of Nutrition and Dietetics in recognition of her dedication to the high standards of the nutrition and dietetics profession, and active participation, leadership and devotion to serving others in nutrition and dietetics, and its related health fields. In addition, Drs. Lara Nasreddine (FAFS) and Marlene Chakhtoura (FM) received AUB's Farouk Jabre Award at the 9th Biomedical Research Day at AUB. Drs.

Hadi Jaafar and Samer Kharroubi along with Drs. Fatima Abu Salem (Computer Science, FAS) and Mazen Saghir (Electrical and Computer Engineering, MSFEA) received a highly competitive \$1,000,000 Google's AI Impact Challenge grant for their project proposal in the field of smart irrigation.

FAFS Alumni chapter conference and gala dinner: The FAFS Alumni and FAFS celebrated the FAFS Legacy Worldwide, recognizing the work of successful FAFS Alumni at the third Career trends and opportunities in Agriculture, Nutrition, Food Sciences and Landscape Design conference, followed by the FAFS Distinguished Alumni Award ceremony and gala dinner on October 10, 2018. Honorees during the ceremony were: Mr. Maurice Saade, Mr. Ayad Karam Gebran, Dr. Hannibal Muhtar, Dr. Mamduh Sifri (represented by Dean Emeritus Nuhad Daghir), Dr. Maya Nehme Zoghby, and Mrs. Randa Saadeh Jaroudi.

c. Faculty Meetings

Dr. Elie-Jacques Fares, Assistant Professor, Secretary

During the period September 1, 2018-August 31, 2019, seven regular and one special faculty meetings were held at FAFS, and the following actions were taken:

- **Elections** to FAFS Standing Committees & University Committees and the Senate for AY 2018/2019.
- **Voting of Degrees:** Voted unanimously to award B.S. degrees in Agriculture and Diploma of Ingénieur Agricole, Agribusiness, Food Science and Management, Landscape Architecture and Diploma of Ingenieur Agricole, Nutrition and Dietetics, and Nutrition and Dietetics-Coordinated Program; and Master of Sciences for students as recommended by the representatives from each department, effective September 2018, January 2019, and June 2019 consecutively.
- **FAFS Distinguished Awardees for AY 2018/2019:** Voted on the recommendation of the Student Affairs Committee and granted FAFS Awards as follows:
 - ***Edgecombe Memorial Prize:*** Jad Kaj, AGRI IV
 - ***Kashadurian Award:*** Mr. Abdul Razaak Doughan, AGRI III
 - ***The Joana Haidar Award:*** Ms. Joy Attallah, AGRI III
 - ***Dr. Musa Najib Nimah Endowed Award for Academic Excellence:*** Ms. Rhea Khoury Helou, AGRI IV
 - ***The Nehme Moujaess Student Award in Landscape Architecture:*** Ms. Tara Kanj, LDAR IV
 - ***Penrose Award:*** Ms. Tara Kanj, LDAR IV
 - ***Dean Thomas Sutherland Prizes for graduate excellence:*** Ms. Lara EL-Gemayel, PLSC
 - ***Abdul Hadi Debs Endowment Award for Academic Excellence:*** Ms. Nivin Nasser, FTCH.
 - ***Dean Nuhad Dagher FAFS Graduate Student Award:*** Mr. Majd Kais, POSC
 - ***The FAFS Alumni and Friends Award for Academic Excellence (new):*** Zahraa Hourany, NTDT III and Layal Ghamloush, NTCP IV
- **Presentations:**

- Presentation on “Mental Health” by Dean Talal Nizameddin, Dr. Fadi Maalouf and Ms. Ruby Sawaya.
- Presentation on “Compliance and Rules” by Dr. Adnan Tahir
- New MLA Graduate Program
- **FAFS Dean’s updates:**
Dean Mohtar updated faculty members on a number of occasions on the following issues:
 - Strategic Planning Retreat
 - FAFS Strategic Plan 2025
 - AUB AREC Taskforce Committee (AAT) task list (launch of WEFRAH, Develop AREC masterplan)
 - WEFRAH internal seed funding
 - FAFS - consultancy agreement with Dr. Steven Searcy
 - Student recruitment (at schools and/or on campus)
 - Faculty scholarship program
- **New Viticulture course offered at AREC:** This course will cover all aspects of vinyard production and wine making and related biological sciences, including: History of wine and origins in Lebanon and the region, practical viticulture and winemaking, viticulture and oenology theory, wine sensory evaluation and wine analysis and the commercial aspect of wine in our market.

2- Research Grants and Service Contracts

- **Published papers:** During the calendar year 2018, a total of 71 papers were published in international refereed journals by FAFS faculty members: 10 by the Dean, 43 in NFSC (8 FM), 14 in AGRI (7 FM), 3 in LDEM (2 FM) and 1 in RCOD (1 FM).
- **Research Funding:** During this period, FAFS received \$3,183,520 in local, regional and external funding divided as follows: Dr. Mohtar [\$1,070,500 from Kellogg], Dr. Hamadeh [\$979,885 from WFP, \$10,000 from URB], Dr. Nasreddine [\$252,360 from Nestle, \$32,500 from WEFRAH, \$7,137 from ELRHA], Dr. Jaafar [\$107,453, from IHE, \$45,000 from TIDES, \$47,775 from USDA, \$13,000 from MASRI, \$11,000 from URB], Dr. Trovato [\$84,497 from UVA, \$60,712 From COOPI], Dr. Zurayk [\$122,895 from Inherit], Dr. Obeid [\$100,000 from IGN, \$10,000 from URB], Dr. Farran [\$107,880 from Elanco], Dr. Bashour [\$45,000 from WEFRAH], Dr. Olabi [\$12,500 from URB, \$4000 from CTL], Dr. Kharroubi [\$12,500 from URB], Dr. Jomaa [\$11,265 from URB], Dr. Toufeili [\$10000 from URB], Dr. Abou Jawdeh [\$10,000 from URB], Dr. Kassem [\$10,000 from URB] and Dr. Keulertz [\$5,500 from Kassel]. Drs. Jaafar (Agriculture, FAFS), Samer Kharroubi (Nutrition, FAFS), Fatima Abu Salem (Computer Science, FAS) and Mazen Saghir (Electrical and Computer Engineering , MSFEA) received a highly competitive \$1,000,000 Google's AI Impact Challenge grant for their project proposal in the field of smart irrigation.
- **The Water-Energy-Food-Health Renewable Resources Initiative (WEFRAH):** a university-wide initiative under the auspices of the Provost’s Office and led by FAFS [Dean Mohtar and Dr. Mirella Aoun (Program manager)] was launched during fall 2018-2019 with a pilot project centered on reviving interdisciplinary research and development activities at AREC,

as well as innovations in technology, science, policy and learning. Under the WEFRAH initiative, a [webinar](#) was hosted by FAFS-AUB and Texas A&M University (TAMU) on November 27, 2018, to present the findings of the 'San Antonio Case Studies of the Texas A&M WEF Nexus Initiative,' which were published in a [Special Issue](#) of Science of the Total Environment (STOTEN) titled: *Opportunities in the Water-Energy-Food Nexus Approach: Innovatively driving economic development, social well-being, and environmental*. This was followed by the WEFRAH call for proposals released in December 2018, by the AUB-AREC Taskforce (AAT), mandated to develop the AREC Masterplan and coordinate the WEFRAH initiative. The call offered internal seed funding (budget up to \$75,000 over two years) and all AUB faculty (as lead PI) and staff (as Co-PI) were eligible to compete where proposals had to include an AREC component and carry a realistic potential for external funding and societal impact. The process resulted in funding eight projects (involving 60 faculty members) from all AUB faculties. **A Re-Design Thinking Workshop** was held at AREC in partnership with WAMDA for the inaugural WEFRAH PIs and Co-PIs to help redesign their project concepts and submit new working plans and budgets.

Research collaborations through WEFRAH has led to the development of Transforming Agriculture Through the Internet of Things, Artificial Intelligence, and Big Data Analytics project, that became part of the inaugural cohort of WEFRAH projects, that also culminated in \$1 million Google grant awarded to AUB professors (FAFS, FAS, MSFEA) to improve irrigation water management.

- **Sustainable Development Goals (SDG) Initiative:** FAFS is coordinating the university wide initiative on SDG. In January 2019, AUB has defined key areas where the university can contribute to the SDGs.
- **AREC Master Plan:** An updated Master Plan for AREC was developed by AUB-AREC taskforce (AAT) representing all campus academic and service units who have shown commitment, dedication, and continuous support for the past year in refining the AREC Master Plan and bringing it into its current shape. The revised Master Plan was presented by Dean Mohtar to the BoT in June, 2019, at AREC and featured a new vision -*AREC Tomorrow*- as well as goals and initiatives across learning, research, outreach, and business that are instrumental in achieving this vision.
- **FAFS Project with FAO:** Discussions with FAO during this year has led to signing of a letter of Agreement between AUB and FAO for a Pilot Study on the Evapotranspiration, and Trade-offs in the Water-Energy Food Nexus in Bekaa Valley in Lebanon. The study will focus on two components: developing water-energy-food (WEF) trade-offs framework based on data collection, analysis of nutrition, production, water reuse, and other management practices, and Comparing FAO's WaPOR database with field measurements of evapotranspiration for the Bekaa valley. The data will result in a conceptual framework of water-energy-food (WEF) data analysis that will be used to develop a framework to quantify the trade-offs between WEF elements to assess productivity for the sustainability of local diets.
- **FAFS Lecture Series:** During this period, twenty one (21) invited speakers and seven (7) panel/launch events took place. This has contributed to increased visibility of the faculty and initiated discussions amongst FAFS faculty members and invited scholars for possible future collaborations. On June 18, FAFS hosted the launch of the IFPRI 2019 Global Food

Policy Report: Revitalizing Rural Areas in Lebanon. The session was followed by the soft launch of the World Bank Group (WBG) DigitalAG4MENA Competition, which continued the discussion around themes of agricultural revitalization through the use of digital technologies.

- **Visiting URB Scholar:**

- Dr. James Herbert, Health Sciences Distinguished Professor of Epidemiology at University of South Carolina, Columbia, visited FAFS in April 2019 as a URB Visiting Scholar where he presented to FAFS & AUB Community lectures on Inflammatory Potential of Diet and Risk of Cancer Mortality in Women-Hidden food ingredients; Vitamin D and Related Genes, Race and Prostate Cancer Aggressiveness, as well as Expanding Mentoring Capacity in High-Risk Populations. In addition to the three presentations, Dr. Hébert met with NFSC faculty to discuss current research in nutrition, food science, and health. NFSC students also had the opportunity to meet the renowned scholar and learn more about current nutrition research and potential career opportunities in nutrition and disease prevention.
- Professor Thomas Hertel, Distinguished Professor of Agricultural Economics at Purdue University, USA, also visited FAFS as a Visiting URB Scholar in March 2019 and gave lectures related to the future of food prices and its impact on food security in the Arab world and beyond. Dr. Hertel also met with students from the Master of Science in FSP as well as faculty experts in food and water security and the social sciences, and visited AREC

3- Outreach & Societal Impact

Several FAFS faculty members involved in outreach and societal impact activities.

- **Faculty invited speakers at regional and international conferences:** Faculty members from the different departments were invited speakers at regional (7) and international (32) conferences.
- **ENELPAN final conference: AUB and FAFS lead integrated energy planning for the region:** During September 13-14, 2018, FAFS hosted the final conference of the ENEPLAN (Developing Skills in the Field of Integrated Energy Planning in Mediterranean Landscapes) project on Integrated Energy and Education in Mediterranean Universities led by Dr. Yaser Abunnasr, ENEPLAN committee chair.
- **FAFS - ACTED conference on hybrid electric vehicles (HEV):** FAFS, in partnership with the Agency for Technical Cooperation and Development (ACTED) and the Lebanese Hybrid Automotive Club, held an event promoting environmentally sustainable transportation in Lebanon on October 20, 2018. Dr. Ali Chalak presented his recent research about the readiness of Lebanese motorists to switch to hybrid electric vehicles (HEVs), including data monetizing the net financial and social, health and environmental benefits to be gained from the transition.
- **FAFS and TAMU Webinar: STOTEN Special Issue on the WEF Nexus :** FAFS and Texas A&M University (TAMU) hosted a webinar on November 27, 2018, to present the findings of the 'San Antonio Case Studies of the Texas A&M WEF Nexus Initiative,' published in a Special

- Issue of Science of the Total Environment (STOTEN), titled: Opportunities in the Water-Energy-Food Nexus Approach: Innovatively driving economic development, social well-being, and environmental sustainability.
- **Launching of the International Fair Trade Charter:** Fair Trade Lebanon organized and launched the International Fair Trade Charter at FAFS on September 25, the day that coincides with the third anniversary of the declaration of Sustainable Development Goals. The launch of the Charter was under “How the Global Fair Trade Movement works to transform trade in order to achieve justice, equity and sustainability for people and planet”.
 - **FAFS and NCC organized the National Guidelines for Native Nursery Management Trees & Shrubs launch:** The National Guidelines for Native Nursery Management: Trees & Shrubs, a cooperative effort of the Lebanon Reforestation Initiative (LRI), the AUB Nature Conservation Center (AUB-NCC), and FAFS - funded by USAID Lebanon - was successfully launched on November 14.
 - **ESDU receives \$1Million grant from the World Food Program (WFP) for the CLIMAT project:** WFP selected FAFS’ Environment and Sustainable Development Unit (ESDU) to implement a one-year project aimed at sustainably improving the skills, capacities, and livelihood opportunities of vulnerable Lebanese communities and Syrian refugees in Northeast Baalbeck and West Bekaa. CLIMAT (Climate-Smart Livelihoods Initiatives and Market Access Tailoring) is part of WFP’s Lebanon Country Strategic Plan 2018-2020, and its efforts to enhance the livelihoods of Syrian refugees and vulnerable Lebanese host communities through Food for Training (FFT).
 - **Texas A&M University graduates research collaborations with FAFS:** In September 2018, FAFS welcomed three recent graduates of Texas A&M University as interns: Rebecca Doncov, Lauren Holtmeier, and Lindsey Aldaco-Manner. As president of the World Youth Parliament for Water, Ms. Aldaco-Manner is working to establish a chapter of the parliament in Lebanon.
 - **Book Launch ‘Crisis and Conflict in Agriculture’:** The book ‘Crisis and Conflict in Agriculture’ was launched at FAFS on November 1, 2018. Volume editors include Drs. Ramy Zurayk, Eckart Woertz and Ms. Rachel Bahn.
 - **Dr. Timothy Williams visits FAFS and AREC:** On November 28-29, 2018, Dr. Timothy Williams, **Director** of Africa, International Water Management Institute (IMWI), visited FAFS and AREC for discussions focused on opportunities for research collaboration in land and water management, and capacity building and development opportunities such as student exchange through the Water Security Africa Initiative and other special programs.
 - **Awareness campaign: World Diabetes Day - by FAFS, DiaLeb, and Wellness Program (AUBMC):** The NFSC Department at AUB and the Wellness Program at AUBMC, in collaboration with the National Diabetes Organization DiaLeb, organized a Diabetes Awareness Campaign during the World Diabetes Day on November 14, 2018 in the main campus.
 - **New York-Beirut Briefing:** Dr. Abunnasr participated in the New York-Beirut Briefing held on November 28, 2018 and titled “How Communities Imagine the Sea and How the Sea Creates Communities”. In this new regular forum, faculty members and collaborators in

Beirut and New York give presentations on a specific topic followed by a group discussion. Dr. Abunnasr gave a presentation and managed the discussion in Beirut.

- **SDSN:** One of the greatest achievements on SDGs for this last year was that AUB became member of the UN Sustainable Development Solutions Network (SDSN). SDSN membership expands AUB's regional and international partnerships and visibility, and strengthens our ability to support localized implementation of SDGs and develop long-term transformative pathways for sustainable development through education around the Agenda 2030.
- **World Bank, ESCWA, FAO, and Center for Mediterranean Integration Projects (started in June 2019):** FAFS is collaborating with international agencies on transforming regional agriculture: "Mashreq Digital Transformation of the Agricultural Sector". The initiative consists of a knowledge sharing process between three Mashreq countries (Iraq, Jordan, and Lebanon) with the long term aim to revitalize the agricultural sector, boost digital agriculture innovation, and raise the profile of agriculture among non-agricultural sectors.
- **MOUs:** During the period extending from July 1, 2018 to June 30, 2019, FAFS expanded its international partnerships to promote student and faculty exchange, provide excellence in education, and participate in the advancement of knowledge through research and outreach. Many Memoranda of Understanding (MoUs) and cooperation agreements were signed with local institutions as well as institutions in the MENA region, Europe, and North America, securing partnerships with FAO, Ecole d'Ingenieur de Purpan, Montpellier Université d'Excellence (MUSE), Purdue University, University of Kassel, Arabian Gulf University, The Jordanian Hashemite Funds for Human Development (JOHUD), ICARDA, Arab Beverage Association, Waterlution, SEALNGO and Texas A & M including Texas A&M University at Qatar (TAMUQ), a branch campus of TAMU.
- **Water Solutions by Young Arab Leaders:** FAFS hosted the first Water Innovation Lab in Lebanon (WIL Lebanon) for one week in AREC from June 8 - 14. Among the 70 participants were 62 from Lebanon, with 13 from AUB-FAFS, and others from Jordan, Syria, Canada and the United States. Young community leaders, engineers, architects, entrepreneurs, professionals and experts joined to explore, study, and resolve some of Lebanon's most pressing water challenges. From the 13 participating teams, 5 winning teams were awarded seed grants and mentorship awards.
- **New York-Beirut Briefing:** Dr. Abunnasr participated in the New York-Beirut Briefing titled "How Communities Imagine the Sea and How the Sea Creates Communities". The briefing is a recent initiative by AUB to spread the research of Faculty in North America.
- **FAFS – AUB Planting the Seeds of Hope:** FAFS, in collaboration with the Nature Conservation Center (NCC) initiated on April 7, 2019 its first AUB Planting Seeds of Hope in Dhour Al Abadie, Mount Lebanon as part of the "40 million tree campaign" of the Ministry of Agriculture about conservation and management of natural areas.
- **Nutrition in Emergencies:** NFSC in collaboration with the Institute of Global Health (UK), conducted an 11-day intensive training course, Nutrition in Emergencies in Beirut, for the eighth year. The course was delivered by nine international experts and hosted thirteen nutritionists, health professionals, and humanitarian workers from across the region, all of whom shared their experience and expertise.

- **ENELPAN Final Conference:** FAFS hosted the final conference of the ENEPLAN project (Developing Skills in the Field of Integrated Energy Planning in Mediterranean Landscapes). The two-day conference presented the outcomes from the integrated energy planning projects and looked at ways to mainstream those outcomes into higher education in Mediterranean countries.
- **Climate-Smart Livelihoods Initiatives and Market Access Tailoring (CLIMAT):** FAFS's ESDU launched the CLIMAT project to improve the skills, capacities, and livelihood opportunities of vulnerable Lebanese and Syrian refugees in Northeast Baalbeck and West Beqaa.

4- Fundraising

A first draft fundraising strategy was devised by the Dean's Office and later on shared with the FAFS 2025 Strategic Plan Committee for review and feedback. The pillars of this strategy included fundraising for 1) FAFS specific scholarships, which culminated in the development of the Scholars of Agriculture, Food and the Environment (SAFE) with the approval of the upper administration. SAFE scholarships are merit ones that aim at providing a maximum of 50% coverage from FAFS, through FAFS named scholarships, while the rest, i.e. max. of 50%, is secured from AUB's financial aid system. The other pillars were fundraising activities related to 2) AREC facilities for upgrading its infrastructure, 3) Engagement activities at AREC and the main campus, and 4) Naming opportunities for facilities, endowed Chairs, centers and lectureship series. The priority was given to the SAFE scholarships and for naming opportunities in 2018-2019 and resulted in **\$215,626.61**.

5- Student Recruitment

In an effort to increase undergraduate student numbers and quality, an EAB subcommittee was formed of Mr. Khaled Sinno (EAB Chair), Dr. Lamya Tannous Khuri, in addition to Dr. Ammar Olabi, Dr. Maya Nabhani, Ms. Alia Alameddine, Ms. Tharwat Haddad and Ms. Rabia Koubayssi from the Dean's Office. To this effect an action plan was devised and included 1) Outreach efforts through FAFS presence at school fairs, conducting high school visits, etc; 2) A communication plan with social media activities, mailers, and emails to prospects including deadline dates; 3) Marketing activities with various videos developed, brochures, scholarships, such as the SAFE for all majors and the Raji and Fawzieh Sinno Scholarship in Agriculture. All of the suggested efforts were in tandem with the typical requirements of the student experience success cycle (Figure 1).

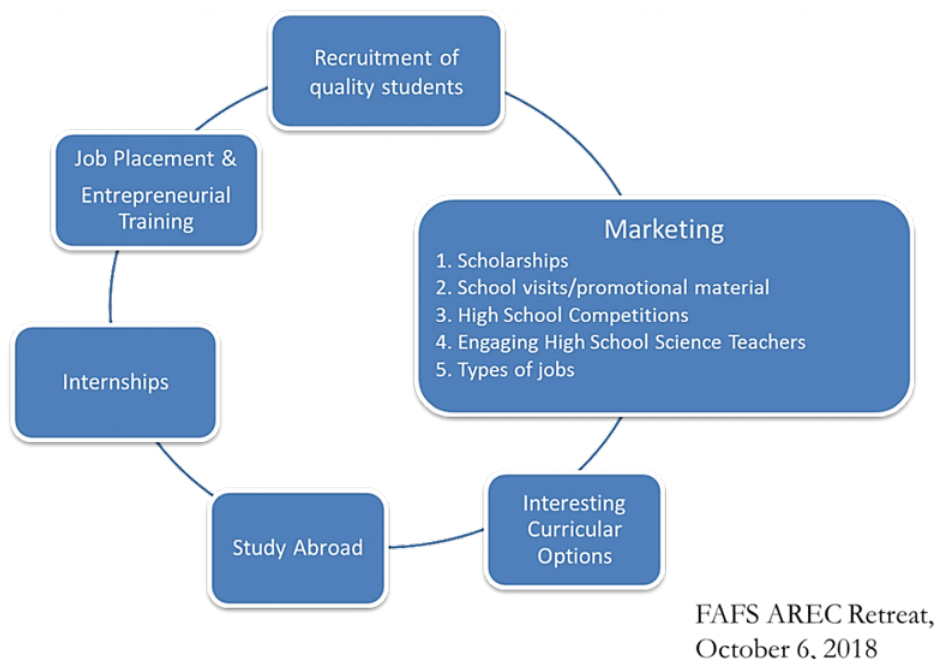


Figure 1. Student Experience Success Cycle

6- External Advisory Board

The role of the External Advisory Board (EAB) at FAFS has been re-vitalized, which resulted in the development of an EAB Strategy to contribute in increasing FAFS's outreach activities and connections with local, regional, and international stakeholders, as well as emphasizing experiential learning and entrepreneurial educational experiences in FAFS programs. New members were invited to and accepted to join the EAB during this period: Ms. Nadine Khoury, Mr. Pierre Issa (for AREC tomorrow), Mr. Rami Abu Jawdeh (for innovations) and Mr. Salah Saliba (for fundraising agencies). The new members bring additional private sector expertise that will add to FAFS' network and resources. During its meeting, the EAB discussed several plans for maintaining and further strengthening FAFS' leadership in Lebanon and the region, despite the major challenges currently facing its agriculture sector.

7- Space and Facilities

During this period, the renovation of Lab 520 was completed, as well as the GIS Lab at FAFS, seven new offices were renovated in anticipation of the new hires, maintained the AREC villa and sidewalk following cracks, and completed the renovation of the AREC Cafeteria generously supported by the President's Club. The FAFS Dean's office administrative reception area was remodeled, and the computer lab 209, the soils characterization lab and soil preparation room were revamped. The establishment of seminar room 302 was also successfully completed. Plans, drawings, and timelines for the ASHA funded food safety lab were also laid out and tasks were assigned. Plans for the establishment of the Iodine Lab and the Animal Physiology and Pathology

Lab were approved. The renovation of the greenhouse area continues with two glasshouses completely revamped under the supervision of PPD. The first clean technologies innovation unit, the green-energy poultry house, was established at AREC.

C. Student Statistics

1. Student Enrollment (2018-2019)

The total undergraduate student enrollment in the Faculty for the year 2018-2019 was 430 distributed among the departments as follows: NFSC (233), AGRI (126), LDEM (70) and visiting student (1). Most of the undergraduate programs at FAFS witnessed a slight 3% drop in enrollment. This drop was mainly attributed to a 19% drop in the enrollment of newly enrolled students at the Faculty. Also, to a lower yield in the NTDT and LDAR programs as compared to AY 2017-2018.

The total graduate student enrollment for the year 2018-2019 was 146 distributed among the departments as follows: NFSC (61), AGRI (29), LDEM (19), FSEC (19), the interdisciplinary Rural Community Development (RCODE) program (17) and visiting student (1). At the graduate level, enrollment highly improved from 114 in 2017-2018 to 146 in 2018-2019 due to the introduction of the new Public Health Nutrition program and the increase in enrollment in all majors.

Table 4 Total Student Enrollment in various FAFS programs during the academic year 2018-2019

Undergraduate Enrollment	AY 2018-2019
Nutrition and Dietetics (NTDT)	134
Nutrition and Dietetics – Coordinated Program (NTDT-CP)*	36
Food Science and Management (FSMT)	63
Agriculture (AGRI)*	67
Agribusiness (AGBU)	59
Landscape Architecture (LDAR)*	70
Visiting Student	1
Total Undergraduate	430
Graduate Enrollment	
Nutrition (NUTR)	22
Food Safety (FSAF)	10
Food Technology (FTCH)	20
Public Health Nutrition (PHNU)	9
Agricultural Economics (AGEC)	6
Animal Science (ANML)	1
Irrigation (IRRG)	6

Plant Protection (PLPT)	10
Plant Science (PLSC)	3
Poultry Science (POSC)	3
Food Security (FSEC)	19
Rural & Community Development (RCODE)	17
Ecosystem Management (ECOM)	19
Visiting Student	1
Total Graduate	146
Total (UG & GR)	576

* Agriculture, Landscape Architecture and Nutrition & Dietetics – Coordinated Program are 4 years programs

2. Historical Perspective (2018-2019)

This considerable change in the undergraduate enrollment as compared to the peak enrollment year 2014-15 (547) was mainly due to a lower number of newly enrolled students in the preceding Academic Years. The undergraduate enrollment in the past 5 years is shown in Table 5.

Table 5: Number of Enrolled Undergraduate FAFS Students for the Last Five Academic Years

Program	14-15	15-16	16-17	17-18	18-19
NTDT	144	142	133	120	134
NTDT-CP	44	44	36	41	36
FSMT	85	77	79	68	63
AGRI (4 years)	88	88	85	71	67
AGBU	64	59	63	61	59
LDEM (4 years)	115	106	90	81	70
Visiting	7	5	12	2	1
Total Undergraduate	547	521	498	444	430

Graduate enrollment increased tremendously from 89 students in 2014-15 to 146 in 2018-19. This has tremendously improved in the last years. This was due to the introduction of the new Rural & Community Development, Food Security, Food Safety programs and Public Health Nutrition and the increase in enrollment in all majors. The graduate enrollment in the past 5 years is shown in Table 6.

Table 6: Number of Enrolled Graduate FAFS Students for the Last Five Academic Years

Program	14-15	15-16	16-17	17-18	18-19
NUTR	30	21	26	24	22

FSAF	-	-	-	5	10
FTCH	15	19	19	17	20
PHNU					9
AGEC	4	6	6	5	6
IRRG	2	4	6	9	1
PLPT	7	2	4	7	6
PLSC	3	4	2	3	10
ANML	4	3	3	1	3
POSC	3	1	2	3	3
RCOD	5	7	12	12	19
FSEC	4	-	6	17	17
ECOM	12	9	8	10	19
VISIG	-	1	2	1	1
Total Graduate	89	77	96	114	146

3. Undergraduate New Applicants

- Student Admissions (2018-2019):**

During the academic year 2018-2019, a total of 1354 new applications were received for FAFS majors of which 564 (42%) were accepted and 74 (13%) of the accepted enrolled. In the fall semester of 2018-2019, the yield of admittance was 11% (61 enrolled out of 536 accepted students) whereas, in the spring semester of 2018-2019, the yield of admittance was 46% (13 enrolled out of 28 accepted students). A significant decrease in the number of enrolled undergraduate students (74 students) compared to the previous year 2017-2018 (88 students). This main decrease was most noticeable within NTDT. Table 7 shows the numbers and percentages of undergraduate new students who applied to the different FAFS programs, those who were admitted and those who enrolled in fall and spring 2018-2019.

Table 7: Number of New Undergraduate Applicants, Admitted and Enrolled during the Academic Year 2018-2019

First Semester 2018-2019				
Program	Applications	Admissions	Enrollment	% Yield
NTDT	534	231	26	11%
FSMT	228	84	13	15%
AGRI	131	51	8	16%
AGBU	173	70	6	9%
LDAR	214	100	8	8%
Total	1280	536	61	11%
Second Semester 2018-2019				
Program	Applications	Admissions	Enrollment	% Yield
NTDT	17	8	3	38%

FSMT	12	3	1	33%
AGRI	16	5	2	40%
AGBU	21	8	4	50%
LDAR	8	4	3	75%
Total	74	28	13	46%

4. Undergraduate Transfer Applicants

During the academic year 2018-2019, a total of 153 transfer applications were received at FAFS of which 108 (71%) were accepted with 42 (39%) of those accepted having enrolled. A significant decrease in the number of enrolled undergraduate transfer students (42 students) compared to the previous year 2017-2018 (46 students). This considerable decrease was most noticeable within AGBU, LDAR and NTDT programs. Table 8 shows the numbers and percentages of undergraduate transfer students who applied to the different FAFS majors, those who were admitted and those who enrolled in fall and spring 2018-2019.

Table 8: Number of Undergraduates (Second Degree and Transfer) Applicants, Admitted and Enrolled during the Academic Year 2018-2019

First Semester 2018-2019				
Program	Applications	Admissions	Enrollment	% Yield
NTDT	40	23	10	43%
FSMT	25	22	7	32%
AGRI	18	17	8	47%
AGBU	21	19	4	21%
LDAR	14	7	2	29%
Total	118	88	31	35%
Second Semester 2018-2019				
Program	Applications	Admissions	Enrollment	% Yield
NTDT	12	6	3	50%
FSMT	7	3	2	67%
AGRI	7	4	3	75%
AGBU	6	4	2	50%
LDAR	3	3	1	0%
Total	35	20	11	55%

5. Graduate Applicants:

During the academic year 2018-2019, a total of 300 graduate applications were received at FAFS of which 233 (78%) were accepted and 48 (21%) of those accepted enrolled. This year, the number of enrolled new graduate students remains the same as compared to the 2017-2018 year. Table

9 shows the numbers and percentages of graduate students who applied to FAFS, those who were admitted and those who enrolled.

Table 9: Number of Graduate Applications and Admissions

Fall, Spring 2018-2019					
Program	Applications	Admissions	% Admitted out of applicants	Enrollment	% Yield
NUTR	50	39	78%	3	8%
FTCH	24	20	83%	5	25%
FSAF	33	24	73%	4	17%
PHNU	68	46	68%	9	20%
AGEC	10	8	80%	2	25%
ANML	6	6	100%	1	17%
IRRG	3	2	67%	0	0%
PLPT	11	10	91%	3	30%
PLSC	12	9	75%	1	11%
POSC	3	3	100%	2	67%
ECOM	13	13	100%	8	62%
RCOD	32	25	78%	2	8%
FSEC	35	28	80%	8	29%
Total	300	233	78%	48	21%

6. Graduation (2018-2019):

FAFS graduated 124 undergraduate students in 2018-2019 distributed over the different majors as follows: Nutrition and Dietetics (29), Nutrition and Dietetics–Coordinated Program (9), Food Science and Management (25), Landscape Architecture (21), Agriculture (22) and Agribusiness (18). The number of undergraduate graduates has slightly decreased this year (124 graduates) compared to the previous year 2017-2018 (127 graduates). This slight decrease was most noticeable within the Nutrition & Dietetics-Coordinated Program and Landscape Architecture. This drop was mainly attributed to the drop in the enrollment of students in those programs.

FAFS also graduated 32 graduate students distributed over the different programs as follows: Nutrition (11), Food Technology (6), Agricultural Economics (1), Irrigation (1), Plant Protection (2), Poultry Science (1), Ecosystem Management (1), Rural Community and Development (2) and Food Security (7). The number of graduates has tremendously increased this year (32 graduates) compared to the previous years. This considerable increase was due to the introduction of the new Rural and Community Development and Food Security programs in 2014-2015. Tables 10 and 11 show the distribution of graduated students in the different disciplines at FAFS during the past five years.

Table 10: Number of Graduated FAFS Undergraduate Students for the Last Five Academic

Years

Major	14-15	15-16	16-17	17-18	18-19
NTDT	28	38	40	26	29
NTDT-CP	14	17	14	19	9
FSMT	17	15	16	26	25
AGRI	19	21	30	21	22
AGBU	18	13	15	11	18
LDAR	21	25	21	24	21
Total Undergraduate	117	129	136	127	124

Table 11: Number of Graduated FAFS Graduate Students for the Last Five Academic Years

Major	14-15	15-16	16-17	17-18	18-19
NUTR	15	6	8	2	11
FTCH	5	6	4	5	6
AGEC	1	1	2	0	1
ANML	1	1	1	2	0
IRRG	0	1	0	3	1
PLPT	1	1	0	1	2
PLSC	0	3	1	3	0
POSC	2	0	1	1	1
ECOM	2	4	2	0	1
RCOD			1	1	2
FSEC				1	7
Total Graduate	27	23	20	19	32

IV. Centers and Units**A. Advancing Research Enabling Communities Center (AREC)**

Prepared by: Mr. Nicolas El Haddad, AREC Farm & Facilities Manager

Support Staff:

- AREC Administration:**

Haidar, Mustapha – Ph.D.	Director
El-Haddad, Nicolas	Farm & Facilities Manager
Yazbeck, Mirna	Administrative Secretary
Sleiman, Samar	Administrative Assistant
Hajj Hasan, Hussein	Sales Attendant/Store Keeper

- AREC Physical Plant:**

Ghosn, Hisham	Watchman
Haidar, Naji	Mechanical and Maintenance Foreman
Hajj Hasan, Ali G.	Head of Watchman

- | | |
|---------------------|---------------------|
| Hajj Hasan, Mohamad | Watchman |
| Hamiyeh, Walid | Field Foreman |
| Masri, Ali | Gateman/Watchman |
| Mussawi, Kuzhayyah | Gateman/Watchman |
| Nasser, Haidar | Janitor |
| Rumeh, Abdel-Karim | Farm Attendant |
| Shukr, Khalil | Food Service Worker |
| Sindian, Ali | Head Mechanic |
- **AREC Production:**

El Ali, Ibrahim	Animal Attendant
Hajj Hasan, Ahmad Kassem	Livestock Production Head
Hajj Hasan, Ahmad Khalil	Creamery Operator
Hajj Hasan, Ali T.	Gardener
Harb, Mohamad	Animal Attendant
Mussawi, Abbas	Machine Operator
Safar, Shady	Livestock & Poultry Production Supervisor
Takesh, Nayef	Machine Operator
Yazbeck, Ali	Agronomy Foreman
Yazbeck, Hussein	Animal Attendant
Zureik, Mohamad	Poultry Production Head
 - **AREC Library:**

Sleiman, Samar	Administrative Assistant
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 - **AREC Clinic:**

Sayyed Ahmad, Mariam	Staff Nurse
Yazbek, Mona	Clinical Assistant
 - **Student Affairs:**

Hamieh, Yussuf	Entrance Monitor
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Highlights:

- FAFS leadership, faculty, staff, students from Department of Agriculture, the WEFRAH group, the UNIFERT team, and other guests were invited to an exceptional FAFS research and UNIFERT open field day (July 31) during which they learned about the projects and ongoing research of AREC students, celebrated the end of summer courses, and attended UNIFERT's field day on the topic of their wide variety of vegetables and fruits at AREC.
- The 9th regional Professional Short Course in Nutrition in Emergencies was run by the American University of Beirut (AUB) in Lebanon, from 27, 28 and 29th of June, 2019. Around 30 participants from Lebanon, Syria, Sudan, and India including employees of NGOs, UN agencies and the Ministry of Health successfully completed the course. The training took place over 10 days, with 8 days of classroom based learning and 2 days of

field exercises, including an emergency simulation at the Advancing Research and Enabling Communities (AREC) center in the Bekaa.

- BOT – Inauguration of the green energy poultry house on June 2019.
- As part of the LDEM 249 “Site Engineering III - Design Implementation” course that takes place every summer, the second year LDEM students developed a playful structure in AREC, Bekaa. The permanent installation, which was constructed under the supervision of LDEM 249 professors Dr. Beata Dreksler and Wissam Melhem, aims to revive the pine area located near the students’ dorms at AREC. The installation provides an exciting experience to people visiting the campus of all ages. The project consists mainly of two elevated walkways and a hanging bridge.
- Funded by the FAO and the Japanese Embassy, ICARDA organized a training course on crop management skills and seed production in Lebanon from June 24 till July 2, 2019. 20 PhD students and agricultural engineers from different districts in Syria participated in this course. 3 days of this training took place at AREC which included lectures and practical demonstration on farm machinery, introduction to the different types of seeders and chemical equipment along with calibration and safety measurements provided by Nicolas El Haddad, AREC Farm and Facilities Manager.
- Mrs. Emmanuelle Lamoureux, Ambassador of Canada to Lebanon at AREC, Dr. Rabi Mohtar, FAFS Dean, accompanied with their families visited at AREC on February 23, 2019.
- Dr. Thomas W. Hertel, Distinguished Professor and Executive Director at the department of Agricultural Economics in PURDUE University accompanied with his wife and Dr. M. Keulertz, Director of Food Safety at FAFS visited AREC on Thursday March 14, 2019.
- Under the title of Informal Refugee Settlements and Agriculture in Lebanon, Dr. Silva Hanie and 4 Graduate students (Joel Taylor, Sailer Perkins, Jeremy Bowie, Joshua Chaney) from Bush School of Government Service, Center on Conflict and Development – Texas A&M University visited AREC on Friday March 15, 2019. The purpose of the visit was to explore the influence that informal Syrian refugees settlements have had on agricultural product, demand, production, distribution, and the general farming livelihoods in Lebanon.
- AREC welcomed 16 undergraduate agriculture students on February 23, 2019 to spend spring and summer semesters in order to obtain practical experience in various sectors of agriculture provided by available opportunities and facilities within the 100-hectare farm.
- Unlike the previous years, this winter witnessed heavy rainfall pattern and most of the rivers and the springs flowed back again. The up-to-date precipitation (644 mm) exceeded the total average (503 mm) by 95 mm and the thickness of the snow accumulation on top of the mountain chains exceeded 2 meters. It is worthy to mention that AREC wells are mainly fed after snow melting and this source constitutes an essential supply for the irrigated crops during summer.
- Within the framework of AREC’s sustainable projects, the first clean technologies innovation unit (Green energy poultry house) was established as a showcase of various renewable energy applications. This project proposes a sustainable and integrated broiler production operations at AREC through the use of renewable energy (RE) sources to ensure heating and ventilation needs of the poultry house and the anaerobic digestion of the produced cow/chicken waste to produce biogas and fertilizers of improved quality.

- Aquaculture and agriculture project started on 2007 at AREC, has been developed into an integration of aquaculture with greenhouse vegetable production and the use of biological pest control to reduce spraying of harmful pesticides in order to improve water use efficiency.
- As part of the project "Testing of the cocoon technology in Lebanon", a demonstration workshop was held on April 8, 2019 at AREC. The workshop was led by Land Life representative (The creators of the technology) and included an overview of its usage with some monitoring techniques and databases to the farmers.
- Dean Mohtar and General Ghorayeb, Chief of Protection at AUB visited AREC on Monday April 8, 2019.
- The ND Traffic Consulting generously donated a solar room, known as the Village Kit to AREC. This system will be used as a model to promote green energy in the Beqaa plain and provide solutions for farmers suffering from an unreliable energy supply network. Potential future training/research with students/faculty members is also applicable.
- Dr. Asmare, short listed Candidate for the Animal Science position in the AG department, along with Dr. Abebe had the chance to visit AREC on Wednesday April 3, 2019.
- AREC was teeming with its big family on October 6, where all FAFS departments were gathered for the faculty retreat headed by Dean Rabi Mohtar and the presence of Dr. Mustapha Haidar, AREC director, FAFS chairpersons, professors, and FAFS and AREC administrative staff.
- The long-loved Harvest Day was hosted on Sunday October 7. The event was organized by the Food and Agriculture Student Society at FAFS in collaboration with AREC Director Dr. Mustapha Haidar and FAFS Student Records Officer Ms. Tharwat Haddad and sponsored by Kassatly Chtaura, Balkis, Rim Water and the food was catered by KMK group in West Beqaa.
- On October 9, Ms. Jehane Akiki ("Peace Acceleration and Farms Not Arms" Office in New York) visited AREC. The purpose of the visit was to explore ways of collaboration between FAFS-AREC and New York in order to establish a new training program for the Syrian refugees related to organic agriculture, sustainable agriculture, livelihood, composting, crop, and livestock production.
- On October 12, Dr. James Forkin (Associate Director – Study Abroad –Global Affairs) and Mr. Marik Von Rennenkampff (Travel Security Manager – Global Affairs) from UC Davis California visited AREC. The purpose of the visit was to discuss future cooperation opportunities between FAFS-AREC and UC Davis in terms of collaborative research, faculty, and students' exchange.
- On October 16 and October 17, the front yard of the AREC administration was chosen by M. Ezzat Jallad & Fils s.a.r.l Co. to hold its John Deere tractors exhibition for the first time in the Bekaa plain. For two days, AREC received more than 8 tractors and over 50 senior and small farmers who have been invited by the company.
- Dr. Aly Abu Sabaa, DG of ICARDA, Dr. Michel Afram, President and Director General of LARI, members of ICARDA BOT visited AREC on October 31st.
- On November 4, Dr. Charles Benjamin, President of the Near East Foundation and his board members along with Dr. Rabih Shibli, Director of the CCECS at AUB visited AREC.

- 100 IRADA Youth event was held at AREC on November 11. The visitors gathered and enjoyed a variety of activities ranging from hay rides and saffron harvesting. Dr. Williams, Director of International Water Management Institute in Africa and Dr. M. Keulertz, Director of Food Safety at FAFS visited AREC on Thursday November 29.
- A group of 8 German researchers including Dr. Martin Keulertz and Dr. Andreas Thiel, the Head of the international Agricultural Policy and Environmental Governance Unit, visited AREC on UniKassel-FRANKENHAUSEN.
- Dr. Haidar, AREC director, invited the staff for lunch on December 28 on the occasion of the end of year 2018.
- Attending a ceremony that was held on December 8 in the CHSC Auditorium in which 3 AREC received award pins for the 20 and 25 years of services at AREC.
- As a part of the food security program, Dr. Martin Keulertz with 14 Food Security Master Students visited AREC on October 26. The purpose of the visit was to get introduced to the latest achievements obtained from the conservation agriculture demo plots and to have an overview of the agriculture and food safety situation in the Beqaa.
- Updating the new collaboration agreement between the American University of Beirut (AUB) and the International Center for Agricultural Research in Dry Areas (ICARDA).
- Producing 2,764.00 g of dried saffron.
- As part of AREC mission, and based on its main objective Enabling Community, a field day was organized on campus on August 22, 2019.
- Invited by AREC director, neighborhood farmers, Agricultural Engineers, graduate & undergraduate students, and representatives of agricultural research centers attended AREC from 10:00 till 15:00. The journey started by a welcoming note by Dr. Haidar, followed by: Saffron techniques presentation by Mr. Nicolas Haddad; More Crop per Drop for Lebanon: Combining Aquaculture and Agriculture for Food Security presented by Dr. Imad Saoud; and ended by Managing Pests in Vegetable Production Greenhouses with *Amblyseius swirskii* and *Phytoseiulus persimilis* cultured in Lebanon by Ms. Nour Ezzedine on behalf of Dr. Abou Jawdeh.
- AREC hosted the student Bridget Ireland from St. Lawrence University N.Y. -U.S.A, as well as Imad Keniar, AUB graduate, in order to conduct their experiments to obtain their Master degree. Along with Ms. Sara Daher, a part time research assistant.

Training Workshops:

Mr. Nicolas Haddad (AREC Farm and Facilities Manager) and Mrs. Samar Sleiman (Administrative Assistant) attended AUB Title IX Training held at AUB on June 12 & 13, 2019.

Teaching:

- Sixteen AGR III students continued their spring and summer semesters at AREC
- Acquainting the students with different practical farm operations on daily basis.
- Preparing the necessary tools for different labs.
- Demonstrating the different systems of engines and the use of farm machinery.
- Providing assistance to the students in the implementation of their projects.
- Providing accommodation and teaching facilities to AUB visiting-professors and students.

- Helping the students in their undergraduate and graduate projects.
- Helping students in opening their own business in vegetable production.

Services:

- Performing various operations at the botanical garden, saffron, vineyard, apples, stone fruits, and pomegranate.
- Providing assistance to Drs. Bashour, Haidar, Farran, Saoud, and Salam to carry on their research trials.
- Assisting ICARDA staff in various operations.
- Providing accommodation to ICARDA staff & several research assistants.
- Performing various operations at the conservation agriculture plots.
- Performing various operations at the botanical garden, saffron, vineyard, apples, stone fruits and pomegranate.
- Providing assistance to UNIFERT company in their seed trials.
- Providing lodging and assistance to Dr. Beata Drexler, Dr. Wissam Melhem and 15 students in the LDEM249 students' workshop.
- Providing assistance to Mr. Elie Kareh and Mr. Antoine Menassa from the Department of Civil and Environmental Engineering in their project: Rammed Earth.
- Long-term taking care of ewes, rams and pigs for the experiment conducted by Drs. Bassam Youssef and Ibrahim Omeis (Department of Radiation Oncology, Medical Center).
- Supplying AUB community with super sweet corn, apples, peach, saffron, pepper , and potato.
- Various faculty, staff and visitors have visited and slept at AREC.

Strategic Challenges:

- Limited water supply-Tackle low water table with alternatives
- Making AREC financially sustainable
- Looking for more alternative energy production systems in order to reduce AREC's generated power
- Operating the newly rehabilitated and remodeled conventional poultry house using alternative energy

Future Goals and Plans:

- Becoming a regional hub for technology development and experimentation
- Becoming a regional reference for consultation on opportunities in renewable resources, the Water-Energy-Food-Health Nexus, and sustainability
- Converting AREC to a complete green energy center so as to become a showcase of various renewable energy applications
- Broadening the partnership base with NGOs and the private sector
- Transforming AREC into a financially stable center of excellence
- Becoming a platform for rural development
- Enhancing Ecotourism

- Digging a new well or making a huge pool to be fed by Sbat River and the available water at the different wells during winter

B. Environment and Sustainable Development Unit (ESDU)

Prepared by: Dr. Shadi Hamadeh, ESDU Director and Dr. Mabelle Chedid, ESDU Executive Officer

Personnel:

Shadi Hamadeh, PhD, director
Mabelle Chedid, PhD, executive officer
Diana Abi Said, MS, admin and financial officer
Sarah Karam, MS, monitoring and evaluation officer
Yara Sleiman, MS, food technology and food safety officer
Maya Saade, MS, project coordinator
Juliette Amidi, MS, REEF facilitator
Hind Naim, BS, communication officer
Marwa Soubra, MS, nutrition officer
Nadim Rawda, MS, field officer
Petra Chedid, BS, rural tourism and outreach officer
Omar Jarroush, BS, field and outreach officer
Yasmina Olabi, MS, food safety officer
Haydar Sleiman, MS, field officer

Highlights on ESDU Activities during 2018/2019:

ESDU received from the World Food Program (WFP) US \$979,885 to sustainably improve the skills, capacities and livelihood opportunities of vulnerable Lebanese and Syrian refugees in Northeast Baalbeck and West Bekaa. The “Climate-Smart Livelihoods Initiatives and Market Access Tailoring (CLIMAT)”, a one-year project under WFP Lebanon Country Strategic Plan 2018-2020 and WFP Program “Enhancing the livelihoods of Syrian Refugees and vulnerable Lebanese host communities through Food for Training (FFT)” was led by ESDU and implemented in partnership with Cooperation without Borders (CWB) in the West Bekaa and North East Baalbeck. It targeted more than 800 beneficiaries from the vulnerable Lebanese community and Syrian refugees and built their capacities on sustainable agricultural practices and climate smart food processing. It also offered material support, and created market linkages.

Together with the LDEM department, ESDU received a grant of €360,840 from the ENI CBC Mediterranean Sea Basin Program to implement the project MedSNAIL aims to tackle the socio-economic and environmental challenges in the agro-food sector by fostering the valorization and developing small-scale traditional agro-food value chains using enhanced market potential and socio-environmental sustainability. Project activities will build on the well-established experience, principles, and methods of SlowFood (project partner), an international grassroots organization promoting traditional food with a strong focus on biodiversity preservation.

ESDU with its partners ACTED, ABAAD and DOT received from UNDP a new grant of \$1,130,445 USD to implement their project entitled "Strengthening Women's Resilience in a Time of Crisis". The project seeks to increase vulnerable women's access to economic opportunities in South Lebanon while building stakeholders' engagement to address existing barriers and advocate for inclusive economic development planning. ESDU will specifically build the capacity of Lebanese and Syrian women on different value chains including freekeh and aromatic plants production, rural tourism, and handcrafts. Project activities are expected to start early 2020 and will stretch over 28 months.

During 2018-2019 ESDU continued empowering local and small-scale agro-food processors all over Lebanon not only through capacity building but also its marketing network and its farmers' markets "Souk aal Souk".

On the academic level, ESDU continues to support the RCODE MS program by linking the students to its development projects and activities. It also hosted several lecturers from Lebanon and abroad to share their experience in innovations in the development sector. ESDU also organized different workshops linked to CLIMAT project.

Strategic Challenges:

- Developing a FAFS Engagement strategy.
- Mobilizing adequate resources to implement the strategy in light of the current socioeconomic crisis

C. New academic program: Rural Community Development (RCODE) MS Program

Prepared by: Dr. Giuliano Martiniello, RCODE Coordinator, Diana M. Abi-Said, RCODE, Senior RA, Liaison officer ESDU/RCODE (Administrative – financial officer)

Academic Updates and Students' enrollment:

- The program offered six core graduate courses (RCOD341, RCOD342, RCOD 343, RCOD 344, RCOD305, RCOD304, and four FAFS specialized electives (AGSC 376, 389, LDEM 630, and FSEC 310), during the reporting period.
- Received a total of 48 new applications to the RCODE program: (Fall: 5applicants – Spring: 43applicants- Approved 33, rejected 15 no. of applicants)
- Fifteen graduate students are enrolled in the program for the reporting period
- Graduating students: Two thesis students, Nour El Korek and Rami Assaf, graduated in Fall 2018 and Spring 2019, respectively, and One (non-thesis) student graduated in Summer 2019 (Zeina AlOsman).
- RCODE committee discussed the issue of RCOD 343 (Statistical Methods in Agriculture), for the students who do not have a statistic background.....???
- Dr. Chalak was appointed as acting coordinator from June 26, - August 20, 2019, during summer 2019.

Personnel:

- Full-time Faculty / RCODE committee members:**

Giuliano Martiniello	Assistant Professor/ RCODE coordinator
Shady Hamadeh	Professor
Rami Zurayk	Professor
Ali Chalak	Associate Professor
Lamis Jomaa	Assistant Professor

RCODE RAs

Diana Marroush Abi-Said	Senior Research Assistant
Mabelle Chedid	RA – Co-instructor

- Graduate Fellowship Assistants (GFA)/Master Card Foundation programs (MCF) and Middle East Partnership Initiatives (MEPI)**

Sarah Zayat	Fall 2018-2019, Spring 2019, Approved for Fall 2019-2020
Nicolas Gholam	Spring 2019
Lamisse Khairallah	Fall 2017, Spring 2018, Fall 2018-2019, Spring 2019 Approved for Fall 2019-2020
Ghida Al Dirani (new)	Approved for Fall 2019-2020
Rita Rizk, new (pending confirmat	Approved for Fall 2019-2020

- MCF /MEPI Students**

Shukri Islow	MCF
Ibrahim Bahati	MCF
Hikmat Al Khansa	MCF
Rania BouSaid (fall 2019-2020)	MEPI
Aya Hamzeh (Fall 2019-2020)	MEPI

Services (Dr. Martiniello):

AUB	Other
Working Committee on the New Social Sciences Department.	
Working on extending scholarship opportunities provided by the Master Card Foundation to African Students.	
Working in close collaboration with the librarians at FAFS, to expand and develop the library collections on rural development references, particularly with regard to the MENA region	

Thesis Supervision (Dr. Martiniello) - MSc Rural Community Development

Student Name	Thesis Title
Rami Assaf	The Waste Management Value Chain in the West Beqaa: Contributions to Labor Markets and Rural Development" <i>(Completed Spring 2018-2019)</i>
Alam Janbein	Family Farming in Lebanon among challenges and opportunities: the case of Baalback – Hermel <i>(in progress)</i>
Nour Al-Korek	"Impact of Syrian conflict on water issues in Akkar, Lebanon". <i>(Completed Fall 2018-2019)</i>
Shalimar Sinno	The productive Campus: The potential of an urban agricultural initiative at the American university of Beirut, Lebanon <i>(In progress)</i>
Sarah karam	The effect of the protected areas on rural communities. Jabal Moussa Biosphere Reserve Case Study <i>(in Progress)</i>

Research: Publications, Distinctions, Events and Funding

Conferences, Special Lectures, Workshops and Travel Activity
<p>Expert Meeting: Dr. Giuliano Martiniello, attended and presented a talk at the Second Arab Watch Expert Meeting: The Right to Food- Food sovereignty as a social and political framework for change. Sept. 6-7, 2018 - Bristol Hotel – Beirut.</p> <p>Workshop: Dr. Giuliano Martiniello attended the workshop entitled: “Resistance and Transformation” organized by the Review of African Political Economy (ROAPE), Society, Work and Development (university of Witwatersrand) and Institute of Social Change (University of Johannesburg), Nov. 26-27, 2018. Johannesburg. SA.</p> <p>Workshops: Dr. Martiniello participated in the launching of the Fourth Arab Watch Report 2019 on Economic and Social Rights with a focus on the Right to Food, organized by ANND, Arab NGO Network for Development. His chapter, titled ‘Shifting the Paradigm towards Food Sovereignty in Middle East and North Africa: theoretical and practical challenges’, explored the nexus between agricultural policies and the international food system and the steps to implement a food sovereignty strategy. Amman –Jordan, June 27, 2019</p>
Funding:
<p>Dr. Martiniello received a URB Grant for a one year project (14,300USD) – entitled: <i>“The Effect of Protected Areas on Rural Community Development; Jabal Moussa Biosphere Reserve Case Study”</i> July 1, 2019 – June 30, 2020</p> <p>Students travel grant:</p>

Ibrahim Bahati has received the student travel grant for year 2018-2019
 Sarah karam is nominated for the student travel grant for year 2019-2020

Research Publications:

- Katy Jeary, Matt Kandel, Giuliano Martiniello, and Ronald Twongyirwe. Conservation and Agriculture: finding an optimal balance? Sept. 2018. In: Conservation and Development in Uganda. Sandbrook, C. and C.J. Cavanagh and D. Tumusiime (eds), (2018), London and New York: Routledge/Earthscan.
- Branch A., Martiniello. G. Geoforum Journal. Charcoal power: The political violence of non-fossil fuel in Uganda. Sept. 2018.
- Uganda: the Dynamics of Neoliberal Transformation. . Eds: Jorg Wiegratz, Giuliano Martiniello, and Elisa Greco. Publisher: Zedbooks. Nov. 2018. **Introduction:** interpreting change in neoliberal Uganda. Jorg Wiegratz, Giuliano Martiniello, and Elisa Greco. **Conclusions:** neoliberalism institutionalized. Jorg Wiegratz, Giuliano Martiniello, and Elisa Greco.
- Martiniello G. Jan. 2019. Accumulation by Dispossession and Peasant Resistance in Uganda. In: Reclaiming Africa. Edition: Advances in African Social, Economic and Political Development. Publisher: Springer
Uganda: The Dynamics of Neoliberal Transformation (Zed Books, 2018). Co-edited with Jorg Wiegratz and Elisa Greco.
- Giuliano Martiniello. Social Conflict and Agrarian Change in Uganda's Countryside First Published: 05 July 2019. Special issue: Journal of Agrarian Change. The Arrighian Approach To Agrarian Political Economy. Volume 19 - Number 3, Pages: 550-568 - Editors: Jennifer Bair, Philip A. Hough and Kevan. Journal of Agrarian Change Published by John Wiley & Sons Ltd.
- Giuliano Martiniello; Ricardo Azambuja. Contracting Sugarcane Farming in Global Agricultural Value Chains in Eastern Africa: Debates, Dynamics, and Struggles. Published July 30, 2019. Agrarian South: Journal of Political Economy. 1–24. Centre for Agrarian Research and Education for South (CARES) Reprints and permissions: in.sagepub.com/journals-permissions-india journals.sagepub.com/home/ags

Strategic Challenges:

- RCODE, through its coordinator, has been successfully implementing and will keep working on a strategy to secure scholarship options for graduate students, in partnership with private and public stakeholders
- RCODE program needs to proceed with the development of a strategy for providing an exchange program with international universities working in the field of rural development.
- The program needs to establish a form of external visiting experts' participation, international organizations and leading scholars in the field of rural development, migrations and sustainable ecologies in the Mediterranean area

- The program would benefit from an increase in funding for students' fieldwork activities that will help the program start developing an initial documentation of rural development challenges and case studies in Lebanon, to consolidate the profile of the research activities undertaken in MENA region.

V. Departmental Reports

A. Department of Agriculture (AGRI)

1- Highlights

The department of Agriculture, in step with the FAFS vision to foster the wellbeing of the people and the ecosystem they inhabit, successfully hired 3 new faculty members, and implemented its new curriculum. Gradual implementation of the new program will lead to a seamless transfer into the improved setup of graduation requirements. The learning outcomes will be evaluated and continuously reassessed to ensure the acquired skills are streamlined with the FAFS research agenda and vision as well as AUB's mission as a leading educational institution and research pioneer in Lebanon and the region.

The department produced several publications, organized workshops, and partook in events along those lines. As a part of the department's involvement in the developing rural production and farming sustainability, faculty members are keen on establishing direct relations with producers and processors like farmer's markets. Through the Environment and Sustainable Development Unit (ESDU), producers of all scales are invited to sell their produce in the FAFS area. Many students who get their first encounter with the direct farmer supply process take up the skill and excel in the circuit. The department being aware of critical agrarian approaches is adamant on providing service and advice regardless of farm size or available resources. The department's commitment to advancing sustainable agricultural practices and promoting systemic food secure policy forms the core of the research agenda. Alternative pest management is an important venue in reducing herbicide use and contamination of aquifers and water resources. The fields of natural predators and integrated pest management saw important research contributions by faculty and students. The department's research agenda aims to minimize the impact of intensive production, sine qua non for a food secure environment. The department continued its investigative research into the effect of antibiotics presence in irrigation water and extent of its absorption into arable crops. Long term effect of contaminants in irrigation water poses a prime concern if on the long term, for both health specialists and agricultural engineers alike. It is part of the research agenda and an intrinsic dimension of the WEFRAH focus.

The department successfully recruited 3 new faculty members from a pool of distinguished and experienced researchers in the field.

Dr. Sandra brings an expertise in Conservation Agriculture, a field that distinguishes AUB in the region since it was introduced to Lebanon out of the research collaboration with the Agriculture

department. Dr. Yanni's outlook will include the infrastructure, which bode well in the context of interdisciplinary collaboration between faculties at AUB. The expertise Dr. Yanni brings on crop water requirement, reduced tillage and cover crops also contribute to the department's capital in the WEFRAH initiative. Her carbon research is a well suited skill in a climate change oriented research agenda.

The department also offered the position of Horticulture to Dr. Walid El Kayal, his first rank publications in the field of biotech set the bar high. Dr. El Kayal developed a distinguished approach to sustainable research, where far reaching results and innovative trial designs can be completed without requiring all the big budget equipment. His know-how and connections in the field will be a great resource. Dr. El Kayal's expertise in grape production will also be a boon to the plan of introducing viticulture to AREC. He pointed out the transferability of these techniques to the varied requirements of the varied fruit production orchard at AREC.

Dr. Kassahun Asmari became the department's animal pathologist. He brings a prestigious teaching experience and a distinguished research career in the field of small ruminants and zoonotic disease, proving to be acritical aspect of human health and food security. The renovation of AREC and recentralization of hands-on research in the Bekaa campus is an important aspect of the department's research agenda. The strategic value and the size allow flexibility in experiment design and facilitate interdisciplinary projects, becoming a hallmark of current research philosophy.

2- Personnel

Full-time Faculty:

Isam Bashour	Professor/Interim Chair
Youssef Abou-Jawdah	Professor
Shady Hamadeh	Professor/ ESDU Director
Mirella Aoun	Visiting Assistant Professor/Assistant Research Professor
Jad Chaaban	Associate Professor
Mustapha Haidar	Professor/ AREC Director
Hadi Jaafar	Assistant Professor
Mohamad Farran	Professor
Gumataw Abebe	Assistant Professor
Giuliano Martiniello	Assistant Professor
Ali Chalak	Associate Professor
Rachel Bahn	Instructor
Sandra Yanni	Assistant Professor
Walid El Kayal	Assistant Professor
Kassahun Asmare Wondim	Associate Professor

Part-time Faculty:

Youssef Khalil	Lecturer	Fall, Spring,
Sami Saad	Instructor	Fall
Youssef Dughan	Lecturer	Fall, Spring,
Hachem El Hussein	Lecturer	Fall, Spring,
Rami Ollaik	Instructor	Fall, Spring, Summer
Mazen Tamer	Lecturer	Fall,
Amer Najm	Lecturer	Summer
Nabil Nemer	Lecturer	Fall,
George Battikha	Lecturer	Spring
Sarah Osmane	Lecturer	Fall,
Makram Bou Nassar	Instructor	Spring, Summer
Fabienne Gebara	Lecturer	Spring,
Arlette Lteif	Lecturer	Spring,
Hania Chahal	Lecturer	Spring,
Marie-Thérèse Abi Saab	Lecturer	Spring,

Full-time Staff:

Razan Dbaibo	Research Assistant
Hana Sobh	Instructor
Lina Jaber	Lecturer
Rami Elhusseini	Administrative Officer

Graduate Assistants:

Vicken Aknadibossian	Fall 2018,
Nour Ezzeddine	Fall 2018, Spring 2019
Rachel Sfeir	Fall 2018, Spring 2019
Fatme Assaad	Fall 2018, Spring 2019
Fatme Fakhreddine	Fall 2018, Spring 2019
Majd Kais	Fall 2018,
Fatima Abdallah	Fall 2018, Spring 2019
Naji Beyrouthy	Fall 2018,
Roya Mourad	Fall 2018,
Lora Saleh El Moussawi	Fall 2018, Spring 2019
Hiba Naim	Fall 2018,
Mohammad Jamil Kaddoura	Fall 2018 , Spring 2019
Imad Keniar	Fall 2018, Spring 2019?
Aya Fardoun	Fall 2018, Spring 2019
Mahmoud Fawaz	Fall 2018, Spring 2019
Walid El Hakeem	Fall 2018, Spring 2019, Summer 2019
Boushra El Masri	Spring 2019,

3- Teaching Activities: AGSC DeptFall 2018–19 Undergraduate:

Course	Credits	Enrollment	Instructor(s)
AGSC 201	2.0	37	L. Jaber
AGSC 204	3.0	18	M. El Tamer
AGSC 212 (sect. 1)	2.0	30	J. Chaaban
AGSC 212 (sect. 2)	2.0	35	Y. Khalil
AGSC 212 Recitation (sect. 1)	1.0	30	S. Saad
AGSC 212 Recitation (sect. 2)	1.0	35	S. Saad
AGSC 215	3.0	14	I. Bashour
AGSC 219 (sect. 1)	3.0	15	R. Ollaik
AGSC 219 (sect. 2)	3.0	12	R. Ollaik
AGSC 220	3.0	16	M. El Tamer
AGSC 221	3.0	18	N. Nemer
AGSC 232	2.0	15	Y. Abou Jawdeh
AGSC 232 (Lab)	1.0	15	H. Sobh
AGSC 235	2.0	22	S. Osmane
AGSC 241	3.0	11	Y. Doughan
AGSC 250	3.0	12	M. Aoun
AGSC 286	3.0	38	M. Aoun
AGSC 295	3.0	10	Y. Abou Jawdeh
AGSC 296	1.0	16	L. Jaber
AGBU 211	3.0	20	G. Abebe
AGBU 213	3.0	14	H. El Housseini
AGBU 236	3.0	16	R. Bahn
AGBU 239	0	19	R. Bahn
AGBU 248	3.0	12	G. Abebe
AVSC 220	1.5	20	M. Farran
AVSC 220	1.5	20	L. Jaber
AVSC 243	3.0	19	S. Hamadeh
AVSC 271	3.0	18	M. Farran
AVSC 275	3.0	15	L. Jaber
AVSC 281	3.0	19	M. Farran

Fall 2018-19 Graduates:

Course	Credits	Enrollment	Instructor(s)
AGSC 301	1.5	5	S. Hamadeh
AGSC 301	1.5	5	A. Chalak
AGSC 310	3.0	3	H. Jaafar
AGSC 312	3.0	7	I. Bashour
AGSC 323	2.0	5	Y. Abou Jawdeh

AGSC 323 (lab)	1.0	5	H. Sobh
AGSC 334	3.0	5	H. Jaafar
AGSC 395	1.0	7	L. Jaber
AVSC 304	3.0	3	H. Shaib
AVSC 334	3.0	3	M. Farran
AVSC 395	1.0	1	L. Jaber

Spring 2018-19 Undergraduate:

Course	Credits	Enrollment	Instructor
AGSC 201	2.0	48	L. Jaber
AGSC 202	1.5	12	H. Jaafar
AGSC 202	1.5	12	A. Lteif
AGSC 203 Lect.	1.5	20	Y. Abou Jawdeh
AGSC 203 Lect.	1.0	20	F. Gebara
AGSC 203 Lab	1.0	20	H. Sobh
AGSC 203 Lab	0.5	20	F. Gebara
AGSC 212 (sect. 1)	2.0	26	A. Chalak
AGSC 212 (sect. 2)	2.0	30	A. Chalak
AGSC 212 Recitation (sect. 1)	1.0	26	S. Saad
AGSC 212 Recitation (sect. 2)	1.0	30	S. Saad
AGSC 219 (sect. 1)	3.0	14	R. Ollaik
AGSC 219 (sect. 2)	3.0	12	R. Ollaik
AGSC 222	1.0	16	M. Haidar
AGSC 224	3.0	16	F. Gebara
AGSC 225	3.0	12	M. Keulertz
AGSC 228	3.0	16	H. Jaafar
AGSC 231	3.0	16	M. El Tamer
AGSC 253	1.5	26	F. Gebara
AGSC 253	1.5	26	H. Chahal
AGSC 265	3.0	15	I. Bashour
AGSC 278	3.0	14	G. Battikha
AGSC 284	3.0	16	M. Haidar
AGSC 299	2.0	1	I. Bashour
AVSC 220	1.5	23	M. Farran
AVSC 220	1.5	22	L. Jaber
AVSC 222	3.0	16	L. Jaber
AVSC 224	3.0	15	H. Shaib
AGBU 210	3.0	17	G. Abebe
AGBU 213	3.0	13	H. El Housseini
AGBU 240	0	21	M. Bou Nassar
AGBU 255	3.0	20	Y. Doughan
AGBU 292	3.0	19	G. Abebe

AGBU 292	2.0	19	M. Bou Nassar
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Spring 2018-19 Graduates:

Course	Credits	Enrollment	Instructor
AGSC 301	1.5	11	S. Hamadeh
AGSC 301	1.5	11	A. Chalak
AGSC 303	3.0	4	J. Chaaban
AGSC 311	2.0	3	Y. Abou Jawdeh
AGSC 311	1.0	3	H. Sobh
AGSC 376	3.0	8	A. Chalak
AGSC 384	3.0	5	J. Chaaban
AGSC 395	1.0	6	L. Jaber

Summer 2018–19:

Course	Credits	Enrollment	Instructor
AGSC 219	3.0	14	R. Ollaik
AGSC 223	2.0	10	M. Haidar
AGSC 226	3.0	10	A. Najm
AGBU 229	3.0	14	M. Bou Nassar
AGBU 236	3.0	1	J. Chaaban
AGBU 256	1.0	15	M. Bou Nassar
AVSC 226	3.0	10	M. Farran

4- Completed Theses

- **Ms. Aliaa Al Dirani** – Assessing agroecological practices influencing climate change adaptation strategies and food security: A case of smallholder farmers in Lebanon. Advisor: Gumataw Abebe June 2019
- **Mr. Andrew Traboulsi** – Profitability of organic farming in Lebanon: The Case of fruit vegetables value chain. Advisor: Gumataw Abebe and Mirella Aoun June 2019
- **Mr. Albert Ayinpoya Akafari** – Land acquisition for gold mining and its effects on smallholder farmers' livelihoods in the Talensi District of, Ghana. Advisor: Gumataw Abebe September 2019
- **Mr. Kelvin Kimani** – The Effectiveness of Food Aid on Food Availability Among the Small-Scale Pastoralists communities in Tana River County, Kenya. Advisor: Martin Keulertz June 2019
- **Ms. Hannah Nicholson** – The role of household-level food processing in the food security of Jordanian households. Advisor: Martin Keulertz, June 2019
- **Mr. Ibrahim Bahati** – Rethinking Rural Development from a Smallholder's Perspective: How has commercialization of Sugar impacted on Rural Livelihoods in Hoima, Uganda? Advisor: Giuliano Martiniello January 2019

- **Mr. Gadson Asiimwe** - Smart irrigation for sweet corn: Evapotranspiration-based or soil moisture sensor-based scheduling technique. Advisor: Dr. Hadi Jaafar Sept. 2019
- **Mr. Naji ELBeirouthy** - Trends in snow cover and snow water equivalent using remotely sensed data in Lebanon, Advisor: Dr. Hadi Jaafar Sep. 2019
- **Mr. Ghaith Amro** - Aquaculture Water in Irrigation: impact on plant growth, Advisor: Dr. Hadi Jaafar Sep. 2019
- **Ms. Mira Yehya** - Evaluation of five natural enemies: *Phytoseiulus persimilis*, *Amblyseius swirskii*, *Aphidius colemani*, *Eretmocerus erimicus* and *Beauveria pseudobassiana*, for the integrated management of greenhouse vegetable arthropod pests Advisor: Dr. Youddrf Abou Jawdah, 2019
- **Mr. Vicken Aknadibossian** - Development of Serological Detection Methods for 'Candidatus *Phytoplasma phoenicium* Advisor: Dr. Youddrf Abou Jawdah, 2019

5- Research Funding

Internal Grants: University Research Board (URB):

- Dr. Shady Hamadeh
 - Testing the resilience of small ruminant systems – case study of the West Bekaa (Year 2) \$8,000.
- Dr. Hadi Jaafar
 - Modeling daily greenhouse reference evapotranspiration under ventilated and unventilated conditions from outdoor climate, 2017-2018. \$20,000.
 - Modeling climate change-induced variations in crop suitability, yield, and water productivity of major crops in the Near East, 2018-2020. \$20,000.
- Dr. Ali Chalak
 - University Research Board (URB), AUB, Lebanon, July 1st, 2019 – June 30th, 2020. Project title: "Negotiating Agrarian Crisis in the Lebanese Margins: The Case of Baalbek-Hermel Farmers." Grant value: \$13,925.
- Dr. Giuliano Martiniello
 - Principal Investigator: The Effect of Protected Areas on Rural Communities; Jabal Moussa Biosphere Reserve Case Study, Lebanon. University Research Grant– American University of Beirut (2018-2019).

Local, Regional and International Grants:

- Dr. Abou Jawdah
 - 2017-2019 Evaluation of local entomopathogenic fungal isolate *Beauveria* for development of biologically based integrated pest management of greenhouse pests (\$ 30,000 for 2 years).
 - Dec 2014-20 Sustainable Biological Control Strategies for Growers of Greenhouse Vegetables in Lebanon (CFHF, USA).
- Dr. Abebe

- Exploring the adoption and implementation of Food Quality and Safety Management Systems in the Lebanese food supply chain, Lebanese National Council for Scientific Research (LNCSR) (\$8,620).
- Lebanese National Council for Scientific Research (LNCSR) (\$17,241) Extended Producer Responsibility (EPR) as a Waste Management System for the Lebanese Agro-Food Industry: Effectiveness, Challenges and Opportunities (Part I & II) Role: Co Investigator (PI: Mohamad G. Abiad) 11/2016 -10/2018.
- Dr. Aoun
 - Global compact Network, Turning our waste paper into nutrients for plant, 10,000USD, 2018-2019.
- Dr. Chaaban
 - European Commission: “EU MEDRESET Project” (\$140,000), 2017-2019.
 - United Nations High Commissioner for Refugees (UNHCR): “Analysis and Refinement of the Targeting Mechanisms for Food and Multipurpose Cash Assistance to Central African Republic (CAR) Refugees in the East, Adamawa and North Regions of Cameroon” with Nisreen Salti and Hala Ghattas (\$32,230), 2017-2018.
 - Economic Research Forum: ‘A Multi-dimensional measure of vulnerability among Lebanese, Palestinian and Syrian Youth in Lebanon’, with Nisreen Salti and Alexandra Irani (\$10,000), 2017-2018.
- Dr. Chalak
 - European Commission, Horizon 2020 – Research and Innovation Framework Programme and Instituto Affari Internazionali, Roma, Italy, January 1st, 2016 – December 31st, 2018. Project title: “MEDRESET. A comprehensive, integrated, and bottom-up approach to reset our understanding of the Mediterranean space, remap the region, and reconstruct inclusive, responsive, and flexible EU policies in it.” Grant value: €133,840. Co-Principal Investigator.
 - Development Alternatives, Inc. (DAI), March 1st, 2017 – December 31st, 2018. Project title: “Water Security Analysis (WSA) for Regional Water Establishments (RWEs) and Litani River Authority (LRA).” Grant value: \$165,000. Co-Investigator.
 - Lebanese National Council for Scientific Research (CNRS), November 1st, 2016 – October 31st, 2018. Project title: “Extended Producer Responsibility (EPR) as a Waste Management System for the Lebanese Agro-Food Industry: Effectiveness, Challenges and Opportunities.” Grant Value: LBP26,000,000. Co-investigator.
- Dr. Farran
 - Lebanese National Council for Scientific Research for 2 years with a budget of 44,000,000 LL “Could the high cannabidiol low THC industrial hemp enhance the livelihood of farmers in the Beqaa region?”
- Dr. Jaafar
 - Smart Irrigation using remote sensing and ML, Google.org –Tides, Foundation Lead PI (2019-2022) \$1,045,000.
 - Integrating time-series ET, mapping into an operational, irrigation management, framework (ITSET) IHE-Delft DUPC2, Netherlands.
 - Single PI \$115,000 2019-2021

- Characterizing Field-Scale Water Use, Phenology and Productivity in Agricultural Landscapes using Multi-Sensor Data Fusion; NASA Grant 17-LCLUC17-0002- Sub-awarded by USDA (2018-2021), \$654,000 (Total; AUB PI share: \$64,000).
- Assessing the water – energy nexus in the Beqaa Valley in Lebanon by estimating groundwater depletion using remote sensing; Munib and Angela Masri Institute of Energy and Natural Resources; (2018-2020) \$13,000.
- Developing a Global Design Team Approach for Interdisciplinary Learning at the Faculty of Agricultural and Food Sciences; AUB Center for Teaching and Learning – CoI 2018 \$4000.
- Energy Efficient Sensor Design for Precision Agriculture Applications using RF Wake-up and Harvesting; Lebanese National Center for Scientific Research. L-CNRS- Co-I (2018-2020) \$34,000.
- Regents of the University of California - Davis. “GREENER CITIES ARE COOLER CITIES: Using Vegetated Green Infrastructure to Mitigate Urban Micro-climates in Desert”. Co-Investigator, PI: Yasser Abu Nasr. 2016-2018. \$100,000.

6- Publications

* Corresponding author

- Dbaibo, R., **Bashour, I.***, **Hamadeh, S.**, & **Toufeili, I.** (2019). Uptake of Cd, Pb, and Ni by *Origanum syriacum* produced in Lebanon. *Environmental Geochemistry and Health*. doi: 10.1007/s10653-019-00383-7.
- Adela, F. A.*, Aurbacher, J. & **Abebe, G. K.** (2019). Small-scale irrigation scheme governance - poverty nexus: Evidence from Ethiopia. *Food Security*, 11(4), 897-913. doi: 10.1007/s12571-019-00953-8.
- **Farran M.T.***, Kais M.G., Ramadan N.M., **Shaib H.A.**, Kaddoura M.J., Jaroush O.S. (2019). Study of Interaction Between AviPro® *Mycoplasma gallisepticum* (MGF) and Pulmotil®-AC in Broiler Breeder Pullets. *Journal of Veterinary Science & Technology*, 10(5): 585.
- Ramadan, N.M., **Farran, M.T.**, Kaouk, Z., **Shaib, H.** 2019. Impact of dietary methionine on respiratory tissue integrity and humoral immunity of broilers challenged with *Mycoplasma gallisepticum* and treated with Pulmotil AC®. *Journal of Applied Animal Research*, 47(1): 552-559.
- **Jaafar, H. H.***, Ahmad, F. A., & El Beyrouthy, N. (2019). GCN250, new global gridded curve numbers for hydrologic modeling and design. *Scientific Data*, 6(1), 1-9. doi: 10.1038/s41597-019-0155-x.
- **Martiniello, G.** (2019). Social conflict and agrarian change in Uganda's countryside. *Journal of Agrarian Change*, 19(3), 550-568. doi: 10.1111/joac.12306.
- **Martiniello, G.***, & Azambuja, R. (2019). Contracting sugarcane farming in global agricultural value chains in Eastern Africa: Debates, dynamics, and struggles. *Agrarian South: Journal of Political Economy*, 8(1–2), 208–231. doi: 10.1177/2277976019851955.
- Katy Jeary, Matt Kandel, **Giuliano Martiniello**, and Ronald Twongyirwe. Conservation and Agriculture: finding an optimal balance? Sept. 2018. In: Conservation and Development in

- Uganda. Sandbrook, C. and C.J. Cavanagh and D. Tumusiime (eds), (2018), London and New York: Routledge/Earthscan.
- Branch A., **Martiniello, G.** Geoforum Journal. Charcoal power: The political violence of non-fossil fuel in Uganda. Sept. 2018.
 - Uganda: the Dynamics of Neoliberal Transformation. . Eds: Jorg Wiegratz, **Giuliano Martiniello**, and Elisa Greco. Publisher: Zedbooks. Nov. 2018. **Introduction:** interpreting change in neoliberal Uganda. Jorg Wiegratz, **Giuliano Martiniello**, and Elisa Greco. **Conclusions:** neoliberalism institutionalized. Jorg Wiegratz, Giuliano Martiniello, and Elisa Greco.
 - Hmede, Z., Alhaj Sulaiman, A. A., **Jaafar, H.**, & **Kassem, I. I.** (2019). Emergence of plasmid-borne colistin resistance gene mcr-1 in multidrug-resistant Escherichia coli isolated from irrigation water in Lebanon. *International Journal of Antimicrobial Agents*, 54(1), 102-104. doi: 10.1016/j.ijantimicag.2019.05.005.
 - Mourad, R., **Jaafar, H. H.***, & **Daghir, N.** (2019). New estimates of water footprint for animal products in fifteen countries of the Middle East and North Africa (2010–2016). *Water Resources and Industry*, 22. doi: 10.1016/j.wri.2019.100113.
 - Mardigian, P., **Chalak, A.**, Fares, S., Parpia, A., El Asmar, K., & Habib, R. R.* (2019). Pesticide practices in coastal agricultural farms of Lebanon. *International Journal of Environmental Health Research*, 1-16. doi: 10.1080/09603123.2019.1634797.
 - Habib, R. R.*, Hojeij, S., Elzein, K., & **Chaaban, J.** (2019). Self-rated health and relative socioeconomic deprivation in the Palestinian refugee communities of Lebanon. *Journal of Immigrant and Minority Health*, 21(6), 1257-1265. doi: 10.1007/s10903-019-00869-7.
 - Abdallah, C., & **Jaafar, H.*** (2019). Data set on current and future crop suitability under the Representative Concentration Pathway (RCP) 8.5 emission scenario for the major crops in the Levant, Tigris-Euphrates, and Nile Basins. Data in Brief, 22, 992-997. doi: 10.1016/j.dib.2019.01.033.
 - **Abou-Jawdah, Y.***, Aknadibossian, V., Jawhari, M., Tawidian, P., & Abrahamian, P. (2019). Real-Time PCR protocol for phytoplasma detection and quantification. In R. Musetti & L. Pagliari (Eds.), *Phytoplasmas: Methods and protocols* (pp. 117-130). New York, NY: Humana Press.
 - Hammad, E. A. F.*, Abbass, A., Abbass, M., Haidar, Z. M., El-Chemali, J., **Abou-Jawdah, Y.**, & Ibrahim, L. (2019). Bioactivity of indigenous Melia azedarach extracts against the tomato leafminer, Tuta absoluta. *Journal of Agricultural Science and Technology A*, 9, 8-25. doi: 10.17265/2161-6256/2019.01.002.
 - Daher S., **Abou Jawdeh Y.**, Haidar M., Abou Haidar A., Parker B., Skinner M. and Saoud I. P. 2019. Integrating Agriculture with Aquaculture and Biological Pest Management – Does it Work? *World Aquaculture* 50 (4): 58-61”.
 - **Jaafar, H. H.***, & Ahmad, F. A. (2019). Time series trends of Landsat-based ET using automated calibration in METRIC and SEBAL: The Bekaa Valley, Lebanon. *Remote Sensing of Environment*. doi: 10.1016/j.rse.2018.12.033.
 - Manja, K., & **Aoun, M.*** (2019). The use of nets for tree fruit crops and their impact on the production: A review. *Scientia Horticulturae*, 246, 110-122. doi: 10.1016/j.scienta.2018.10.050.

- **Martiniello, G.** (2019). Accumulation by dispossession and peasant resistance in Uganda. In S. Moyo, P. Jha, & P. Yeros (Eds.), *Reclaiming Africa: Scramble and resistance in the 21st century* (pp. 183-201). Singapore: Springer.
- **Chalak, A.,** Diab, M., Kassem, I. I., & Abiad, M. G.* (2019). Qualitative and quantitative cues in consumers' valuation of food safety: Evidence from Lebanon. *Journal of Food Safety*, 39(3), e12632. doi: 10.1111/jfs.12632.
- **Jaafar, H. H.***, & Ahmad, F. A. (2019). Determining reference evapotranspiration in greenhouses from external climate. *Journal of Irrigation and Drainage Engineering*, 145(9). doi: 10.1061/(ASCE)IR.1943-4774.0001404.
- **Jaber, L. S.***, Duvaux-Ponter, C., **Hamadeh, S. K.**, & Giger-Reverdin, S. (2019). Mild heat stress and short water restriction treatment in lactating Alpine and Saanen goats. *Small Ruminant Research*, 175, 46-51. doi: 10.1016/j.smallrumres.2019.04.004.
- Mardigian, P., **Chalak, A.**, Fares, S., Parpia, A., El Asmar, K., & Habib, R. R.* (2019). Pesticide practices in coastal agricultural farms of Lebanon. *International Journal of Environmental Health Research*, 1-16. doi: 10.1080/09603123.2019.1634797.

Abstracts and Conference Proceedings

- Chalak, A. (2019). 'Progress on WP5: Agriculture and Water.' Oral presentation at the MEDRESET Final Review Meeting, organized by the Italian International Affairs Institute (IAI), Rome, Italy, 22-23 July, 2019.
- Mattar, L., Abiad, M., Diab, M., Chalak, A. & Hassan, H. (2019). 'Attitudes and behaviors shaping household food waste generation: Lessons from a developing country.' Oral presentation at the 2019 Annual Meeting of the Institute of Food Technologists (IFT), New Orleans, USA, 2-5 June, 2019.
- Chalak, A. (2019). 'Political economy trends and challenges in the MENA Region.' Oral presentation at the joint MEDRESET and MENARA dissemination and discussion workshops on 'Policies and Politics of EU-MENA Relations', organized by the Italian International Affairs Institute (IAI) and Egmont Institute, Brussels, Belgium, 6 March, 2019.
- Martiniello, G. 2019. Shifting the paradigm, moving towards food sovereignty in the MENA region: theoretical and practical reflections (translated in Arabic and English), in Arab Watch Report on the Right to Food. Arab Network of NGOs for Development: Beirut.
- Martiniello, G. and R. Riachi. 2019. The political economy of Arab food systems under global food regimes, in ArabWatch Report on the Right to Food. Arab Network of NGOs for Development: Beirut.
- Martiniello, G. Shifting the paradigm towards food sovereignty: theoretical and practical reflections. International Conference Food Sovereignty, Colony and Frontier, Ramallah 14-15 October 2019.
- Martiniello, G. The expanding sugarcane frontier in Northern Uganda: social and ecological implications. International Conference Rethinking Sustainable Development from Northern Uganda, University of Gulu, 11-12 April 2019.
- Yanni, S.F., P. Rajsic, C. Wagner-Riddle, and A. Weersink. Best management practices for Greenhouse Gas Mitigation in Ontario Cropland – Synthesis of Knowledge. Annual Meeting of the Canadian Society of Soil Science. June 10 – 14, 2018, Niagara Falls, Ontario, Canada.

- M Anderson, F Gao, C Hain, B Kustas, J Alfieri, Y Yang, J Otkin, H Jaafar, Characterizing Field-scale Water Use, Phenology and Productivity in Agricultural Landscapes Using Multi-sensor Data Fusion: Annual Project Progress Report (80NSSC18K0483), University of Wisconsin--Madison, Space Science and Engineering Center.

7- Services

- Dr. Abebe
 - Reviewer for the following journals: 1. World Development 2. Agricultural Systems 3. Food Policy 4. Food Security 5. British Food Journal 6. Journal of Agricultural Science and Technology 7. African Journal of Agricultural Research.
- Dr. Abou Jawdah
 - 2011-present, Member of the Pesticide Scientific committee, Ministry of Agriculture.
- Dr. Martiniello
 - Editorial Assistant for the Agrarian South: a Journal of Political Economy (2016-present).
 - Contributing Editor for the Review of African Political Economy (2011-present).
 - Chairperson of Master of Science in Rural Community Development, American University of Beirut (2016-present).
 - Faculty of Agricultural and Food Sciences Research Committee (2016-present).
 - Member of the IIPPE - Africa Group - (International Initiative in Promoting the Study of Political Economy).
 - Journal Refereeing: Journal of Peasant Studies, Journal of Agrarian Change, Journal of Rural Studies, Third World Quarterly, Geoforum, Community Development Journal, Sustainability, Land Use Policy, Review of African Political Economy, Canadian Journal of Development Studies, Journal of Contemporary African Studies, Africa Security Review.
- Dr. Chalak
AUB
 - Member of the Interfaculty Committee on Capacity Building in Food Security, Faculty of Agricultural and Food Sciences. (September 2018 – Present)
 - Acting Coordinator of the Rural Community Development (RCODE) M.Sc. Program, Faculty of Agricultural and Food Sciences. (February 2018 – August 2018 & June 2019 – August 2019)
 - Member of the Advisory Committee for the “Integrated Shelter and WASH response to meet basic needs of vulnerable families: Assessing refugee shelter modalities applied in three localities in Lebanon”, Issam Fares Institute for Public Policy and International Affairs, Save the Children (March 2018 – September 2019)
 - Member of the Curriculum Committee for the AUB-EARTH Global Master’s Program (GMP) in Health and Sustainable Development (October 2016 – Present)
 - Member of the University Committee on Students Affairs (UCSA) (2015 – Present)

- Member of the Senate Steering Committee (SSC) (2018 – Present)
- Member of the University Senate committee (Fall 2014 & 2015 – Present).
- Member of the University Library Committee (2013 – 2015 & 2017 – Present)

Public service

- Associate Editor, New Medit: Mediterranean Journal of Economics, Agriculture and Environment, May 2019 – Present.
 - Member of steering committee to launch a competition on “Participatory Land Use Planning in Chekka and its Koura surroundings” organized by Public Works, June 2019 – Present.
 - Co-organizer of the workshop on “Promoting Environmentally Sustainable Transportation”, Faculty of Agricultural and Food Sciences, ACTED Lebanon and Lebanese Hybrid Automotive Club, American University of Beirut, 20 October 2018.
 - Vice-president of the Executive Committee of AUB Faculty United, October 2017 – January 2020.
- Dr. Aoun
 - AUB representative in two technical committees at the Ministry of agriculture of Lebanon (MoA).
 - WEFRAH coordinator
 - SDGs focal point at AUB
 - Dr. Bashour
 - AUB
 - Chair of the AUB admissions committee
 - Other
 - Supervise the soil and water laboratories, interpret results, and give recommendations to farmers on fertilization programs and problem solving.
 - Dr. Farran
 - Advisor to the Minister of Agriculture, Republic of Lebanon, February 1, 2017 to date
 - Dr. Chaaban
 - AUB
 - Undergraduate Coordinator for the Agribusiness Program (2009-present).
 - Other
 - Research Fellow (2015-present), Economic Research Forum, Cairo, Egypt
 - Research Associate (2014-present), Lebanese Center for Policy Studies
 - Member of the Advisory Board (2015-present), Co-Opinion Network, Istanbul, Turkey
 - Network member, Migration Policy Centre, Robert Schuman Centre for Advanced Studies, European University Institute (EUI), Italy (2012-present).
 - Associate Researcher, Toulouse School of Economics, GREMAQ-INRA, France (2005-present).
 - Dr. Hamadeh

- AUB
 - RCODE Committee
 - Food Security Committee
 - Advisory Committee
 - AREC Task Force Committee
- Other
 - Member in the International Goat Association.
 - Reviewer to many scientific journals including; Small Ruminant Research, Australian Journal of Experimental Agriculture, Jordan Journal of Agricultural Sciences, Turkish Journal of Veterinary and Animal Sciences, and others.
- Dr. Jaafar
 - AUB
 - Member of AUB Board of Graduate Studies (2016-2018)
 - Chair, FAFS Research Committee (2016-2018)
 - Water Specialization at the Pro-green Online Diploma- Advisor (2014-2020)
 - Member (Graduate Studies Committee) (2016-2018)
 - Task Force for Scholarly Concentration Clerkship at the Faculty of Medicine, Faculty representative 2018-2019
 - REP-Steering Committee; Member, 2016-2018
 - Other
 - Member, Scientific Committee - Abdel Al Foundation (2016 - Present)
 - Member, “ National committee to Combat desertification and Climate change mitigation”, Ministry of Agriculture Member, (2015- Present)
- Dr. Haidar
 - AUB
 - AREC undergraduate coordinator
 - Member in the Administrative and Student Affairs Committees
 - Other
 - Chairman of the National Committee of Conservation Agriculture, 2013-Present
 - Member in the National Committee of Organic Agriculture, 2012-Present
 - Provides daily services to the local community

8- Participation in Workshops, Proposals, Meetings and Conferences

- Dr. Martiniello
 - Land enclosures, agricultural commercialization and contract farming in Uganda and Tanzania, International Workshop, ‘Structural Transformations in Africa: radical political economy and strategic industrialization’, Accra, 13-14 November 2017.
 - Workshop entitled: “Resistance and Transformation” organized by the Review of African Political Economy (ROAPE), Society, Work and Development (university of

- Witwatersrand) and Institute of Social Change (University of Johannesburg), Nov. 26-27, 2018. Johannesburg. SA.
- Participated in the launching of the Fourth Arab Watch Report 2019 on Economic and Social Rights with a focus on the Right to Food, organized by ANND, Arab NGO Network for Development. His chapter, titled 'Shifting the Paradigm towards Food Sovereignty in Middle East and North Africa: theoretical and practical challenges', explored the nexus between agricultural policies and the international food system and the steps to implement a food sovereignty strategy. Amman –Jordan, June 27, 2019
 - Presented his book titled, "Uganda: The Dynamics of Neoliberal Transformation" (ZedBooks 2019) at Makerere University, 15 April 2019.
 - Attended and presented a talk at the Second Arab Watch Expert Meeting: The Right to Food- Food sovereignty as a social and political framework for change. Sept. 6-7, 2018 - Bristol Hotel – Beirut.
 - Dr. Chalak
 - 'School and community drivers of child diets in Arab cities; identifying levers for intervention.' Oral presentation at the Social Science Experimental Development Workshop, American University of Beirut, Beirut, Lebanon, 23-24 February 2018.
 - 'Effectiveness and Potential of European Trade and Assistance Policies in the Fields of Agriculture, Water and Rural Development: The Case of Lebanon.' Oral presentation at the MEDRESET conference on Resetting Mediterranean Relations, organized by the Italian International Affairs Institute (IAI), Beirut, Lebanon, 4 June 2018.
 - Dr. Jaafar
 - USAID ASHA "Integrated Water Resource Management for Semi-arid Condition: A Demonstration Project at AUB's Advancing Research Enabling Communities Center (AREC)" – preliminary approval received
 - Dr. Bashour
 - USAID Agriculture and Rural Empowerment (ARE) Activity: FAFS-AUB
 - Dr. Aoun
 - Participated in the workshop on Good Agriculture Practices that took place in Istanbul, Turkey August 11 and 12, 2018
 - Organized WEFRAH Design thinking workshop
 - Dr. Haidar
 - USAID ASHA "Integrated Water Resource Management for Semi-arid Condition: A Demonstration Project at AUB's Advancing Research Enabling Communities Center (AREC)" – preliminary approval received
 - Coordinated and organized the AREC Day, AREC Night and Harvest Day at AREC
 - Dr. Hamadeh

- Moderated the session on the “Culture of sustainability and the advocacy for preserving the environment”, at the Educational Innovation conference organized by the Rafik Hariri Foundation, Beirut, November 25 2018.
- Dr. Abou Jawdah
 - Participated in 4 workshops organized by FAO in the Bekaa plain and one in Beirut

9- Consultancies

- Ali Chalak
 - Customer Research (2019 Price Review) – Affinity Water, UK, March 2019.
 - Final Performance Evaluation of the Lebanon Industry Value Chain Development (LIVCD) Project – InfoPro S.A.L. and Social Impact, Lebanon, August – October-November 2018.
 - Assessment of The Agricultural Sector in Zgharta/Ehden Village In North Lebanon – Renée Moawad Foundation and UNDP, Lebanon, May – September 2018.
- Youssef Abou Jawdah
 - 2010-present, Scientific consultant on pesticide registration Committee, Lebanese Ministry of Agriculture
 - Scientific consultant for the Lebanese Standards Institution (LIBNOR), Ministry of Industry, on establishing Maximum Residue Limits (MRLs) for pesticide residues in Lebanon
- Hadi Jaafar
 - Remote Sensing Training for grapevine farmers in the Bekaa (2018)

10- Strategic Challenges

- Streamline the new curriculum program learning outcomes with the ABET categories
- Promote the specific employability features that FAFS accords its graduates, in both Agribusiness and Agriculture
- Explore effective methods in online training and other adaptive approaches in light of the emergent COVID-19 situation

B. Department of Landscape Design and Ecosystem Management (LDEM)

Prepared by: Dr. Rami Zurayk, Professor & LDEM Chairperson (until January 2020), Dr. Yaser Abunnasr, Associate Professor & LDEM Chairperson (effective January 2020) and Ms. Nadine Modad, LDEM Administrative Officer

1- Highlights

LDEM strives to lead in the education of environmental design & management in the region graduating ethically, socially, and environmentally responsible designers and scientists. Two programs are currently offered by LDEM: A Bachelor of Landscape Architecture (BLA) with a Diploma of Ingenieur Agricole; and a Master's of Science in Environmental Sciences with a major in Ecosystem Management (ECOM) which is part of the Interfaculty Graduate Environmental Sciences Program (IGESP). During Academic Year 2018/2019, the Department consisted of eight full-time faculty members. In 2018-2019, 66 BLA undergraduate students and 14 MSc ECOM students were registered; LDEM, also, graduated 20 BLA students. Faculty research themes included agrarian transformations and land use change; natural and human disaster assessment and planning; green infrastructure and climate change; conservation of native flora; socio-spatial concerns in healthy community design; landscape design and planning; and cultural and spiritual landscapes.

2- Department Academic Activities

The following tasks were completed during the academic year 2018-2019:

- **Program Learning Outcomes (PLOs) and Course Learning Outcomes (CLOs) assessment:** Direct and indirect assessment of program and course learning outcomes were carried at the end of Fall 2018/2019 and at the end of Spring 2018/2019. Assessment reports for both terms were submitted to the Dean's office.
- **Curriculum adjustments:** The Landscape Management course (LDEM 265) which has been reintroduced to the BLA curriculum as a required course was re-offered for the first time during Spring 2018/2019 to LDEM III students.
- **BLA program registration status:** Further to the two program reviewers visits in late April/early May 2018, Dr. Susan Kelly Shannon (program reviewer 1), professor of urbanism at the Department of Architecture, Faculty of Engineering at KU Leuven, Belgium and Dr. John Francis Ahern (program reviewer 2), professor of landscape architecture and urban planning at the University of Massachusetts Amherst, NYSED addressed some inquiries to the department and the department clarified them in December 2018. In July 2019, LDEM received the decision of NYSED for final approval and registration of the BLA program.
- **BLA program accreditation status:** In March 2019, Y. Abunnasr (BLA coordinator) was informed by the ASLA/LAAB (Landscape Architecture Accreditation Board) that the BLA program was approved to go ahead with the full accreditation application process. When accredited, our program will be the first to be accredited outside the USA. The same self-study used for program re-registration was updated during Fall 2019/2020 based on the 2018/2019 academic year and based on ASLA requirements. It was submitted for ASLA/LAAB accreditation in December 2019/2020. The department prepared for the accreditation visit which was anticipated in March-April 2020 but was postponed tentatively to Fall 2020/2021 due to the COVID-19 pandemic crisis.
- **General Education courses re-certification:** 'Landscape Architecture History I' -LDEM 207 (Social Sciences List I), 'Landscape Architecture History II' - LDEM 208 (Social Sciences List I), 'Contemporary Issues in Landscape Architecture' LDEM 260 (Humanities List II), 'Soils in

the Landscape' LDEM 217 (Natural Sciences), ' Water and the Environment' LDEM 230 (Natural Sciences) all received renewal for three years as GE courses.

- **Tara Kanj, third LDEM student to win “The Nehme Moujaess Student Award in Landscape Architecture”:** Final year LDEM student, Ms. Tara Kanj, was selected as the most deserving senior Landscape Architecture student for AY 2018/2019 based on her final year project entitled ‘Ecological Synergies: The Adaptive Transformation of the Ouzai coastal strip’ that is aligned with FAFS vision and mission. Ms. Kanj was also granted “first look” placement and recruitment consideration at Terraverde, Dubai, as well. The department with approval of Mr. Moujaess set the criteria for the selection of the best project effective May 2017. Four shortlisted candidates were also selected and presented with certificates of recognition. These students were (in alphabetical order): Aya Hamze, Thea Maria Maroun, Ghida Sbeity and Sarin Mary Semerjian. The Nehme Moujaess Student Award in Landscape Architecture was presented to Ms. Kanj by Dr. R. Zurayk, Chair of LDEM and Dr. R. Mohtar, Dean of FAFS, during the annual FAFS Graduate Reception held on May 27, 2019 at Charles Hostler auditorium where FAFS celebrated the achievements of all its graduating students and awardees.

New Academic Programs:

- **Proposal of a Master of Landscape Architecture (MLA) program:** The MLA proposal lead by M. G. Trovato with significant contribution by LDEM administrative staff was finalized and submitted to FAFS Dean during early December 2018. The program was benchmarked with similar ASLA accredited programs across the US. It was processed through the proper university channels in Fall 2019/2020.
- **Proposal for a New Undergraduate Program:** S. Talhouk is preparing a proposal for a new undergraduate program to be offered by LDEM upon approval. The **suggested** program is a B.Sc. in Eco-tourism. Being a unique program in Lebanon, it is expected to attract a good number of students. Submission of the proposal through the proper channels is expected in AY 2020/2021.

Faculty activities:

- **Periodic Paid Research Leave:** S. Talhouk was approved for a Periodic Paid Research Leave during Fall 2018/2019. The leave was spent at the Center for Contemporary Arab Studies (CCAS) at Georgetown University, Washington, D.C., USA. The title of her research was “Nature in Fairuz song lyrics: A thematic analysis”. The objective of this leave was to gain insight into knowledge, perceptions, and attitudes towards nature in the rural community of Mount Lebanon during the 1950s and 1960s by evaluating the representation of nature in Fairuz song lyrics. Provisions were taken by the department to cover for S. Talhouk’s absence.
- **Faculty awarded Short-Term Faculty Development Grant:**
 - M. Madani was awarded a short-term faculty development grant to attend “Aging and Society International Conference” and present his accepted abstract entitled “Travel Behavior and Struggles over Older Adults’ Accessibility: Case of Beirut Pedestrian Safety”. The conference was held in Toyo University, Tokyo, Japan from September 17 to September 20, 2018.

- M. G. Trovato was awarded a short-term faculty development grant to attend the '11th International Forum on Urbanism (IFOU) Congress 2018 'Reframing urban resilience implementation: aligning sustainability and resilience' and present her accepted abstract 'Landscape, community and resilience: migration and inclusive cities'. The Congress was held in Barcelona, Spain, at the Universitat Internacional de Catalunya (UIC) from December 10 to December 12, 2018 and was organized by the Urban Resilience Research Network, the School of Architecture of UIC Barcelona and UNHabitat.
- Y. Abunnasr was awarded a short-term faculty development grant to present his research at UC Davis, California, from March 4 to 5, 2019; he also attended and presented two accepted abstracts during the yearly conference organized by the Council of Educators in Landscape architecture (CELA) from March 6-9, 2019 and hosted by UC Davis in Sacramento, California, USA.

Public Lectures and Seminars

- **Public Lecture on Works and Philosophy:** LDEM in collaboration with the Lebanese Landscape Association (LELA) organized a public lecture by Kamel Louafi entitled 'Works and Philosophy', which was held on October 24, 2018. Kamel Louafi is an international landscape architect from Germany. He presented his work philosophy as well as his approaches and methods.
- **Public Lecture on Forestscaping:** As part of the FAFS Lecture Series, and in collaboration with AUB's Neighborhood Initiative and theOtherDada [integrated consultancy and architecture], LDEM organized on April 1, 2019, an open lecture entitled "Forestscaping: How to Bring Back Our Lost Forests in Cities" by Mr. Shubhendu Sharma, Eco-entrepreneur, Founder, and Director of Afforestt. 'Afforestt' is a for-profit enterprise established in India in 2011 and devoted to planting native forests for all kinds of clients, from farmers to corporations to city governments. In his talk, Shubhendu Sharma discussed the Miyawaki method of afforestation and the mission of his enterprise 'Afforestt' to bring back native forests, specializing in making natural forests of native species in urban landscapes. Mr. Sharma was visiting Beirut to work on the Beirut River Urban Reforestation Pilot Project as part of Beirut RiverLESS initiative by theOtherDada.
- **Public lecture and book launch 'A Landscape Approach: Between Theory and Practice':** LDEM hosted at FAFS the lecture and book launch event 'A Landscape Approach: Between Theory and Practice' on May 31, 2019. Using a series of global case studies at the intersection of practice and academia to highlight the need for a landscape approach focusing on the international practice work of Hideo Sasaki. The event, sponsored by the Lebanese Landscape Association (LELA), featured presentations by Swiss Landscape Architect Thomas Nideroest, co-founder of the think tank 'International Landscape Collaborative', and Dima Rachid (LDEM alumna, class of 2010), a Lebanese landscape architect, urbanist, and design researcher.

Involvement in interdisciplinary and interfaculty activities

Faculty members of the department were actively involved in university wide centers, programs and activities.

- **Lebanese Landscape Association (LELA):** Two of LDEM full time faculty members (N. Al-Akl and M. G. Trovato) continue to be part of LELA activities lead by LDEM associate faculty J. Makhzoumi, president of LELA.
- **AUBotanic:** the department (S. Talhouk) continues to lead this university wide initiative, which was officially launched in May 2016 as part of AUB's 150th anniversary celebrations. In addition to S. Talhouk, the committee consists of 25 other members from different faculties and units at AUB in addition to AUB friends.

Department outreach activities and community involvement

- **Inauguration of Municipal Garden of Bikfaya-Mhaidtha:** The Municipal Garden of Bickfaya-Mhaidtha, designed and coordinated by **N. Al-Akl**, is expected to enhance and promote public spaces and everyday community landscapes as a result of increased exchange between academics in landscape architecture and local stakeholders. The project highlights the cultural and natural heritage of the site by preserving its local character. The design advances inclusion, enhances accessibility, and provides spaces for all ages. The new landscape redefines the relationship between the public spaces of the library and playground. The design relies on a palette of restrained, local materials and native plants: a strategy that increases awareness of the natural heritage and historic trees minimizing maintenance and the demand for water and other human or natural resources.
- **New York-Beirut Briefing: Y. Abunnasr** participated in the New York-Beirut Briefing held on November 28, 2018 and titled "How Communities Imagine the Sea and How the Sea Creates Communities". The briefing is a recent initiative by AUB to spread the research of Faculty in North America. Faculty members and collaborators in Beirut and New York give presentations on a specific topic followed by a group discussion. Y. Abunnasr gave a presentation and managed the discussion in Beirut. The presentation titled "The Shoreline as a Sink, Source, Habitat, and Conduit" presents a conceptual understanding of the shoreline that emanates from a landscape ecological understanding of the shoreline as the space and demarcation line of flows between and across sea and the land. This work also builds on previous design studio teaching at the department of Landscape design and Ecosystem Management and the service work conducted with Dr. Mona Fawaz and Mr. Habib Debs (from MSFEA) on the development of a planning proposal for the coastal area of Beirut.
- **A piece of AUB's history and Beirut's nature – on the road to transformation:** An open day was held at the Anglo-American Cemetery (AAC) in Furn El Shebak on October 2018 in an effort to further preserve AUB's culture and heritage, Lebanon's natural ecosystem, and the historic Anglo-American relations with Lebanon. Organized by the Anglo-American Association, with members from AUB including **N. Al-Akl** and the UK and US embassies, the event aimed to promote a new vision for a green, sustainable space in Beirut with a rich cultural and ecological significance within the city. According to N. Al-Akl whose research interest includes spiritual sites and healing landscapes, this event aimed to raise awareness around the AAC as a cultural and natural heritage site and promote its future vision as a green urban space and multifunctional landscape that is at once a peaceful place for bereavement, a beautiful garden for contemplation, a place for commemoration, and a conservation site.

- **Annual Spring Plant Sale:** M. Fabian and LDEM I students organized as part of an experiential learning session in the introductory horticulture course (LDEM 211), the department's annual plant sale in front of AUB's West Hall on April 12, 2019. The sales generated are deposited in the department's revolving fund to sustain experiential learning activities in landscape horticulture.
- **LDEM students win at the AUBotanic Ladybug competition:** The AUB Botanic Garden Committee (AUBotanic), announced the winners of the Ladybug Hotel Competition in its annual spring event on May 21, 2019. The Ladybug Hotel Competition engaged artists, designers, ecologists, entomologists, and members of the community at large, to design hotels for ladybugs. The hotels, installed around the AUB campus, support ecological diversity in a densely concrete urban environment. The team of Aya Hamze, Rania Bou Said, and Farah Bou Ghanem, all final year landscape architecture students, received the first prize check, worth \$2000, for their original design. Second prize (\$1500) went to a team of second year landscape architecture students including Yasmeena Farajallah, Yara Sleem, Lujain Maddah and Aya Khoury who presented functional, aesthetically pleasing, easily reproducible designs. The third prize went to FAFS alumna and landscape architect Raya Rizk, who was awarded a check in the amount of \$1000. During the event, FAFS Associate Dean Ammar Olabi delivered an eye-opening speech about the relevance of the Ladybug Hotel Competition in today's world, where insect populations face major decline. S. Talhouk, founding chairperson of AUBotanic, announced recent inductees into their Docent Program, which trains volunteers to guide visitors, contribute to planning botanical activities, or help in managing the garden.
- **FAFS – AUB planting the seeds of hope:** FAFS, in collaboration with the Nature Conservation Center (NCC), the Office of Development, and the Communication Office, initiated on April 7, 2019 its first AUB One Day Planting the Seeds of Hope in Dhour Al Abadie, Mount Lebanon. As part of the “30 million campaign” of the Ministry of Agriculture about conservation and management of natural areas, a million oak trees and seeds will be planted over the next 5 years. More than 100 AUB faculty members, staff, students and their families, and high school students joined Aley Red Cross and Dhour Al Abadie Municipality members by planting oak seeds in Dhour Al Abadie preserved land. The Seeds of Hope campaign is led by S. Talhouk.
- **Landscape Architecture Student Society Christmas plant sale:** The Landscape Architecture Student Society (LASS), in collaboration with the Association of Volunteers in International Service (AVSI) Foundation and UNICEF, held a Christmas plant sale in December 2018.
- **LASS received a certificate of recognition** for the initiative Agriculture Vocational Education and Training for Vulnerable Adolescents in Lebanon, a project funded by UKaid and the German Corporation. This projects aimed to empower women in agriculture and support Lebanese nurseries, which engaged vulnerable youth in internships and job opportunities.
- **LDEM student society Activities:** The Landscape Architecture Student Society (LASS) organized and participated in various activities during the Fall and Spring 2018-2019 semesters. Activities included internship workshops, Baysour ethnobotanical garden project, breast cancer awareness, Santa's plants, and much more.

- **World Landscape Architecture (WLA) Awards 2019:** The final year project of LDEM student Tara Kanj (class of 2019) entitled 'Ouzai Coastal Slums' was shortlisted in April 2019 for the World Landscape Architecture (WLA) Award 2019. Kanj studied the shore of Ouzai, a coastal strip south of Beirut, Lebanon. The 2019 World Landscape Awards attracted entries from around the world. Kanj's project suggested that increasing shore space by restoring the eroded shoreline to its 1945 condition is the solution to the Ouzai strip. The design is an amalgamation of solutions to the existing ecological problems, and directly results in the creation of safe and accessible spaces for the inhabitants.
- **New Women's National Record and First Place by LDEM student:** In March 2019, FAFS final year landscape architecture student Tara Kanj set a new women's national record by winning first place in the 400m relay at the Turkish indoor Championship.
- **FAFS student Ranim Koleilat received 'Rasha and Nouhad Daouk Student Development Award':** ECOM graduate student Ranim Koleilat, was selected as the first recipient of the new Student travel grant the "Rasha and Nouhad Daouk Student Development Award". The grant allowed her to attend the 2019 'Children and Nature Network' international conference in Oakland, California which was held in May 2019. Ranim presented her thesis research 'The Learning Landscape of Biophilia: Design guidelines for kindergarten Schools with Marginal Space and Resources'.
- **LDEM faculty and students visit Lebanese schools:** Under this year's vision of promoting the importance of landscape architecture and reaching out for the community, LDEM decided in March 2019 to visit, through some of its student volunteers, some of the schools around Lebanon where they presented the landscape architecture profession and program at FAFS.
- **A playful structure by LDEM students revives AREC's pine area:** Each summer, second year LDEM students develop a playful structure at AREC, Bekaa, as part of the Site Engineering III - Design Implementation course (LDEM 249). Under the supervision of LDEM 249 teaching faculty, B. Dreksler and part-time lecturer W. Melhem, a permanent installation was constructed with the goal of reviving the pine area near the student dorms at AREC. The installation provides an exciting experience to visitors of all ages.
- **LDEM towards ideas for sustainable tourism in Jordan:** Several landscape architecture students travelled with N. Al-Akl to Ajloun, Jordan from June 21 to June 29, 2019, to participate in an intensive program to develop projects for sustainable tourism in Jordan. The interdisciplinary and intercultural exchange considered ways to sustainably safeguard unique cultural and natural landscapes. Over a period of ten days, 40 international students from multiple disciplines, including seven from LDEM, worked with local civil society actors to develop concepts and business models that focused on sustainable tourism in the Kufranja region of northeastern Jordan, near the Syrian border. Issues discussed included: concepts of landscape identity, capacity building, sustainable tourism, empowerment of women, and rural development. Students broadened their world-views and learned to address real problems while working in interdisciplinary, multicultural groups. The LDEM team also received training in social entrepreneurship through an online course coordinated by Nürtingen-Geislingen University. The course familiarized participants with concepts of social entrepreneurship, social innovation, recognizing local

challenges, design thinking, and business modelling. The program also received support from the German Academic Exchange Service (DAAD), the FAFS Dean's Office, and LDEM.

- **Landscape Architecture Student Society participation at the Garden Show and Spring Festival 2019:** The Landscape Architecture Student Society (LASS) participated in the 16th annual Garden Show and Spring Festival (June 2019), the largest event of its kind in Beirut, representing LDEM and the faculty. Using the theme 'A Career in Landscape', LASS highlighted the profession of Landscape Architecture and its role in promoting nature and human wellbeing. At night, LASS's Lights in the Garden attracted the attention of those interested in the field.
- **The first Community Park Day, organized by LASS, celebrates Beirut's diverse communities:** The Landscape Architecture Student Society (LASS) launched the first edition of Community Park Day, organized by the society's cabinet Hana Ismail, Rania Bou Said and Sara El Samman (LDEM) on June 29, 2019, in Basta, Hawd El Weleye Public Park. The eventful day aimed to highlight the importance and use of public spaces in Lebanon by familiarizing people with Hawd El Wileye Park. The day's activities allowed visitors to experience the park's full potential, and included yoga, meditation, kid's entertainment, puppet shows, art exhibitions, musical performances and food shacks. The diversity of attendees was key to the success of the event, which brought together people from multiple social classes, nationalities, genders, and of varying physical abilities. The audience included families from Basta and youth from AUB and greater Beirut. The event was sponsored by Bankmed, FAFS and LDEM, Malik's for Printing, and Beirut Municipality (which offered logistical support), the event offered a lineup of performers, fun activities, and facts to raise awareness of public parks in Beirut.
- **Landscape Student Society trip to Jabal Safi and Mleeta:** The FAFS Landscape student society organized a trip on March 23, 2019 to the Jabal Safi natural area's soon to be announced hiking trail, and the Mleeta Museum, a landmark war memorial commemorating the 2006 war. The two sites, chosen to highlight landscape projects in general, and especially the important role of landscapes in boosting ecotourism, are important natural and cultural sites. AUB and AUBMC staff and students enjoyed lunch at a local restaurant to both support local business and enjoy an authentic village experience.
- **LDEM graduate Lorena Gebran featured in international magazine:** Lorena Gebran (LDEM alumna, class of 2018), current research assistant at LDEM (on grant), was featured in June 2019 in the prestigious, annual international magazine GA Houses 157: Project 2018. The magazine features significant residential housing projects around the world for work, like the Spanish project Casa Muchavista that Gebran worked on.
- **LDEM graduate student Christelle Moussa among winners in IFI Climate Change competition:** In January 2019, Christelle Moussa, current Ecosystem Management graduate student at LDEM was selected among the winners of the second annual student competition on climate change. A cooperative effort of the Issam Fares Institute (IFI), Banque Libano-Française (BLF), IHE Delft Institute for Water Education, and Wageningen University and Research (WUR), the competition encourages interdisciplinary research on climate change adaptation and water scarcity solutions that inform policy making. Criteria included: English language proficiency, significance/relevance of the topic, innovation, the research plan, methodology, clarity, and achievability, and relevance to policy. Moussa's

project explores the use of climatically adapted and native vegetation in residential developments in arid cities to potentially reduce the UHI footprint. Her thesis proposal, Vegetation as an Urban Heat Island (UHI) mitigation measure in arid contexts: The case of Dubai, reflects on the significance and challenge of UHI mitigation. The results will contribute to the revision of planning and landscape policies in Dubai and has the potential to also provide guidelines for other arid cities.

- **Graduate Excellence:** In May 2019, graduate ECOM student Christelle Moussa was selected among several student applicants from several faculties as student delegate to represent AUB in the Pritzker Forum on Global Cities Global Student Delegation, taking place in Chicago on June 5-7, 2019. Moussa's research focuses on the potential contribution of climatically adapted vegetation in residential landscapes to reduce the urban heat island footprint in the city of Dubai. The Forum which was hosted by the Chicago Council on Global Affairs and the Financial Times, raised provocative questions about the rising influence of global cities and their capacity to solve pressing global challenges. The Global Student Delegation comprised of approximately 30 students nominated by the world's leading research universities and provides an opportunity for promising students to engage in discussions and interact with business and policy leaders, civil society, and cultural stakeholders shaping today's global cities.
- **Undergraduate Excellence:** In May 2019, BLA final year student, **Tara Kanj**, was selected to receive this year's FAFS '**Penrose Award for Undergraduate excellence**'. The Penrose Award is granted based on scholarship, character, leadership, and contribution to university life to the outstanding graduate of each year. Tara also was selected to receive '**The Dean Thomas Sutherland Award for Undergraduate Excellence**'. Tara was additionally selected by the department to be the third LDEM student to win '**The Nehme Moujaess Student Award in Landscape Architecture**' established in 2017. The Nehme Moujaess Student Award in Landscape Architecture was presented to Ms. Kanj by Dr. R. Zurayk, Chair of LDEM and Dr. R. Mohtar, Dean of FAFS, during the annual FAFS Graduate Reception held on May 22, 2019 at Charles Hostler auditorium where FAFS celebrated the achievements of all its graduating students and awardees.

Major Initiatives or Accomplishments

- **LDEM joins ECLAS to expand its reach of high academic standards:** LDEM became officially a member of the European Council for Landscape Architecture Schools (ECLAS) in March 2019. ECLAS is a community working on fostering and developing scholarship in landscape architecture at the European and international level. By affirming its commitment to the highest standards of academic scholarship in landscape architecture, LDEM enhances its presence and visibility in the international academic community of landscape architecture through information exchange, experiential participation, common research agendas, and collaborative research projects (<http://www.eclas.org>).
- **BLA program full registration at NYSED in July 2019.**
- **BLA program upcoming accreditation visit in Spring 2019-2020 or AY 2020/2021.**

Student Activities

The below activities were organized by LDEM students through classes or by the Landscape Architecture Student Society (advisor N. Al-Akl):

- **First year students' acquaintance and welcoming event:** In an attempt to introduce first year students to the department life and encourage student interaction and support across the different years, the Landscape Architecture Student Society (LAAS) organized an event to welcome the new first year landscape architecture students. The event was held in October, 2018. New students were introduced to the department and to LAAS, and its achievements and activities. The gathering was also a chance for the different years to meet and interact together. The event's program included a brief introduction of the cabinet members, the registered members, a brief presentation of the society's achievements, a final year projects video, karaoke, cartoon, series screening, and food and beverages.

3- Personnel

During academic year 2018-2019, the LDEM department included eight full-time faculty members, fourteen part-time faculty members (4.5 FTE) and twelve research assistants out of which eleven were appointed on grants. Seventeen graduate assistants were appointed. The department has two non-academic staff (One Administrative Officer and one Greenhouse Technician).

- **New, Promoted Faculty and Faculty Updates:**
 - **BLA program coordinator:** Further to the program reviewers repeated recommendation and the department recommendation, Y. Abunnasr was appointed as BLA program coordinator effective Fall 2018/2019.
 - **Nayla Al-Akl, Associate Dean of Student Affairs:** N. Al-Akl was appointed as Associate Dean of Student Affairs, effective January 15, 2019. The appointment aligns with the strategic goals of the Office of Student Affairs for a holistic, coherent response to the student campus experience that ensures a sense of belonging and enhances access to the best of what AUB offers and represents to all students. Al-Akl's leadership of the student affairs team will further promote inclusion by helping to establish a data-driven approach and framework based on analysis. She will develop reporting measures to improve understanding of student issues with the goal of improving inclusion on campus.
 - **Renewal of Contracts:** Y. Abunnasr's contract as associate professor was renewed for six years effective September 1, 2019.
 - **Advertisement of Landscape Architecture Faculty Line (Focus: Landscape Design and Site Construction):** The recommendation of the department to advertise for one faculty replacement position was approved in December 2018. Visiting assistant professor B. Dreksler whose contract ends in August 2019 occupied this position. The deadline for receiving applicants was March 1, 2019. Eleven applications were received including B. Dreksler's. Two candidates were short-listed. The department ranked B. Dreksler as top candidate for this position and the recommendation was sent to the FAFS Dean's office in May 2019.

- **New Faculty:** In June 2019, the Provost approved FAFS recommendation to appoint B. Dreksler as a tenure track Assistant Professor for a period of five years effective September 1, 2019 for the position of Landscape Architecture (Focus: Landscape Design and Site Construction).
- **Advertisement of Landscape Architecture Faculty Line (Focus: Landscape Design and History):** The recommendation of the department to advertise for a re-instated faculty position in landscape architecture (with a focus of landscape design and history) was approved in March 2019. During the visit of the external team reviewers to LDEM Department in 2018, they have consistently requested the recruitment of a theorist/historian/designer as a pre-requisite for the NYSED full-registration of the BLA program and in support of the on-going ASLA accreditation process. The position was advertised for during the period of June-August 2019. Eleven applications were received. The department will initiate the search committee and short-listing process in September 2019. The selected candidate was expected to start in Spring 2019/2020.
- **Faculty Resignation:** M. Madani, assistant professor at LDEM, submitted his resignation effective August 25, 2019. M. Madani was previously approved for a leave without pay during the Spring term 2018/2019 for special and urgent family circumstances.
- **Alumni Excellence – LDEM Alumna Dr. Nada Toueir appointed at Lincoln University, Christchurch:** LDEM alumna Dr. Nada Toueir, was appointed as lecturer at the School of Landscape Architecture, Lincoln University, Christchurch, New Zealand in March 2019. Toueir was among the graduates of the first FAFS class in Landscape Design & Ecosystem Management (BS, 2004). Before moving to New Zealand, Toueir worked in Montreal, Canada, teaching design studios and theoretical courses.
- **New Departmental research assistant:** In December 2018, LDEM hired Ms. Rim Hazimeh as new departmental research assistant to replace Ms. Sandra Youssef who resigned from her position in October 2018. Ms. Rim Hazimeh is LDEM alumna, BLA Class of 2016.

The below tables detail the personnel in the Landscape Design and Ecosystem Management department during academic year 2018/2019:

Full Time Faculty:

Rami Zurayk	Professor and Chairperson (January 2014- January 2020)
Yaser Abunnasr	Associate Professor and Chairperson (January 2020 – present)
Nayla Al-Akl	Assistant Professor
Beata Dreksler	Visiting Assistant Professor (August 2016 - August 2019) Assistant Professor (effective August 2019)
Monika Fabian	Instructor/ Greenhouse supervisor
Mehran Madani	Assistant Professor (resigned effective August 2019)
Salma N. Talhouk	Professor

Maria Gabriella Trovato	Assistant Professor
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Part Time Faculty:

Rania Abboud Melhem	Lecturer (Fall and Spring 2018/2019)
Balsam Al-Ariss	Lecturer (Fall and Spring 2018/2019)
Noura Badran	Lecturer (Spring 2018/2019)
Joelle Baroud	Lecturer (Fall 2018/2019)
George Battikha	Senior Lecturer (Fall and Spring 2018/2019)
Cornelia Krafft	Lecture (Fall 2018/2019)
Nadim Farajalla	Research Associate & Director of Climate Change & Environmental Prog. At Issam Fares Institute (Fall& Spring 18/19)
Sara Hage	Lecturer (Spring 2018/2019)
Mona Khechen	Senior Lecturer (Fall and Spring 2018/2019)
Wissam Melhem	Lecturer (Fall and Summer 2018/2019)
Ramzi Mezher	Lecturer (Fall and Spring 2018/2019)
Halim Nader	Lecturer (Spring 2018/2019)
Dima Rachid	Lecturer (Spring 2018/2019)
Salwa Sabbagh	Lecturer (Spring 2018/2019)

Associate Faculty:

Jala Makhzoumi	Associate to the Department
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Graduate Assistants:

Thuraya Abu Merhi	Ecosystem Management (Fall 2018/2019)
Salma Ajour	Ecosystem Management (Fall and Spring 2018/2019)
Hamza Denny	Ecosystem Management (Fall 2018/2019)
Rhea Ekmekji	Ecosystem Management (Spring 2018/2019)
Asma El-Hajal	Ecosystem Management (Spring 2018/2019)
Maya El Jundi	Ecosystem Management (Fall 2018/2019)
Leen El Taki	Ecosystem Management (Spring 2018/2019)
Leila El-Zeeni	Ecosystem Management (Fall and Spring 2018/2019)
Lama Katerji	Ecosystem Management (Fall and Spring 2018/2019)
Ranim Koleilat	Ecosystem Management (Summer 2018/2019)
Bridget Ireland	Ecosystem Management (Spring 2018/2019)
Christina Majdalani	Ecosystem Management (Spring 2018/2019)
Maya Melhem	Ecosystem Management (Fall 2018/2019)
Samar Morkos	Ecosystem Management (Spring 2018/2019)
Christelle Moussa	Ecosystem Management (Fall and Spring 2018/2019)
Zaynab Rady	Ecosystem Management (Fall 2018/2019)
Maya Zeid	Ecosystem Management (Fall and Spring 2018/2019)

Support Staff:

Elias Abi Samra	Greenhouse Technician
Nadine Modad	Administrative Officer (August 25, 2016 – present)

4- Teaching

- Courses Offered:**

- During the academic year 2018/2019, the Department offered fifteen undergraduate courses during the Fall term 2018/2019; sixteen undergraduate courses and three graduate courses during the Spring term 2018/2019 and four undergraduate courses and one internship course during the summer term 2018/2019.
- Re-introduction of the Landscape Management (LDEM 265) course: LDEM 265 brings together what students learn from the plant material, the horticulture, the soil and the water courses. It has been reintroduced to the curriculum as a required course and will be taken by students who joined the program effective 2016/2017. The course was offered during the Spring of Year III as of Spring 2018/2019.
- New graduate elective course: One new graduate elective course was suggested and created by M. Madani, approved by the department and then approved by ACC in January 2018. The course is entitled 'Research Methods in Landscape Architecture and Socio-spatial Studies' (LDEM 303, 3cr.).

- Student Enrollment in Courses:**

- Student Enrollment - Fall 2018/2019

Course	Course Title	Credits	Enrollment	Instructor(s)
LDEM 200	Landscape Technical Drawing	4	10	M. Madani (P) /J. Baroud ^P
LDEM 202	Studio I: Landscape Design Fundamentals I	4	10	B. Dreksler (P)/ R. Mezher
LDEM 207	Landscape Architecture History I	3	23	N. Al-Akl
LDEM 210	Botany and Plant Ecology for Landscape Architects	3	20	M. Fabian
LDEM 214	Landscape and Geomorphology	3	10	R. Zurayk
LDEM 218	Landscape Ecology	3	13	Y. Abunnasr
LDEM 221	Plant Material II	1	19	M. Fabian
LDEM 222	Studio III: Landscape Planting Design	4	19	N.Al-Akl (P) / M. Fabian
LDEM 228	Studio V: Urban Landscape Design	6	15	M. Madani (P)/ D. Rachid ^P
LDEM 230	Water and The	3	60	N. Farajalla (P)

	Environment (GE Natural Sciences Elective)			
LDEM 241	Studio VII: Landscape Capstone Project I	4	22	M. G. Trovato (P); M. Khechen ^P ; B. El-Ariss ^P
LDEM 247	Site Engineering I	3	19	B. Dreksler
LDEM 251	Geographic Information System	3	17	R. Abboud ^P
LDEM 260	Contemporary Issues in Landscape Architecture (Core course and GE Humanities)	3	21	M. Madani
LDEM 261	Spatial Structure and Movement (FAFS Elective)	3	10	C. Krafft ^P
LDEM 270	Ornamental Plants for Dry Landscapes	3	17	G. Battikha ^P

○ Student Enrollment - Spring 2018/2019

Course No.	Course Title	Credits	Enrollment	Instructor(s)
LDEM 201	Landscape Descriptive Drawing	4	12	N. Badran ^P
LDEM 204	Studio IV: Cultural Landscape Design	6	19	B. Dreksler (P)/ Salwa Sabbagh ^P
LDEM 208	Landscape Architecture II (Core course and GE Humanities)	3	19	N. Al-Akl
LDEM 211	Landscape Horticulture	3	11	M. Fabian
LDEM 216	Studio II: Landscape Design	4	9	R. Mezher ^P
LDEM 217	Soils in the landscape (Core course Natural Sciences)	3	9	R. Zurayk(P)/ M. Fabian (Lab)
LDEM 230	Water & the Environment	3	67	N. Farajalla (P)
LDEM 242	Studio VIII: Landscape Capstone Project II	6	22	M. G. Trovato (P); M. Khechen ^P ; B. El-Ariss ^P
LDEM 246	Studio VI: Natural Landscape Design	6	14	Y.Abunnasr (P); Sara Hage ^P
LDEM 248	Site Engineering II: Construction Material	3	19	B. Dreksler
LDEM 262	Healing Gardens: Theoretical Perspectives & Applications (FAFS	3	17	S. Talhouk

	elective and GE Social Sciences)			
LDEM 263	Landscape Appreciation and Site Analysis	3	21	M. G. Trovato
LDEM 264	Interior Landscaping (FAFS Elective)	3	9	G. Battikha ^P
LDEM 265	Landscape Management	3	14	S. Talhouk
LDEM 290	Professional Practice	3	15	B. Dreksler
LDEM 291	Surveying and Base Plan Development	3	11	H. Nader (P) ^P
LDEM 302	Green Infrastructure for resilient Landscapes and Cities (Graduate elective)	3	9	Y. Abunnasr
LDEM 630/EN	Natural Resources Management (Graduate core course)	3	11	R. Zurayk
LDEM/ ENSC	The Political Ecology of Water	3	5	R. Riachi (IFI)

○ Student Enrollment - Summer 2018/2019

Course No.	Course title	Credits	Enrollment	Instructor(s)
LDEM 219	Plant Material I	2	7	M. Fabian
LDEM 231	Sustainable Water Techniques	3	16	B. Dreksler
LDEM 249	Site Engineering III: Implementation	4	19	B. Dreksler (P)/ W. Melhem ^P
LDEM 252	Computer Aided Design	3	8	R. Abboud ^P
LDEM 292	Internship	2	14	B. Dreksler

^P Part-time faculty

(P) Principal instructor

5- Completed Theses and Thesis Advising

Eighteen students were enrolled in the ECOM program for the academic year 2018/2019. In addition to serving as advisors and/or committee members to ECOM students, LDEM Faculty members also served as advisors or committee members to other AUB or non-AUB Masters and PhD students as follows:

- **R. Zurayk** serves as committee member to two Masters students from the AGRI department and to two PhD students in Environmental engineering at AUB and co-advisor to one PhD student at the KTH Royal Institute of Technology, Stockholm, Sweden.

- **Y. Abunnasr** is serving as thesis advisor to four Urban Design students, one RCODE student and one Mechanical Engineering AUB student. He is also serving as committee member to two AUB students (from PSPA and Urban Design), co-advisor to one PhD student from the University of Addis Ababa Ethiopia and committee member for another PhD student from the University of Massachusetts Amherst, USA.
- **M. G. Trovato** is serving as committee member to three Urban Design Masters students at AUB and as co-advisor to one PhD student from the University of Girona, Spain.
- **M. Madani** is serving as committee member to three Urban Design Masters students at AUB.

Completed theses:

	MSc student	Thesis or Project Title	Advisor/ Co-advisor	Date of Thesis Defense
1.	Nour Amhaz	Thesis (Agrarian Transition and Food Security in the Village of Nabha, Central Bekaa	R. Zurayk	Fall 2018/2019
2.	Nour El Jundi	Thesis (Agrarian transition and food security in the village of Khreibet El Jundi, Akkar, Lebanon)	R. Zurayk	Spring 2018/2019
3.	Gretta El-Asmar (MSFEA)	Thesis (Urban design invitation qualities towards an aging-friendly community : case of "Ras el Nabaa", Beirut)	M. Madani (Advisor)	Fall 2018/2019
4.	Ranim Koleilat (ECOM)	Thesis (The Learning Landscape of Bio-Philia: Outdoor Activities for Kindergarten schools with Marginal Space and Resources)	S. Talhouk (Advisor)	Spring 2018/2019
5.	Maya Melhem (ECOM)	Thesis (Guidelines for Establishing and Developing Ancillary Botanic Gardens)	S. Talhouk (Advisor) and Y. Abunnasr (co-Advisor)	Spring 2018/2019
6.	Ghadir Ghamrawi (Urban Design, MSFEA)	Integrated Coastal Management for Sustainable Development of Coastal Cities: The Case of El-Mina, Tripoli	Y. Abunnasr (advisor)	Spring 2018/2019

7.	Zain Droubi (Urban Design, MSFEA)	Urban agriculture as a green infrastructure system to catalyze post-war recovery in the city of Homs, Syria.	Y. Abunnasr (advisor)	Spring 2018/2019
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PhD Theses advising/ Co-advising:

	PhD student	Title of Research	Advisor/ Co-advisor/ Committee member	Date of Completion/Expected Date of Completion
1.	Musa McKee (School of Oriental and African Studies (SOAS), University of London)	'Just Add Water': The Alchemy of Authoritarian Rule in Desert Land Reclamation Development in Egypt during the Mubarak era	R. Zurayk (PhD thesis examiner)	October 2017
2.	Yared Girma	Green Infrastructure Development and Management System for the Emerging towns of Oromia Special Zone Surrounding Finfine, Ethiopia (Addis Ababa University, Ethiopian Institute of Architecture, Building Construction and City Development)	Y. Abunnasr (Co-Chair)	2018
3.	Sean O'Donnell	Roots in Transition: contribution of urban agriculture to livelihoods in temporary settlements (University of Massachusetts Amherst, Department of Landscape Architecture and Regional Planning)	Y. Abunnasr (committee member)	2018
4.	Anne Gough	Rephotography and Historical Landscape Analysis (working title) (KTH Royal Institute of	R. Zurayk (Co-advisor)	2018

		Technology, Stockholm, Sweden)		
6.	Eliza Deutsch	Assessing Eutrophication in Qaraoun Reservoir (AUB)	R. Zurayk (Committee member)	2018

6- Research Funding

Local, Regional and International Grants:

LDEM Faculty members continued work on current research projects and launched new research and development projects under the FAFS umbrella supported by external and internal funding as follows:

- Total number of recent continuing grants: 2 grants (1 co-funded between AUB and CNRS and 1 from AUB and AUBMC funds)
- Total number of new grants: 8 grants (3 from AUB funds and 5 from international funding)
- Total grants amount (recent continuing and new; excluding continuing older grants): \$389,720 USD

Title	Funded by	Year	PI	USD	Academic Umbrella
New grants					
Leveraging an Integrated Network: Bettering Conservation and Management of Rare Plants in and around Culturally Protected Sites (LINK)	Birdlife International	June 2019-2020	S. Talhouk (PI)	\$19,908	NCC
SWaM Akkar. Supporting Sustainable Solid Waste Management in Jurd al-Kaytee, Akkar*	Cooperazione Internazionale (COOPI) / EU	Oct. 2018 – June 2020	M. G. Trovato (PI) and R. Zurayk (co-PI)	\$68,111	FAFS
Cultural Corridors of Peace	INHERIT	October 2018 – January 2020	R. Zurayk (PI)	\$41,413	FAFS
Sustaining the landscape of cemeteries: Enhancing religious institutions' contribution to sustainable cities and communities in Beirut	SDG (Global Compact Network Lebanon, GCNL)	October 2018 – October 2019	N. Al-Akl (PI)	\$10,000	FAFS
Mapping Pedestrian Behavior and Social Mobility of Older Adults in Beirut, Lebanon	University Research Board (URB)	July 2018-June 2019	M. Madani (PI)	\$12,500	FAFS
Advancing Alternative Migration Governance (ADMIGOV)	European Commission/ HORIZON 2020	February 1, 2019 – January 31, 2023	M. G. Trovato (PI) and N. Al-Akl (co-PI)	75,443.38 Euros	FAFS
Capacity Building for Education and Applied Research on Mediterranean UNESCO's Biosphere Reserves (Edu-BioMed)**	ERASMUS+	Nov. 2018 to Nov. 2021 (AUB officially received its part of the grant on Feb.12, 2019)	S. Talhouk (PI); R. Zurayk (co-PI) and W. El-Hajj (Co-PI; FAS)	AUB funds: 100,600 EUR	NCC

Developing a Global Design Team Approach for Interdisciplinary Learning at the Faculty of Agricultural and Food Sciences	Scholarship on Teaching and Learning (SOTL) University Research Board, AUB	2018-2019	Ammar Olabi, Maya Nabhani (PIs), Maria G. Trovato, H. Jaafar, M. Abiad, R. Bahn, S. El Labban (Co-PIs)	7,600	FAFS
Total:				\$343,120	
Continuing grants					
Using Unmanned Aerial Vehicles (UAV)/Drones to measure the contribution of trees to Urban Heat Island Reduction in Urban Landscapes	The Collaborative Research Stimulus Award (AUB's President's Office and AUBMC)	April 2018- April 2020	Y. Abunnasr (PI), M. Awad (FEA) and A. Yertezian (MSFEA)	\$34,600	OGC
The Saliency of Outdoor Built Environment Design For Older Adults' Social Well-being and Public Health: Case of Aging-friendly Communities in Beirut, Lebanon	AUB funds and Lebanese National Council for Scientific Research (CNRS)	Jan. 2018- Jan. 2019	M. Madani (PI), A. M. Sibai (Co-PI) and M. Osman (Co-PI)	\$ 12,000	FAFS/CNR S
Total:				\$46,600	

***EuropeAid - SWaM Akkar: Supporting Sustainable Solid Waste Management in Jurd al-Kaytee by Maria Gabriella Trovato:** Landscape has the power to inspire, captivate, and mobilize people. While the developing concept of landscape may be difficult to grasp, in some parts of the world the idea of landscape is in a more advanced state than in Lebanon. Dr. Maria Gabriella Trovato believes that the EuropeAid research project she is currently working on, SWaM Akkar: Supporting Sustainable Solid Waste Management in Jurd al-Kaytee, Akkar, provides a concrete approach to demonstrate the importance and validity of landscape as a tool in the planning process of Lebanese territories. The SWaM Akkar project focuses on planning and management of solid waste in North Lebanon.

****LDEM professors S. Talhouk and R. Zurayk receive Erasmus grant to address Biosphere reserve:** S. Talhouk and R. Zurayk (LDEM/FAFS) in collaboration with W. El Hajj (Computer Science/FAS) were recently awarded an Erasmus grant under the AUB nature conservation center (NCC). The project, entitled 'Capacity Building for Education and Applied Research on Mediterranean UNESCO's Biosphere Reserves (Edu-BioMed)', is funded for €107,000 EUR by the European Commission. The project partnership includes colleagues from other organizations and higher education institutions

in Spain, Italy, France, Morocco, and Lebanon. The project partnership is led by the Universitat Autònoma de Barcelona, Spain and includes Université d'Aix Marseille, France; American University of Beirut, Lebanon; Université Saint-Joseph, Lebanon; Université Cadi Ayyad, Morocco; Université Mohammed V de Rabat, Morocco; Man and the Biosphere (MAB), France; Association for the Protection of Jabal Moussa, Lebanon; UNIMED – Unione delle Università del Mediterraneo, Italy. Through this project, the partners will seek to develop a strategy to enhance the contribution of universities to the conservation of Mediterranean Biosphere Reserves.

7- Publications:

In line with the department mission, the research agenda and the department's broad research themes, a number of articles in international refereed journals were published by the LDEM faculty members. Below are some samples:

Peer-reviewed article in prominent journal:

- **R. Zurayk contributed to a research published in the prominent 'Nature' Journal:** Marco Springmann and colleagues, including **R. Zurayk**, have addressed the environmental impacts associated with food systems in an article they prepared "Options for keeping the food system within environmental limits". R. Zurayk was part of the research team that studies the options of transforming the food system and gearing it towards sustainability. His specific input was about water and depletion of water resources. The MENA region and Lebanon bare the brunt of climate change, which creates a stress on natural resources. The region is also chronically short on water and will experience further shortages associated with food production and food consumption in the future. This work allows us to look at the global picture of the state of resources at a time where interbasin transfers are the norm due to extensive food trade. It also allows us to identify hotspots and this region is one of them. The research was featured in many magazines, such as: The Guardian, The Washington Post, BBC, Thomson Reuters Foundation, Independent. (Springmann, M., Clark, M., D'Croz, D. M., Wiebe, K., Bodirsky, B.L., Lassaletta, L., de Vries, W., Vermeulen, S. J., Herrero, M., Carlson, K. M., Jonell, M., Troell, M., DeClerck, F., Gordon, L. J., **Zurayk, R.**, Scarborough, P., Rayner, M., Loken, B., Fanzo, J., Godfray, H. C. J., Tilman, D., Rockström, J., and Willett, W. 2018. Options for keeping the food system within environmental limits. **Nature Research**. <https://doi.org/10.1038/s41586-018-0594-0>).

International Refereed Journals (*Corresponding/Senior author):

- Baalbaki, R. Ahmad, S. H., Kays, W., **Talhok, S.N.**, Saliba, N. A., Al-Hindi, M. 2019. Citizen science in Lebanon – a case study for ground water quality monitoring. R. Soc. open sci. 6: 181871. <http://dx.doi.org/10.1098/rsos.181871>
- Baalbaki, R. Ahmad, S. H., Kays, W., **Talhok, S.N.**, Saliba, N. A., Al-Hindi, M. 2019. Citizen science in Lebanon – a case study for ground water quality monitoring. R. Soc. open sci. 6: 181871. <http://dx.doi.org/10.1098/rsos.181871>

- Jaszczak, A., Żukowska, J., **Dreksler, B., Al-Akl, N.**, & Kristianova, K. (2019). Planning of the green road system as an element of spatial management in suburbs and small towns. *Zarządzanie Publiczne*, 2(46), 131-147. doi: 10.4467/20843968ZP.19.009.10685.
- **Al-Akl, N. M.**, Karaan, E. N., Al-Zein, M. S., & Assaad, S. (2018). The landscape of urban cemeteries in Beirut: Perceptions and preferences. *Urban Forestry & Urban Greening*, 33, 66-74.
- Willett, W., Rockström, J., Loken, B., Springmann, M., Lang, T., Vermeulen, S., Garnett, T., Tilman, D., DeClerck, F., Wood, A., Jonell, M., Clark, M., Gordon, L.J., Fanzo, J., Hawkes, C., **Zurayk, R.**, Rivera, J.A., De Vries, W., Sibanda, L.M., Afshin, A., Chaudhary, A., Herrero, M., Agustina, R., Branca, F., Lartey, A., Fan, S., Crona, B., Fox, E., Bignet, V., Troell, M., Lindahl, T., Singh, S., Cornell, S.E., Reddy, K.S., Narain, S., Nishtar, S., and Murray, C.J.L. 2019. Food in the Anthropocene: the EAT–Lancet Commission on healthy diets from sustainable food systems. *Lancet*, London, England. Vol. 393. February 2, 2019. <https://www.thelancet.com/journals/lancet/article/PIIS0140-6736%2818%2931788-4/fulltext#rel693a86d5-def0-4c8a-be40-235cf5297fbb>
- Wheeler SM, Abunnasr Y, Dialesandro J, Assaf E, Agopian S, Gamberini VC. Mitigating Urban Heating in Dryland Cities: A Literature Review. *Journal of Planning Literature*. 2019;34(4):434-446. doi:10.1177/0885412219855779
- Wheeler, Stephen & Abunnasr, Yaser & Dialesandro, John & Assaf, Eleni & Agopian, Sarine & Carter Gamberini, Virginia. (2019). Mitigating Urban Heating in Dryland Cities: A Literature Review. *Journal of Planning Literature*. 0885412219855779. 10.1177/0885412219855779.
- Springmann, M., Clark, M., D’Croz, D. M., Wiebe, K., Bodirsky, B.L., Lassaletta, L., de Vries, W., Vermeulen, S. J., Herrero, M., Carlson, K. M., Jonell, M., Troell, M., DeClerck, F., Gordon, L. J., **Zurayk, R.**, Scarborough, P., Rayner, M., Loken, B., Fanzo, J., Godfray, H. C. J., Tilman, D., Rockström, J., and Willett, W. 2018. Options for keeping the food system within environmental limits. *Nature Research*. <https://doi.org/10.1038/s41586-018-0594-0>
- **M. G. Trovato***, N. Panajot (2018). Enfeh coastal landscape: preservation, management and landscape planning strategies, in *Journal of Marine and Island Cultures*, v7 n2-3; doi: 10.21463/jmic.2018.07.2.03
- Vogiatzakis, I.N.; Terkenli, T.S.; **Trovato, M.G.**; Abu-Jaber, N. Landscapes in the Eastern Mediterranean between the Future and the Past. *Land* **2018**, 7, 160.
- Ioannis N. Vogiatzakis, Theano S. Terkenli, **Maria Gabriella Trovato** and Nizar Abu-Jaber, Landscapes in the Eastern Mediterranean between the Future and the Past, in *Land Special Issue on “Landscapes in the Eastern Mediterranean between the Future and the Past”*. *Land* 2018, 7(4),160; <https://doi.org/10.3390/land7040160>

Books:

- **Zurayk, R.**, Woertz, E., and B. Rachel (Eds.) 2018. *Crisis and Conflict in Agriculture*. Wallingford, UK: CABI. 294 p.p. ISBN: 978-1786393647
- **Planning for Climate Change: Reader in Green Infrastructure and Sustainable Design for Resilient Cities**, co-authored **Dr. Yaser Abunnasr**: Y. Abunnasr published his book, co-authored with Elisabeth M. Hamin Infield and Robert Rayan. The book *Planning for Climate*

Change: Reader in Green Infrastructure and Sustainable Design for Resilient Cities, is an innovative reader that brings together the topics of climate adaptation and green infrastructure to encourage a more hopeful perspective on the great challenge by exploring these subjects and potential local solutions (Hamin, E.M., **Abunnasr, Y.** and Ryan, R.L. 2018. Planning for Climate Change: A Reader in Green Infrastructure and Sustainable Design for resilient Cities. Routledge).

Book Chapter:

- Bahn, R., Tell, T., and **Zurayk, R.** 2019. Social Life, from Rural to Urban. In Yom, S. (ed.). The Societies of the Middle East and North Africa: Structures, Vulnerabilities, and Forces. 1st Edition (Paperback) - Routledge. pp.356
- B. Rachel, and **Zurayk, R.** 2018. Agriculture, Conflict and the Agrarian Question in the 21st Century. In Zurayk, R., Woertz, E., and B. Rachel (Eds.). Crisis and Conflict in Agriculture. Wallingford, UK: CABI. Pp. 3-27.
- **Talhoun, S.N.**, M. Itani, and M. Al-Zein. 2018. Biodiversity in Lebanon. In: Global Biodiversity, Volume 1: Selected Countries in Asia. Editor: T. Pullaiah. Apple Academic Press. ISBN: 9781771887076
- **Trovato, M.***, & Ali, D. (2019). Planning tools for the protection of the natural and cultural heritage in the Eastern Mediterranean area. In L. Mueller & F. Eulenstein (Eds.), Current trends in landscape research (pp. 467-486). Cham: Springer.
- **Trovato M.G.** (2019) A Landscape Perspective on the Impact of Syrian Refugees in Lebanon. In: Asgary A. (eds) Resettlement Challenges for Displaced Populations and Refugees. Sustainable Development Goals Series. Springer, Cham. https://doi.org/10.1007/978-3-319-92498-4_4

Reports:

- **R. Zurayk** co-authored a report in the EAT-Lancet Commission on Food to develop a healthy diet to feed the world's growing population without crossing planetary boundaries. R. Zurayk was part of the team that dealt with the sustainable food systems, and he focused specifically on the implications of diets on water use in agriculture.

Events:

- **Book Launch 'Crisis and Conflict in Agriculture'**: The book 'Crisis and Conflict in Agriculture' was launched at FAFS on November 1, 2018. Volume editors include **R. Zurayk**, Eckart Woertz and R. Bahn. The book was published in September 2018 by CABI (Center for Agriculture and Biosciences International). **R. Zurayk** and R. Bahn presented the volume, its highlights and its contribution to the field and literature which followed by a discussion session.

Distinction:

R. Zurayk was re-appointed Member of the Steering Committee of the High Level Panel of Experts on Food Security and Nutrition (HLPE) of the Committee on World Food Security (CFS) for the second term during 2017 to 2019. The steering committee is composed of 15 internationally

recognized experts in a variety of food security and nutrition related fields.
<http://www.fao.org/cfs/cfs-hlpe/hlpe-steering-committee/en/>

8- Services

- Yaser Abunnasr

AUB

- Member, Academic Campus Master Planning 2030 Steering Committee, faculty (college) representative (2016- present)
- Member, Advisory Committee to the Center for Teaching and Learning, faculty (college) representative (2015- present)
- Member, AUBotanic Planning Committee (2015- present)
- Elected Chair FAFS Library Committee (2015- present)
- Member of FAFS Undergraduate Curriculum Committee and the Undergraduate Student Academic Affairs Committee
- Member of AREC strategic task force (2018-present)
- Member of FAFS Facilities Committee
- Founding member – Invented Landscapes- A research group dedicated to conceptualizing alternatives to urban landscape on slopes adjacent to major urban conglomeration – joint collaboration between the department of Landscape Design and Ecosystem Management and Department of Architecture and Design – Web link: <http://inventedlandscapes.wordpress.com/>
- Member, University Architect Committee, serving under the Facilities Planning and design Unit (FPDU) providing advice and direction to architectural projects and master plan initiatives across university projects. Reports to head of FPDU and COO (2016 – present)
- Lead Faculty Member, (research, writing, and reviewers' visit), BLA Program Self-Study, for New York State Education Department registration and LAAB/ASLA Accreditation process (2017-present)

Others

- Journal editor: Heritage and Society, invited in July 2016 to start as co-editor (2016-present)
- Journal reviewer: Landscape and Urban Planning (2014-present); Landscape Journal (2016-present) and Lebanese Scientific Journal (2017-present)
- Expert, with 'Beirut Madinati' on Coastal project proposal for Beirut Coastal Zone (2017-present)

- Nayla Al-Akl

AUB

- Member, University Task Force on Lives and Careers of Women Faculty at AUB
- Member of FAFS Undergraduate Admissions Committee
- Associate Dean of Student Affairs, Office of Student Affairs, AUB

- Member of the Jury Board of the Raji & Fawzieh Sinno Promising Leader in Agricultural Award, Faculty of Agricultural and Food Sciences, AUB (2018 – Present)
- Jury Member of the “Nehme Moujaess Student Award in Landscape Architecture”, Department of Landscape Design and Ecosystem Management, AUB
- Member, Taskforce to review the Grievance Policy and Procedures (2019-Present)
- Member, Task Force on Inclusive Campus Environment (2019-Present)
- Member, Core Curriculum Committee (2018-Present)
- Member, Student Affairs Committee (2019 – Present)
- Member, Graduate Studies Committee (Student Affairs representative) (2019 – Present)
- Member, AUB Strategic Planning Committee – AUB (2016- present)
- Member, Undergraduate Admissions Committee (2017-2019)
- Design, supervision and coordination of several FAFS facilities (2016 – 2019)
- Member, AUBotanic University Committee–AUB
- Academic Advisor to the Landscape Student Society –LDEM

Others

- Co-founding member of the Lebanese Landscape Association (LELA), NGO
- Member of the Administrative Committee, Accountant – LELA, NGO
- Design consultant on landscape architecture, landscape planning and architecture projects locally and internationally.
- Member; Invented Landscapes;web link: <http://inventedlandscapes.wordpress.com/>
- Member, Garden Show Spring Festival Planning Committee (2016-Present)
- European Council of Landscape Architecture Schools (ECLAS): Representative member of LDEM-AUB
- Chair of IFLA Working Group: Natural Resources & Protected Landscapes – International Federation of Landscape Architects - IFLA Middle East (2018 – Present).
- Jury Member at the Interior Design Final Year Student Projects, Notre Dame University North Lebanon Campus
- Bikfaya Municipal Garden, Municipality of Bikfaya-Mhaidtha, Lebanon

• Beata Dreksler

AUB

- FAFS Social Committee – an organization of social events for faculty and students (FAFS Christmas Dinner)
- AUB Botanic Committee Participation in the committee Lectures for docent program (2017-2019)

Others

- Member to the Commission on Ecosystem Management of IUCN (International Union for Conservation of Nature) for the Quadrennial Period 2017-2020.

- Monika Fabian

AUB

- Coordinate school students visits to the greenhouse area and offer miscellaneous horticultural activities
- Member of the Initiative for AUB as Botanic Garden
- Member of the Greenroof research group
- Advising landscape architecture and architecture students on plants and trees used in their projects
- Manage the continuous updating of the landscape plant database

- Mehran Madani

AUB

- Member of the FAFS Research Committee (2015-present)
- Member of FAFS Graduate Studies Committee

Others

- Journal reviewer, Reviewer of Springer, Euro-Mediterranean Journal for Environmental Integration (2016- present)
- Reviewer of Population Health Metrics Journal (2016- present)
- Reviewer of Sage Publishing, Urban Studies Journal (Started in 2016)
- Reviewer of Common Ground Publishing LLC., Design Principles, Constructed Environment, & Aging and Society Journals (2012-present)

- Jala Makhzoumi

AUB

- Associate to the LDEM department
- Advisory Board Member at the Nature Conservation Center (NCC)

Others

- Main founder and president of the Lebanese Landscape Association (LELA), NGO as the Lebanese Chapter of the International Federation of Landscape Architects (IFLA) (2015-present)
- Editorial Board Member, Landscape Research, Taylor and Francis, London (2014-present)
- Lead landscape planning consultant, Booz Allen Hamilton, client: Al Riyadh Development Authority, Project: Riyadh Greening, KSA (2018- present)

- Salma Talhouk

AUB

- Member of the Executive Committee of NCC (AUB's Nature Conservation Center), 2010-present.
- Member of FAFS Advisory committee (Spring and Summer 2018/2019)
- Member of FAFS Undergraduate Curriculum Committee and the Undergraduate Student Academic Affairs Committee

- FAFS representative at the University's Academic Development Committee (Spring and Summer 2018/2019)
- Member of FAFS Strategic Plan Committee
- Member of FAFS Climate and Award Committee
- Faculty representative of University Academic Development Committee (Spring and Summer 2018/2019)
- Founding Chairperson of AUBotanic committee (2014- present)
- Academic review of curriculum committee
- Accreditation Task Team 10
- Advisory committee for the Center for Civic Engagement and Community Service
- Member of Campus planning committee

Others

- Member of Botanical Garden Conservation International (BGCI),
- Member of the International Union for the Conservation of Nature (IUCN)
- Chair of the ecotourism group – Ecosystem Services Partnership (ESP)
<https://www.es-partnership.org/community/workings-groups/sectoral-working-groups/swg-7-tourism/>

• Maria Gabriella Trovato

AUB

- Member of the Student Affairs Committee, 2017-2019 (FAFS)
- Chair of the ad hoc committee for the MLA program development
- Member of the AUB Botanic Garden committee
- Member of the AUB4refugee working group on Syrian Refugee Crisis (2016-present)
- Founding member of the landscape research group 'Landscape in Emergency'.
- Co-Principal Investigator in the academic research Developing a Global Design Team Approach for Interdisciplinary Learning at the Faculty of Agricultural and Food Sciences, Scholarship on Teaching and Learning (SOTL) University Research Board, AUB (2018-2019).

Others

- Member of the European Council of Landscape Architecture Schools (ECLAS)
- Initiator and Director for the East Med Landscape Observatory (2015-present)
- Member of Order of Architects, Planners, Landscape Architects and Conservators, Province of Messina, Italy
- Member of the editorial department of the 'RIVISTA' journal of the Order of Architects, Planners, Landscape Architects and Conservators, Province of Messina, Italy (2012-present).
- Co-founding member and secretary of the Lebanese Landscape Association (LELA), NGO
- Chair of the IFLA Landscape Architecture Without Borders working group, under the Professional Practice IFLA Committee

- Responsible of the CIVILSCAPE's Task Force for Landscape in Emergency
 - Initiator and member of the board committee of the a research group on 'Mediterranean Landscape in Emergency'
 - Member of the Committee of the PhD program in Landscape Architecture, Faculty of Architecture, Università di Firenze, Italy, since 2018. (www.dida.unifi.it/vp-534-landscape-architecture.html)
 - Invited Reviewer for the Scientific Journal 'Al-Masaq: Journal of the Medieval Mediterranean, Routledge group, 2018
 - Invited Expert to the 'Second Thematic Meeting related to the preparation of the Sixth National Report to the Convention on Biological Diversity'. Lebanese Ministry of Environment. 2018.
 - Invited Examiner of a PhD candidate, Universitat Internacional de Catalunya (UIC), Barcelona, Spain. 2019
 - Invited Examiner of PhD candidates, on the ADAPT-r PRS doctorate Program, RMIT University, Australia. 2019
- Rami Zurayk
AUB
 - Chairperson, Department of Landscape Design and Ecosystem Management (LDEM), January 2014 – present.
 - Member of FAFS Administrative Committee
 - Member of FAFS Advisory committee
 - Member of FAFS Undergraduate Curriculum Committee and the Undergraduate Student Academic Affairs Committee
 - Member of FAFS Strategic Plan Committee
 - Member of FAFS Students' Recruitment Committee
- Others
- Member of the Steering Committee of the High Level Panel of Experts on Food
 - Security and Nutrition (HLPE) of the Committee on World Food Security (CFS) (Two terms: 2015-2017 and 2017-2019). The steering committee is composed of 15 internationally recognized experts in a variety of food security and nutrition related fields. <http://www.fao.org/cfs/cfs-hlpe/hlpe-steering-committee/en/>
 - Member of the Research Review Board, Arab Council for the Social Sciences (ACSS-Cycle 2017-2018 and 2018-2019)
 - Member of the Steering Committee of the PhD program in the Department of Natural Resources and the Environment at the Arabian Gulf University.

9- Faculty Participation in Local and International Conferences and Workshops

Conferences:

- **AUB leads in integrated energy planning for the region:** During September 13-14, 2018, FAFS hosted the final conference of the ENEPLAN (Developing Skills in the Field of

Integrated Energy Planning in Mediterranean Landscapes) project on Integrated Energy and Education in Mediterranean Universities led by **Yaser Abunnasr**, ENEPLAN committee chair. The two-day conference presented results of integrated energy planning projects and looked at ways to mainstream them in higher education in Mediterranean countries. It served as a culmination of project activities and a primary dissemination tool of ENEPLAN projects which cover areas such as curriculum development, university governance, and the relationship between the university and the society. Financed by the Erasmus+ program of the European Commission, ENEPLAN is one of 11 capacity building projects selected to be implemented in Lebanon for the period between 2015 and 2020. Eighteen partners gathered at the closing conference, from Europe and the region, with University of Roma Tre (Italy) as leading partner and AUB as a primary partner contributor and organizer of the conference. The conference aimed to converge efforts for the advancement of educational capacities and tools in higher education toward integrated energy planning. Over two days, presentations disseminated activities of projects, focused on the Lebanese context and energy situation, along with case studies on similar projects in Europe. A surveying of universities in Lebanon engaging in this field and a discussion of outputs of all projects wrapped up the conference.

- **Y. Abunnasr (LDEM) and Stephen M. Wheeler (UC-D) co-present at UC Davis Arab Region Consortium:** Y. Abunnasr and S. M. Wheeler, professor of Urban Design and Sustainability from UC Davis co-presented on the topic Mitigating Heat islands for Dryland Cities, at the UC Davis Arab Region Consortium Sustainability Research and Training Program which was held on March 5, 2019. The two discussed their project funded by Diamond Developers of Dubai. The project utilizes satellite data to compare urban heating dynamics for 10 arid cities worldwide, including Dubai. Urban heating dynamics and mitigation strategies for dryland cities are more complex than for temperate cities, due to their climates and the lack of water for urban greening. Abunnasr's project relies on data supplemented by The Sustainable City in Dubai, drawing conclusions about the ways in which urban forestry, shade maximizing built form, and surface material helps cool these cities.
- **M. G. Trovato as invited speaker at the Australian Institute of Landscape Architecture (AILA) International Festival:** In December 2018, M. G. Trovato was invited to give a presentation entitled 'Humanitarian Design in the face of forced migration' at the largest Australian Festival/Conference on landscape Architecture. The event which was held at the Gold Coast of Australia was entitled 'The Expanding Field'. The conference surveyed the edges of the landscape architecture profession, with the aim of identifying progressive avenues of enquiry, new territory for design, and innovative forms of practice. The conference projected possible futures, by looking outward toward the perimeter of practice where landscape architects are venturing into new roles and territories and applying our culture in hybrid ways. The Festival illuminated possible pathways forward that will enable landscape architecture to grow its relevance and ability to confront and significantly contribute to the challenges of the coming century.
- **Beata Dreksler at the 2019 International Week Agriculture Academy of Vytautas Magnus University, Business and Rural Development Research Institute, at Kaunas, Lithuania:** She gave a poster presentation entitled: "Possibilities and perspectives for common research projects for studies and sciences" .

- **Beata Dreksler at the 10th International Congress on Education in Botanic Gardens BGCI, Warsaw, Poland:** She participated in a poster presentation which was entitled “AUBotanic as a common ground for joint activities and teaching – Creation of multiple users’ network” September 2018.

Workshops:

- **Workshop on Interactive Lecturing:** Y. Abunnasr organized and conducted a workshop for the Center of Teaching and Learning entitled “Interactive Lecturing”. The workshop presented some of the ideas, tools, and experiences on interactive lecturing. Most of the workshop was spent on interactive activities that address the debate on interactive versus traditional lecturing. Participants worked individually and/or in groups discussing and debating their own experiences and views on the subject. The workshop was exploratory and iterative in nature providing a platform for self-reflection on own lecturing methods. More than 20 faculty members from across the campus participated in the workshop that was held on November 15, 2018 in West Hall. The learning outcomes of the workshop were to: 1) explain interactive lecturing and its tools; 2) assess how suitable interactive lecturing is for their style of teaching; and 3) apply some of the tools of interactive lecturing.
- **Training workshop within the framework of the EuropeAid Project:** In 2019, M. G. Trovato organized a training workshop within the framework of the EuropeAid/155108/DD/ACT/LB Project: SWaM Akkar. Supporting sustainable solid waste management in Jurd al-Kaytee, Akkar of which she serves as PI. The workshop title was ‘GIS as a tool for the Landscape Character Assessment’.

10- Consultancies

- **Nayla Al-Akl**
Landscape consultant, Bikfaya Municipal Garden, Municipality of Bikfaya-Mhaidthe (2017-present): The Municipal Garden of Bikfaya-Mhaidtha, designed and coordinated by N. Al-Akl was inaugurated in October 2018. It is expected to enhance and promote public spaces and everyday community landscapes as a result of increased exchange between academics in landscape architecture and local stakeholders. The project highlights the cultural and natural heritage of the site by preserving its local character. The design advances inclusion, enhances accessibility, and provides spaces for all ages. The new landscape redefines the relationship between the public spaces of the library and playground. An expansive view toward the broader landscape offers space for group interactions and for moments that are more intimate. The design relies on a palette of restrained, local materials and native plants: a strategy that increases awareness of the natural heritage and historic trees minimizing maintenance and the demand for water and other human or natural resources.
- **Maria Gabriella Trovato**

Homat Al Hima International, Landscape Master plan for the Park and development of the Butterflies garden, Client SPNL (March 2017 - Ongoing)

- Rami Zurayk
Expert on Food Security Monitoring for the Arab Region at UN-ESCWA (2017-present)

11- Space and Facilities

- **Capital budget equipment:** During summer 2018/2019, the LDEM department received a laser cutter which was part of a previously approved capital budget. The equipment, which was placed in the LDEM outdoor model room, will be installed and made functional for students use effective AY 2019/2020.
- **LDEM students' facilities improvement:** LDEM department continues to improve its indoor and outdoor facilities at Reynolds.
- **Eco-Unit Renovation:** The first phase of the Eco-Unit (previously greenhouse area) renovation which includes the entrance area started in November 2017 and was completed during summer 2018/2019. Phase 2, which consists of an outdoor classroom, was submitted as capital budget for 2019/2020 in October 2018 but was not approved. Since the major beneficiaries of this renovation will be FAFS and LDEM students, faculty and staff through teaching, research and outreach, part of the proposal was submitted to the Dean and was approved for funding in summer 2018/2019. Works will be executed in Fall 2019/2020.

12- Strategic Challenges

- Successful application for accreditation of the BLA undergraduate program at ASLA (American Society of Landscape Architects).
- Increase enrollment in the Landscape Architecture undergraduate program.
- Approval of the new graduate Masters of Landscape Architecture program.
- Finalizing the new undergraduate BSc program in Ecotourism.
- Lack of a fixed budget for holding departmental lecture/workshop series is an obstacle for establishing an interdisciplinary discourse among the local and international scholars.

C. Department of Nutrition and Food Sciences (NFSC)

Prepared by: Dr. Imad Toufeili, Chairman

1- Highlights

During the period of September 1, 2018 to August 31, 2019 the Nutrition and Food Sciences Department conducted several activities as summarized below.

2- Personnel

The NFSC Department has 15 full-time faculty members, 10 part-time faculty members, two Departmental Research Assistants, 3 support staff, and 20 Research Assistants. Twenty graduate assistants were appointed in the Fall 2018-2019, 22 graduate assistants in the Spring AY 2018-2019, and 4 in the Summer 2019. The tables below provide further details.

Full-time Faculty	
Names	Title
Imad Toufeili	Professor and Chairman
Nahla Hwalla	Professor
Omar Obeid	Professor
Ammar Olabi	Professor
Lara Nasreddine	Associate Professor
Samer Kharroubi	Associate Professor
Farah Naja	Associate Professor
Mohammad Abiad	Associate Professor
Issmat Kassem	Assistant Professor
Lamis Jomaa	Assistant Professor
Elie-Jacques Fares	Assistant Professor
Marie-Claire Chamieh	Lecturer
Basma Hamadeh	Instructor
Darine Hachem	Instructor
Laura Hjeij	Instructor

Part-time Faculty	
Names	Title
Carla Habib Mourad	Lecturer
Adib Charafeddine	Part-time Lecturer
Hamza Daroub	Part-time Instructor
Krystel Ouaijan	Part-time Instructor
Linda Shaker Berbari	Part-time Instructor
Marie-Rose Samaha	Part-time Instructor
Pascale Karam	Part-time Lecturer
Abir Barhoumi	Part-time Instructor
Joelle Abi Kharma	Part-time Instructor
Chafic Koleilat	Chef

Departmental Research Assistants	
Names	Title
Batoul Zaiter	Administrative- Departmental RA
Hala Al Fallah	Laboratory- Departmental RA

Research Assistants	
Names	Names
Jennifer Ayoub	Zeinab Hmede
Nehmat El Helou	Caroline Rajeh
Marie-Elizabeth Ragi	Esmail Abdul Fattah
Carla El Mallah	Myra Zeineddine
Mandy Taktouk	Sarah Zahr
Marwa Diab El-Harake	Arev Mazlounian
Maria El Hajj	Rita Jalkh
Hiba Shatila	Shaden Baasiri
Line Koleilat	Dima Wattar
Fatima Mouzahem	Rayyan Nasr

Support Staff	
Names	Title
Samson Atamian	Pilot Plant Supervisor
Tsolair Sourenian	Laboratory Technician
Tania Ghannam	Secretary

Graduate Assistants

Fall 2018-2019	
Graduate Assistant	Major
Mayssa Bou Dargham	FSAF
Mona Zeidan	FSAF
Pamela Aoun	FTCH
Marya Harb	FTCH
Marwa Itani	FTCH
Sara Nasserredine	FTCH
Caroline Rajeh	FTCH
Myra Zeineddine	FTCH
Lea Dagher	FTCH
Rita Aoun	NUTR
Cecile Borgi	NUTR
Dima Charara	NUTR
Zahraa Khalil	NUTR
Lara Chehade	NUTR
Melodie Al Daccache	PHNU
Hiba Al Rifai	PHNU
Miriam Dagher	PHNU
Arev Mazlounian	PHNU
Nadine Nasser	PHNU

Sarah Zahr	PHNU
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Spring 2018-2019	
Graduate Assistant	Major
Mayssa Bou Dargham	FSAF
Mona Zeidan	FSAF
Nadia Al Ashi	FSAF
Pamela Aoun	FTCH
Lea Dagher	FTCH
Marwa Itani	FTCH
Sara Nasserredine	FTCH
Myra Zeineddine	FTCH
Malak Baydoun	FTCH
Rayanne Beayno	FTCH
Nour Hallab	FTCH
Cecile Borgi	NUTR
Fidele El Masri	NUTR
Nisrine Chidiac	NUTR
Lara Chehade	NUTR
Maria Abou Mourad	NUTR
Melodie Al Daccache	PHNU
Hiba Al Rifai	PHNU
Miriam Dagher	PHNU
Arev Mazlounian	PHNU
Nadine Nasser	PHNU
Sarah Zahr	PHNU

Summer 2018-2019	
Graduate Assistant	Major
Mona Zeidan	FSAF
Lara Chehade	NUTR
Nisrine Chidiac	NUTR
Maria Abou Mourad	NUTR

3- Teaching

FALL Term 2018-2019:

Course No.	R	L	C	Title	Faculty Member
NFSC 210	2	3	3	Statistics in Nutrition and Food Sciences	S. Kharroubi
NFSC 220	3	0	3	Food and Nutrition Awareness	C. Habib Mourad
NFSC 221	3	0	3	Basic Nutrition	N. Hwalla

Course No.	R	L	C	Title	Faculty Member
NFSC 222	3	0	3	Community Nutrition	L. Jomaa
NFSC 223	3	0	3	Nutrition and Physical Activity	E.J. Fares
NFSC 240	1	3	2	Nutritional Status Assessment	L. Nasreddine/M.C. Chamieh (2 Lab sec.)
NFSC 252	3	0	3	Introduction to Food Processing	B. Hamadeh
NFSC 261	3	0	3	Introductory Biochemistry	A. Charafeddine
NFSC 265	3	0	3	Food Chemistry	I. Toufeili
NFSC 267	1	3	2	Food Analysis	B. Hamadeh (2 lab sec.)
NFSC 277	3	0	3	Food Microbiology I	I. Kassem
NFSC 279	0	3	1	Medical Nutrition lab I for NDCP	M.R. Samaha
NFSC 281				Nutrition in The Life Cycle Lab for NTDT	D. Hachem
NFSC 282	3	0	3	Food Quality Management	R. Hamzeh
NFSC 283	3	0	3	Nutrition, Education and Communication	L. Jomaa
NFSC 284a	-	-	1	Seminar in Clinical Dietetics	M.C. Chamieh
NFSC 287	2	0	2	Food Processing	M. Abiad
NFSC 288	2	3	3	Technology of Food Products	H. Daroub (3 lab sec.)
NFSC 289	0	3	1	Food Processing Laboratory	H. Daroub
NFSC 290	2	3	3	Food Service Management	D. Hachem (2 lab sec.)
NFSC 292	3	0	3	Medical Nutrition Therapy I	P. Karam/A. Barhoumi
NFSC 294	0	3	1	Medical Nutrition Therapy Lab I	M.R. Samaha (2 lab sec.)
NFSC 296	1	0	1	Seminar Presentation in Food Sciences and Nutrition	E.J. Fares (2 sections)
NFSC 298F	-	-	13	Dietetic Practicum	M.C. Chamieh
NFSC 298I	-	-	2	Internship	D. Hachem
NFSC 299	-	-	2	Special Topics in Nutrition and Food Sciences	E.J. Fares (coordinator)
NFSC 300A	-	-	1	Graduate Tutorial	Staff
NFSC 300B	-	-	2	Graduate Tutorial	Staff
NFSC 300C	-	-	3	Graduate Tutorial	Staff
NFSC 301	2	3	3	Statistical Methods for Nutrition and Food Science	S. Kharroubi
NFSC 307	3	0	3	Nutritional Epidemiology	F. Naja
NFSC 314	3	0	3	Advanced Nutrition: Minerals Elements	O. Obeid
NFSC 350	3	0	3	NFSC 350- Advanced Food Microbiology	I. Kassem
NFSC 370	3	0	3	Food Product Development	A. Olabi
NFSC 371	3	0	3	Food Engineering	M. Abiad

Course No.	R	L	C	Title	Faculty Member
NFSC 395	1	0	1	Graduate Seminar	M. Abiad
NFSC 396	0	0	0	Comprehensive Exam	Staff
NFSC 399	-	-	T	M.S. Thesis	Staff
PHNU300	3	0	3	Fundamentals of Public Health Nutrition	L. Nasreddine (added)

WINTER Term 2018-2019:

Course No.				Title	Inst / Coord
NFSC 225 A	0	0	0	Job Shadowing	M.C. Chamieh
NFSC 298 W	1	0	0	Practicum	M.C. Chamieh

SPRING Term 2018-2019:

Course No.				Title	Inst / Coord
NFSC 210				Statistics in Nutrition and Food Sciences	S. Kharroubi
NFSC 220				Food and Nutrition Awareness	C. Habib Murad
NFSC 221				Basic Nutrition	F. Naja (Teach 1 st section for NFSC students)/O. Obeid (2 nd section for non-NFSC students)
NFSC 223				Nutrition and Physical Activity	E. J. Fares
NFSC 224				Advanced Nutrition Principles and Practices	Krystel Ouaijan
NFSC 229				Menu Planning	S. Sawaya (Ph.D. Student)
NFSC 252				Introduction to Food Processing	B. Hamadeh
NFSC 261				Introductory Biochemistry	A. Charafeddine
NFSC 265				Food Chemistry	I. Toufeili
NFSC 267				Food Analysis	B. Hamadeh
NFSC 272				Introduction to Food Service and Industries	H. Daroub
NFSC 274				Human Nutrition and Metabolism	O. Obeid
NFSC 275				Quantity Food Production	D. Hachem/Chef Koleilat
NFSC 277				Food Microbiology I	Dr. Kassem
NFSC 278				Food Microbiology II	Mrs. Hamzeh
NFSC 284b				Seminar in Clinical Dietetics	M.C. Chamieh
NFSC 281				Nutrition in The Life Cycle Lab for NTDT	L. Hjeij
NFSC 285				Nutrition in the Life Cycle	F. Naja
NFSC 286				Nutrition in The Life Cycle Lab for NDCP	L. Hjeij
NFSC 287				Food Processing	M. Abiad

NFSC 289				Food Processing Laboratory (3 sections)	H. Daroub
NFSC 290				Food Service Management	D. Hachem
NFSC 291				Elements of Food Engineering	M. Abiad
NFSC 293				Medical Nutrition Therapy II	L. Nasreddine
NFSC 295				Medical Nutrition Therapy Lab II for NTDT	M.C. Chamieh
NFSC 296				Seminar Presentations in Nutrition and Food Science	L. Jomaa/ N. Hwalla
NFSC 297				Medical Nutrition Therapy Lab II for NDCP	M.C. Chamieh
NFSC 298I				Dietetic Internship	D. Hachem
NFSC 298S				Dietetic Practicum	M.C. Chamieh/L. Jomaa (2 cr.)
NFSC 299				Special Topics in Nutrition and Food Science	N. Hwalla (coordinating all 7 sections)
NFSC 300A				Graduate Tutorial in Nutrition and Food Science	Staff
NFSC 300B				Graduate Tutorial in Nutrition and Food Science	Staff
NFSC 300C				Graduate Tutorial in Nutrition and Food Science	Staff
NFSC 300FS				Graduate Tutorial in Food Safety	Dr. Kassem
NFSC 301				Statistical Methods for Nutrition and Food Sciences	S. Kharroubi
NFSC 305				Sensory Evaluation	A. Olabi
NFSC 311				Advanced Nutrition: Macronutrients	N. Hwalla
NFSC 312				Sports Nutrition	E.J. Fares
NFSC 315				Advanced Nutrition: Vitamins	O. Obeid
NFSC 351				Food Safety: Contaminants & Toxins.	Dr. Kassem
NFSC 395				Graduate Seminar in Nutrition and Food Science	M. Abiad
NFSC 399				M.S. Thesis	Staff
PHNU 302/ NFSC 308				Nutrition in Chronic Diseases (cross-listed with NFSC 308)	L. Nasreddine
FSEC 310				Nutrition Security: Assessment and intervention Strategies	L. Jomaa

SUMMER TERM 2018-2019:

<u>Course No.</u>	<u>R L C</u>	<u>Title</u>	<u>Instructor/</u>	<u>Restriction</u>

					<u>Coordinator</u>	
NFSC 210	2	3	3	Statistics in Nutrition and Food Sciences	Samer Kharroubi	
NFSC 221	3	0	3	Basic Nutrition	Omar Obeid	
NFSC 223	3	0	3	Nutrition and Physical Activity	Elie Jacques Fares	
NFSC 225A	0	0	0	Job Shadowing	Marie-Claire Chamieh	For NDCP II
NFSC 225B	0	0	0	Job Shadowing	Marie-Claire Chamieh	For NDCP III
NFSC 252	3	0	3	The making of food: Introduction to Food Processing	Ammar Olabi	
NFSC 261	3	0	3	Introductory Biochemistry	Imad Toufeili	
NFSC 280	-	-	1	Summer Training in Food Establishments	Ammar Olabi Mohamad Abiad	
NFSC 296	1	0	1	Seminar Presentation in Food Science & Nutrition	Staff	Restricted for graduating students only
NFSC 298SU	-	-	28	Dietetic Practicum	Marie-Claire Chamieh	For NDCP
NFSC 299	-	-	2	Special Topics in Nutrition and Food Science	Staff	Restricted for graduating students only
NFSC 300A	-	-	1	Graduate Tutorial	Staff	
NFSC 300B	-	-	2	Graduate Tutorial	Staff	
NFSC 300C	-	-	3	Graduate Tutorial	Staff	
NFSC 395	1	0	1	Graduate Seminar	Staff	
NFSC 399	-	-	T	M.S. Thesis	Staff	
FSEC 310	3	0	3	Nutrition Security: Assessment and Intervention Strategies	Dr. Jomaa	

4- Completed Theses

A total of 12 theses were completed in 2018-2019 as below:

STUDENT'S NAME	YEAR	ADVISOR	MAJOR	THESIS TITLE
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Samer Hamamji	Sept 2018	Dr. Lara Nasreddine	Nutrition	Intake and sources of fat, free sugars and salt among Lebanese children and adolescents.
Waed Sleem	Jan 2019	Dr. Farah Naja	Nutrition	Weight gain and dietary adequacy among pregnant women: A prospective study.
Talar Garabedian	Jan 2019	Dr. Omar Obeid	Nutrition	Acute effect of phosphorus ingestion on postprandial protein synthesis in rats.
Mariam Baroudi	Jan 2019	Dr. Farah Naja	Nutrition	Validity and reproducibility of a food frequency questionnaire among Lebanese adults for the assessment of food groups.
Nivin Nasser	June 2019	Dr. Mohamad Abiad	Food Technology	Converting post-consumer food waste into fish feed.
Raeda El Sayed Ahmad	June 2019	Dr. Farah Naja	Nutrition	Validity and reliability of a food frequency questionnaire for assessing energy, macro and micro nutrients intakes among Lebanese adults.
Nour Al Bissani	June 2019	Dr. Omar Obeid	Nutrition	The relation between the type of adiposity, inflammation, and iron absorption in pre-menopausal women.
Nour Wehbe	June 2019	Dr. Omar Obeid	Nutrition	The relation between glycemic and insulinemic status and iron absorption in premenopausal women.
Marwa Itani	June 2019	Dr. Imad Toufeili	Food Technology	Quantification of antioxidants and antioxidant capacities of Lebanese composite dishes.
Marya Harb	June 2019	Dr. Issmat Kassem	Food Technology	Microbiological acceptability of skinless chicken breasts and analysis of antimicrobial resistance in <i>Escherichia coli</i> associated with Lebanese poultry.
Joanna Salibi	June 2019	Dr. Issmat Kassem	Food Technology	Prevalence and loads of fecal pollution indicators and antibiotic resistance of <i>Escherichia coli</i> in raw minced beef in Lebanon.
Zeinab Harb	June 2019	Dr. Imad Toufeili	Food Technology	Antioxidant intake from fruits, vegetable and beverages consumed in Lebanon.

5- Research Funding

University Research Board (URB)

The following NFSC faculty members received funds from University Research Board (URB)

PI Name	Project Name	Total Fund
PI: Dr. Kharroubi	Estimating the SF-6D Value Set for a Population-Based Sample of Lebanese P.I.: Samer Kharroubi. University Research Board. (July 2018-June 2019)	12,500 USD
Co-I: Dr. Kharroubi	Mapping Pedestrian Behavior and Social Mobility of Older Adults in Beirut, Lebanon. (July 2018-June 2019)	12,500 USD
Co-I: Dr. Kharroubi PIs: Drs. Hwalla, Naja, and Jomaa	Exploring the Determinants and Differentials of Food Insecurity among Migrants and Nationals: Evidence from the Middle East and North African Region (MENA) and Europe. (July 2018-June 2019)	12,500 USD
Dr. Obeid	The effect of bread fortification with phosphorus and lysine on postprandial glycaemia and thermogenesis. (July 2018-June 2019)	10,000

Local, Regional and International Grants

The following NFSC faculty members successfully attracted national and international grants:

Recipient	Project Title	Source	Amount	Duration
PIs: Drs. Kharroubi and Al-Awadi	Bayesian estimations of health state utility values	Kuwait University Research Board	35,000 USD	Sept 2018-Aug 2019
Dr. Kharroubi	The importance of accounting for parameter uncertainty around the SF-6D value sets and its	The International Society for Pharmacoeconomics and	3,000 USD	Nov 2018

	impact on studies that use the SF-6D to measure health utility	Outcomes Research (ISPOR) Conference Award		
PIs: Drs. Kharroubi, Jaafar, Abu Salem, and Saghir	Application of Artificial Intelligence, Machine Learning and Advanced Statistical Models to improve irrigation water management	Google AI Impact Google.org	1,000,000 USD	June 2019 – May 2022
PI: Dr. Kharroubi	Bayesian estimations of health state utility values	CNRS	10,000 USD	Jan 2018-Jun 2019
CO-I: Dr. Kharroubi PI: Dr. Nasreddine	Multi-Purpose Cash plus Nutrition Social and Behavioral Change Communication: A Mixed Method Study amongst Under-five Syrian Refugee Children in Lebanon	Research for Health in Humanitarian Crises (UK/DFID seed funding)	8,000 USD	2018-2019
CO-I: Dr. Nasreddine	Liraglutide and Mediterranean Diet: A Randomized Controlled Trial in Patients with Obesity	Farouk Jabre Interfaculty Grants	24,000 USD	2019-2020
CO-I: Dr. Nasreddine	Cardiovascular and Mental Health Profiles at Middle Age: The Longitudinal Greater Beirut Area Cardiovascular Cohort	MPP	78,475 USD	2019
CO-I: Dr. Nasreddine	Cardiovascular profiles related to mental health conditions in a Lebanese community-based cohort	Faculty of Medicine Seed Grant	20,050 USD	2018-2019
PI: Dr. Nasreddine	Towards Healthier Kids and Sustainable Future	Nestle Middle East FZE	252,360 USD	2019-2021
PI: Dr. Nasreddine	Multi-purpose cash and education for improved nutrition and health: A mixed method study amongst underfive Syrian Refugee Children in Lebanon”	Elrha’s Research for Health in Humanitarian Crises (R2CH) Programme	7,500 USD	2018-2019
CO-I: Dr. Abiad PIs: Drs. Nour Eddine (Farance) and Karam (Lebanon)	Nano-Encapsulation d’Antimicrobiens Biosources pour une Desinfection a Effet Remanent des Surfaces a Contact Alimentaire	Partenariat Hbert Curien (PHC) Franco-Libanais CEDRE	39,158 Euro	2019-2020

CO-PI: Dr. Abiad PI: Ali R. Tehrani	Novel Corrosion Inhibitor for Viscoelastic Fluid in Oilfield Acidizing Application	Lebanese National Council for Scientific Research (CNRS-L)	\$19,628	2018-2020
PIs: Drs. Jomaa, Naja, and Nasreddine CO-Is: Drs. Hwalla, Kharroubi, and Kassem	A food system-based prototype for Healthy, Sustainable and Safe Diets (HeSSaD): The case of school-aged children in the Bekaa Valley, Lebanon	WEFRAH	65,000 USD	2019
PI: Dr. Obeid	Establishment of a regional iodine lab	IGN	100,000 USD	2019-2020
Lead investigator: Dr. Omar Obeid, PIs: Joseph Costantine and Assaad Eid	Does hepatic heating control eating?	AUB funds (CRS)	31,000 USD	2018-2020

6- Publications

The following articles were published in international refereed journals by NFSC members as indicated below:

Name of the Professor	Depart	Year	Journal	Title	Authors
Mohamad Ghassan Abiad	NFSC	2018	International Journal of Environmental Science and Technology	Evaluation of post-consumer food waste as partial replacement of commercial feed in marbled rabbitfish, <i>Siganus rivulatus</i> aquaculture	Nasser N., Babikian J., Hatem M.G., Saoud I.P., Abiad M.G.

Mohamad Ghassan Abiad	NFSC	2018	Waste and Biomass Valorization	Assessment of the Physico-chemical Properties of WasteCooking Oil and Spent Coffee Grounds Oil Extract for Renewable Applications.	Jalkh R., El, Chehab G., Abiad M.G.
Mohamad Ghassan Abiad	NFSC	2018	Journal Of Cleaner Production	Attitudes and behaviors shaping household food waste generation: Lessons from Lebanon	Mattar L., Abiad M.G., Chalak A, Diab M, Hassan H
Mohamad Ghassan Abiad	NFSC	2018	Food Security	Generation of food waste in the hospitality and food retail and wholesale sectors: lessons from developed economies	Chalak A., Abou-Daher C., Abiad M.G.
Mohamad Ghassan Abiad	NFSC	2018	BMC Medical Research Methodology	The interaction of personal, contextual, and study characteristics and their effect on recruitment and participation of pregnant women in research: a qualitative study in Lebanon.	Ayoub J.J., Abiad M., Forman M.R., Honein-Abou Haidar G., Naja F.
Mohamad Ghassan Abiad	NFSC	2018	Aquaculture Research	Using restaurant food waste as feed for Nile tilapia production	Nasser N., Abiad M.G., Babikian J., Monzer S., Saoud I.P.
Mohamad Ghassan Abiad	NFSC	2018	Aquaculture	Converting trash to fish improves aquaculture sustainability and reduces pollution	Saoud I.P. , Nasser N., Abiad M.G.
Mohamad Ghassan Abiad	NFSC	2018	Waste Management	An Overview on Food Loss and Food Waste research in the Arab World. A Glance at the World	Abiad M.G., Meho L.I.
Mohamad Ghassan Abiad	NFSC	2018	Food Security	Food loss and food waste research in the Arab world: a systematic review	Abiad M.G., Meho L.I.
Mohamad Ghassan Abiad	NFSC	2018	Journal of Biobased Materials and Bioenergy	Multifunctional Ordered Bio-based Mesoporous Framework from Edible Compounds	Kathuria A., Al-Ghamdi A., Abiad M.G., Auras R.

Mohamad Ghassan Abiad	NFSC	2018	Global Heart	Worsening of the Cardiovascular Profile in a Developing Country: The Greater Beirut Area Cardiovascular Cohort	Isma'eel H.A., Almedawar M.M., Breidy J., Nasrallah M., Nakhoul N., Mouneimne Y., Nasreddine L., Khoueiry-Zgheib N., Abiad M., Tamim H.
Nahla Hwalla	NFSC	2018	Clinical Therapeutics	The Use of Multivitamin/Multimineral Supplements: A Modified Delphi Consensus Panel Report	Blumberg J.B., Cena H., Barr S.I., Biesalski H.K., Dagach R.U., Delaney B., Frei B., Moreno González M.I., Hwalla N., Lategan-Potgieter R., McNulty H., van der Pols J.C., Winichagoon P., Li D.
Nahla Hwalla	NFSC	2018	BMC Public Health	Adherence to the Qatar dietary guidelines: a cross-sectional study of the gaps, determinants and association with cardiometabolic risk amongst adults	Al Thani M., Al Thani A.A., Al-Chetachi W., Al Malki B., Khalifa S.A.H., Bakri A.H., Hwalla N., Naja F., Nasreddine L.
Nahla Hwalla	NFSC	2018	Child Care, Health and Development	Adolescents' self-perceived and actual weight: Which plays a dominant role in weight loss behaviour in Lebanon?	Assaad S., Anouti S., Naja F., Nasreddine L., Hwalla N., Sibai A.M.
Nahla Hwalla	NFSC	2018	Nutrition Research	Nutritional status and dietary intakes of children amid the nutrition transition: the case of the Eastern Mediterranean Region	Nasreddine L.M., Kassis A.N., Ayoub J.J., Naja F.A., Hwalla N.C.
Nahla Hwalla	NFSC	2018	Nutrition Research	Food acceptability affects ghrelin and insulin levels in healthy male subjects. A pilot study	Olabi A, Hwalla N, Daroub H, Obeid O, Cordahi C
Nahla Hwalla	NFSC	2018	Nutrition Journal	Environmental footprints of food consumption and dietary patterns among Lebanese adults: A cross-sectional study	Naja F., Jomaa L., Itani L., Zidek J., El Labban S., Sibai A.M., Hwalla N.

Nahla Hwalla	NFSC	2018	Journal of Hunger and Environmental Nutrition	Children's Experiences of Food Insecurity in Lebanon: A Qualitative Study	Ghattas H., Sassine A.J., Aqeel M., Hwalla N., Obeid O.A., Sahyoun N.R.
Lamis Jomaa	NFSC	2018	Nutrition Journal	Environmental footprints of food consumption and dietary patterns among Lebanese adults: A cross-sectional study	Naja F., Jomaa L., Itani L., Zidek J., El Labban S., Sibai A.M., Hwalla N.
Lamis Jomaa	NFSC	2018	Nutrients	Impact of a Pilot School-Based Nutrition Intervention on Knowledge, Attitudes, Behavior, and Nutritional Status of Syrian Refugee Children in the Bekaa, Lebanon.	El Harake M.D., Kharroubi S.A., Hamadeh S.K., Jomaa L.
Lamis Jomaa	NFSC	2018	Nutrition Reviews	Effectiveness of behavioral interventions to reduce the intake of sugar-sweetened beverages in children and adolescents: a systematic review and meta-analysis	Abdel Rahman A, Jomaa L, Kahale L, Adair P, Pine C.
Lara Nasreddine	NFSC	2018	Eastern Mediterranean Health Journal	Salt intake reduction strategies in the Eastern Mediterranean Region.	Nasreddine L., Rafii B., Al-Jawaldeh A.
Lara Nasreddine	NFSC	2018	International Journal of Hyperten	Prevalence, Awareness, and Control of Hypertension in Greater Beirut Area, Lebanon.	Noubani A, Nasreddine L, Sibai AM, Tamim H, Isma'eel H
Lara Nasreddine	NFSC	2018	Nutrients	Association between serum phospholipid fatty acid levels and adiposity among Lebanese adults: a cross sectional study	Yamine S., Naja F., Tamim H., Nasrallah M., Biessy C., Aglago E., Matta M., Romieu I., Gunter M., Nasreddine L., Chajes V.
Lara Nasreddine	NFSC	2018	BMC Pediatrics	Prevalence and Predictors of Metabolically Healthy Obesity in Adolescents: Findings from the National "Jeeluna" Study in Saudi-Arabia	Nasreddine L, Tamim H, Mailhac A & AlBuhairan
Lara Nasreddine	NFSC	2018	Nutrition Research	Nutritional status and dietary intakes of children amid the nutrition transition: the case of the Eastern Mediterranean Region	Nasreddine L.M., Kassis A.N., Ayoub J.J., Naja F.A., Hwalla N.C.

Lara Nasreddine	NFSC	2018	Global Heart	Worsening of the Cardiovascular Profile in a Developing Country: The Greater Beirut Area Cardiovascular Cohort	Isma'eel H.A., Almedawar M.M., Breidy J., Nasrallah M., Nakhoul N., Mouneimne Y., Nasreddine L., Khoueiry-Zgheib N., Abiad M., Tamim H.
Lara Nasreddine	NFSC	2018	BMC Public Health	Adherence to the Qatar dietary guidelines: a cross-sectional study of the gaps, determinants and association with cardiometabolic risk amongst adults	Al Thani M., Al Thani A.A., Al-Chetachi W., Al Malki B., Khalifa S.A.H., Bakri A.H., Hwalla N., Naja F., Nasreddine L.
Lara Nasreddine	NFSC	2018	Eastern Mediterranean Health Journal	Review of the nutrition situation in the Eastern Mediterranean Region	Nasreddine L., Ayoub J.J., Al Jawaldeh A.
Lara Nasreddine	NFSC	2018	Cardiovascular Diagnosis and Therapy	Impact of a hospital-based educational intervention on dietary salt-related knowledge and behaviour in a cardiac care unit population in Lebanon	Walsh J.L., Aridi H., Fathallah J., Al-Shaar L., Alam S., Nasreddine L., Isma'eel H.
Lara Nasreddine	NFSC	2018	Aging and Disease	Short Telomere Length is Associated with Aging, Central Obesity, Poor Sleep and Hypertension in Lebanese Individuals	Zgheib N.K., Sleiman F., Nasreddine L., Nasrallah M., Nakhoul N., Ismaeel H., Tamim H.
Lara Nasreddine	NFSC	2018	Public Health Nutrition	A minimally processed dietary pattern is associated with lower odds of metabolic syndrome among Lebanese	Nasreddine L., Tamim H., Itani L., Nasrallah M.P., Isma'eel H., Nakhoul N.F., Abou-Rizk J., Naja F.
Lara Nasreddine	NFSC	2018	Child Care, Health and Development	Adolescents' self-perceived and actual weight: Which plays a dominant role in weight loss behaviour in Lebanon?	Assaad S., Anouti S., Naja F., Nasreddine L., Hwalla N., Sibai A.M.

Farah Naja	NFSC	2018	Nutrients	Association between Serum Phospholipid Fatty Acid Levels and Adiposity among Lebanese Adults: A Cross-Sectional Study.	Yammine SG, Naja F, Tamim H, Nasrallah M, Biessy C, Aglago EK, M, Romieu I, Gunter MJ, Nasreddine L, Chajès V
Farah Naja	NFSC	2018	Evidence-Based Complementary and Alternative Medicine	Understanding CAM Use in Lebanon: Findings from a National Survey.	Kharroubi S.A., Chehab R.F., El-Baba C., Alameddine M., Naja F.
Farah Naja	NFSC	2018	BMC Medical Research Methodology	The interaction of personal, contextual, and study characteristics and their effect on recruitment and participation of pregnant women in research: a qualitative study in Lebanon.	Ayoub J.J., Abiad M., Forman M.R., Honein-Abou Haidar G., Naja F.
Farah Naja	NFSC	2018	Nutrition Journal	Environmental footprints of food consumption and dietary patterns among Lebanese adults: A cross-sectional study	Naja F., Jomaa L., Itani L., Zidek J., Labban S., Sibai A.M., Hwalla N.
Farah Naja	NFSC	2018	Frontiers in Psychiatry	A Pro-Inflammatory Diet Is Associated With an Increased Odds of Depression Symptoms Among Iranian Adolescents: A Cross-Sectional Study.	Shivappa N., Hebert J.R., Neshatbini Tehrani A., Bayzai B., Naja F., Rashidkhani B.
Farah Naja	NFSC	2018	Nutrition Research	Nutritional status and dietary intakes of children amid the nutrition transition: the case of the Eastern Mediterranean Region	Nasreddine L.M., Kassis A.N., Ayoub J.J., Naja F.A., Hwalla N.C.
Farah Naja	NFSC	2018	PLoS ONE	The Mother-Infant Study Cohort (MISC): Methodology, challenges, and baseline characteristics.	Radwan H., Hashim M., Obaid R.S., Hasan H., Naja F., Ghazal H.A., Mohamed H.J.J., Rizk R., Hilali M.A., Rayess R., Izzaldin G.

Farah Naja	NFSC	2018	BMC Public Health	Adherence to the Qatar dietary guidelines: a cross-sectional study of the gaps, determinants and association with cardiometabolic risk amongst adults	Al Thani M., Al Thani A.A., Al-Chetachi W., Al Malki B., Khalifa S.A.H., Bakri A.H., Hwalla N., Naja F., Nasreddine L.
Farah Naja	NFSC	2018	Child Care, Health and Development	Adolescents' self-perceived and actual weight: Which plays a dominant role in weight loss behaviour in Lebanon?	Assaad S., Anouti S., Naja F., Nasreddine L., Hwalla N., Sibai A.M.
Farah Naja	NFSC	2018	Public Health Nutrition	A minimally processed dietary pattern is associated with odds of metabolic syndrome among Lebanese adults	Nasreddine L., Tamim H., Itani L., Nasrallah M.P., Isma'eel H., Nakhoul N.F., Abou-Rizk J., Naja F.
Omar Obeid	NFSC	2018	BMC Public Health	Metabolic syndrome among adolescents in Dubai, United Arab Emirates, is attributable to the high prevalence of low HDL levels: a cross-sectional study.	Haroun D., Mechli R., Sahuri R., AlKhatib S., Obeid O., El Mallah C., Wood L., AlSuwaidi K.
Omar Obeid	NFSC	2018	Foods (Basel, Switzerland)	Impact of Pre-Processed Chickpea Flour Incorporation into "Mankoushe" on Appetite Hormones and Scores.	Dandachy S., Mawlawi H., Chedid M., El-Mallah C., Obeid O.
Omar Obeid	NFSC	2018	Nutrition Research	Food acceptability affects ghrelin and insulin levels in healthy male subjects. A pilot study	Olabi A, Hwalla N, Daroub H, Obeid O, Cordahi C
Omar Obeid	NFSC	2018	Journal of Hunger and Environmental Nutrition	Children's Experiences of Food Insecurity in Lebanon: A Qualitative Study	Ghattas H., Sassine A.J., Aqeel M., Hwalla N., Obeid O.A., Sahyoun N.R.
Omar Obeid	NFSC	2018	Current Topics In Nutraceutical Research	Effect of phosphorus manipulation on Non-Alcoholic Fatty Liver Disease (NAFLD) development in rats maintained on high fructose or high fat diet.	Ghattas H., Makki J., Halabi M., Jabbour M., Tawil A., Obeid O.

Ammar Olabi	NFSC	2018	Nutrition Research	If it does not taste good, don't eat it! Food acceptability affects ghrelin and insulin levels in healthy male subjects. A pilot study	Olabi A, Hwalla N, Daroub H, Obeid O, Cordahi C
Ammar Olabi	NFSC	2018	International Journal of Food Properties	Dough mixing properties and white pita bread sensory characteristics as affected by salt reduction	Georges C, Daroub H, Toufeili I, Isma H, Olabi A
Ammar Olabi	NFSC	2018	Journal of Thermal Biology	Postprandial energy expenditure of protein is affected by its phosphorus content	Abdouni L, Olabi A, Obeid O
Samer Kharroubi	NFSC	2018	Evidence-Based Complementary and Alternative Medicine	Understanding CAM Use in Lebanon: Findings from a National Survey.	Kharroubi S.A., Chehab R.F., El-Baba C., Alameddine M., Naja F.
Samer Kharroubi	NFSC	2018	Nutrients	Impact of a Pilot School-Based Nutrition Intervention on Dietary Knowledge, Attitudes, Behavior, and Nutritional Status of Syrian Refugee Children in the Bekaa, Lebanon.	El Harake M.D., Kharroubi S.A., Hamadeh S.K., Jomaa L.
Samer Kharroubi	NFSC	2018	Health and Quality of Life Outcomes	Use of Bayesian methods to model the SF-6D health state preference based data 01 Mathematical Sciences 0104 Statistics	Kharroubi S.A.
Samer Kharroubi	NFSC	2018	Quality of Life Research	Modelling a Preference-Based Index for EQ-5D using a nonparametric Bayesian method	Kharroubi S.A., Abou Daher C.
Samer Kharroubi	NFSC	2018	European Journal of Health Economics	Valuation of preference-based measures: Can existing preference data be used to select a smaller sample of health states?	Kharroubi S.A., Rowen D.
Samer Kharroubi	NFSC	2018	Journal of Applied Statistics	Valuations of EQ-5D health states: could United Kingdom results be used as informative priors for the United States	Kharroubi S.A.

Samer Kharroubi	NFSC	2018	Computational Statistics	Posterior simulation via the signed root log-likelihood ratio	Kharroubi S.A.
Samer Kharroubi	NFSC	2018	Pharmaceutical Statistics	Bayesian statistical models to estimate EQ-5D utility scores from EORTC QLQ data in Myeloma	Kharroubi S.A, Edlin R., Meads D., Browne C., McCabe C.
Elie Jacques Fares	NFSC	2018	Journal of Physical Activity and Health	Results from Lebanon's 2018 Report Card on Physical Activity for Children and Youth	Abi Nader P., Majed L., Sayegh S., Hadla R., Borgi C., Hawa Z., Mattar L., Fares E.-J., Chamieh M.C., Mourad C.H., Belanger M.
Issmat Kassem	NFSC	2018	Antimicrobial Agents and Chemotherapy	The Colistin Resistance Gene mcr-1 Is Prevalent in Commensal Escherichia coli Isolated from Preharvest Poultry in Lebanon	Hmede Z., Kassem I.I.
Issmat Kassem	NFSC	2018	Virulence	Novel small molecule modulators of quorum sensing in avian pathogenic Escherichia coli (APEC)	Helmy Y.A., Deblais L., Kassem I.I., Kathayat D., Rajashekara G.
Mohamad Ghassab Abiad	NFSC	2019	Journal of Food Safety	Qualitative and quantitative cues in consumers' valuation of food safety: Evidence from Lebanon	Chalak A, Diab M, Kassem II, Abiad MG
Mohamad Ghassab Abiad	NFSC	2019	International Journal of Food Microbiology	Combined effects of thymol, carvacrol and packaging on the shelf-life of marinated chicken.	Karam L, Roustom R, Abiad MG, El-Obeid T, Savvaidis IN
Mohamad Ghassab Abiad	NFSC	2019	PLoS ONE	The determinants of household food waste generation and its associated caloric and nutrient losses: The case of Lebanon	Chalak A., Abiad M.G., Diab M., Nasreddine L.
Nahla Hwalla	NFSC	2019	Sustainability (Switzerland)	Mediterranean diet and its environmental footprints amid nutrition transition: The case of Lebanon	Naja F., Itani L., Hamade R., Chamieh M.C., Hwalla N.
Nahla Hwalla	NFSC	2019	European Journal of Nutrition	A traditional dietary pattern is associated with lower odds of overweight and obesity among preschool children in Lebanon: a cross-sectional study.	Nasreddine L, Shatila H, Itani L, Hwalla N, Jomaa L, Naja F

Nahla Hwalla	NFSC	2019	Sustainability Science	Impacts of shifting to healthier food consumption patterns on environmental sustainability in MENA countries	Bahn R., EL Labban S., Hwalla N.
Nahla Hwalla	NFSC	2019	Nature	Rising rural body-mass index is the main driver of the global obesity epidemic in adults	Bixby H., Benthall J., Zhou B., Di Cesare M., ... Hwalla N., ... Zheng W., Zheng Y., Zholdin B., Zhou M., Zhu D., Zhussupov B., Zimmermann E., ZunigaCisneros J., Ezzati M.
Nahla Hwalla	NFSC	2019	Metabolic Syndrome and Related Disorders	Anthropometric Cutoffs for Increased Cardiometabolic Risk Among Lebanese Adults: A Cross-Sectional Study.	Nasreddine L, Bachir N, Kharroubi S, Chamieh MC, Mehio Sibai A, Hwalla N, Naja F
Nahla Hwalla	NFSC	2019	PLoS ONE	Identification of dietary patterns associated with elevated blood pressure among Lebanese men: A comparison of principal component analysis with reduced rank regression and partial least square methods	Naja F., Itani L., Hwalla N., Sibai A.M., Kharroubi S.A.
Nahla Hwalla	NFSC	2019	Public Health Nutrition	Prevalence and correlates of food insecurity among Lebanese households with children aged 4-18 years: Findings from a national cross-sectional study	Jomaa L, Naja F., Kharroubi S., Hwalla N.
Nahla Hwalla	NFSC	2019	Nutrients	Differences in dietary intakes among Lebanese adults over a decade: results from two national surveys 1997–2008/2009	Nasreddine L., Ayoub J., Hachem F., Tabbara J., Sibai A., Hwalla N., Naja F.
Nahla Hwalla	NFSC	2019	International Journal of Nutritional Sciences	Fighting Malnutrition in Hospitals: A Middle East and Global Perspective.	Ouaijan K., Hwalla N.

Nahla Hwalla	NFSC	2019	BMJ open	Prevalence and associations of behavioural risk factors with blood lipids profile in Lebanese adults: findings from WHO STEPwise NCD cross-sectional survey.	Mansour M, Tamim H, Nasreddine L, El Khoury C, Hwalla N, Chaaya M, Farhat A, Sibai AM
Nahla Hwalla	NFSC	2019	Frontiers in Public Health	Nutrition in the Prevention of Breast Cancer: A Middle Eastern Perspective	Naja F, Nasreddine L, Awada S, Hwalla N
Nahla Hwalla	NFSC	2019	International Journal of Nutritional Sciences	Reducing the Sugar Burden using Non-Nutritive Sweeteners: Review of Evidence and Recommendations. International Journal of Nutritional Sciences	Aldaheri A., Almadani K., Ayesh W.H., Eldien M.M., Ismail L.C., Sadikot S.M., Hwalla N.
Nahla Hwalla	NFSC	2019	Lancet	The state of hypertension care in 44 low-income and middle-income countries: a cross-sectional study of nationally representative individual-level data from 1.1 million adults.	Geldsetzer P., Manne-Goehler J., Marcus M.E., Ebert C., Zhumadilov Z., Wesseh C.S., Tsabedze L., Supiyev A., Sturua L., Bahendeka S.K., Sibai A.M., Quesnel-Crooks S., Norov B., Mwangi K.J., Mwalim O., Wong-McClure R., Mayige M.T., Martins J.S., Lunet N., Labadarios D., Karki K.B., Kagaruki G.B., Jorgensen J.M.A., Hwalla N.C., Houinato D., Houehanou C., Msaidié M., Guwatudde D., Gurung M.S., Gathecha G., Dorobantu M., Damasceno A., Bovet P., Bicaba B.W., Aryal K.K., Andall-Brereton G., Agoudavi K., Stokes A., Davies J.I., Bärnighausen T., Atun R., Vollmer S., Jaacks L.M

Lamis Jomaa	NFSC	2019	Conflict and Health	Informal healthcare provision in Lebanon: An adaptive mechanism among displaced Syrian health professionals in a protracted crisis	Honein-Abouhaidar G., Noubani A., El Arnaout N., Ismail S., Nimer H., Menassa M., Coutts A.P., Rayes D., Jomaa L., Saleh S., Fouad F.M.
Lamis Jomaa	NFSC	2019	Public Health Nutrition	Prevalence and correlates of food insecurity among Lebanese households with children aged 4-18 years: Findings from a national cross-sectional study	Jomaa L, Naja F., Kharroubi S., Hwalla N.
Lamis Jomaa	NFSC	2019	European Journal of Nutrition	A traditional dietary pattern is associated with lower odds of overweight and obesity among preschool children in Lebanon: a cross-sectional study.	Nasreddine L, Shatila H, Itani L, Hwalla N, Jomaa L, Naja F
Lamis Jomaa	NFSC	2019	PLoS ONE	Perceived impact of community kitchens on the food security of Syrian refugees and kitchen workers in Lebanon: Qualitative evidence in a displacement context	Ibrahim N., Honein-AbouHaidar G., Jomaa L.
Lara Nasreddine	NFSC	2019	European Journal of Nutrition	A traditional dietary pattern is associated with lower odds of overweight and obesity among preschool children in Lebanon: a cross-sectional study.	Nasreddine L, Shatila H, Itani L, Hwalla N, Jomaa L, Naja F
Lara Nasreddine	NFSC	2019	European Journal of Nutrition	A healthy lifestyle pattern is associated with a metabolically healthy phenotype in overweight and obese adults: a cross-sectional study.	Naja F, Itani L, Nasrallah MP, Chami H, Tamim H, Nasreddine L
Lara Nasreddine	NFSC	2019	BMJ open	Prevalence and associations of behavioural risk factors with blood lipids profile in Lebanese adults: findings from WHO STEPwise NCD cross-sectional survey.	Mansour M, Tamim H, Nasreddine L, El Khoury C, Hwalla N, Chaaya M, Farhat A, Sibai AM
Lara Nasreddine	NFSC	2019	Metabolic Syndrome and Related Disorders	Anthropometric Cutoffs for Increased Cardiometabolic Risk Among Lebanese Adults: A Cross-Sectional Study.	Nasreddine L, Bachir N, Kharroubi S, Chamieh MC, Mehio Sibai A, Hwalla N, Naja F

Lara Nasreddine	NFSC	2019	Frontiers in Public Health	Nutrition in the Prevention of Breast Cancer: A Middle Eastern Perspective	Naja F, Nasreddine L, Awada S, Hwalla N
Lara Nasreddine	NFSC	2019	PLoS ONE	The Determinants of Household Food Waste Generation and its Associated Caloric and Nutrient Losses: The Case of Lebanon.	Chalak A, Abiad MG, Diab M, Nasreddine L
Lara Nasreddine	NFSC	2019	Clinical Nutrition	MON-PO635: Contribution of Lebanese Composite Dishes To antioxidant Intakes in Lebanon	Itani M, Toufeili I, Nasreddine L
Lara Nasreddine	NFSC	2019	PLoS ONE	Pre-pregnancy BMI, gestational weight gain and birth outcomes in Lebanon and Qatar: Results of the MINA cohort.	Abdulmalik M.A., Ayoub J.J., Mahmoud A., Nasreddine L., Naja F.
Lara Nasreddine	NFSC	2019	Nutrients	Differences in Dietary Intakes among Lebanese Adults over a Decade: Results from Two National Surveys 1997–2008/2009	Nasreddine L., Ayoub J., Hachem F., Tabbara J., Sibai A., Hwalla N., Naja F.
Lara Nasreddine	NFSC	2019	Journal of Clinical Sleep Medicine	Sleepless in Beirut: Sleep Difficulties in an Urban Environment With Chronic Psychosocial Stress	Chami H., Bechnak A., Isma H., Talih F., Nasreddine L., Nasrallah M., Tamim H.
Lara Nasreddine	NFSC	2019	Food & Nutrition Research	The extent, nature, and nutritional quality of foods advertised to children in Lebanon: the first study to use the WHO nutrient profile model for the Eastern Mediterranean Region.	Nasreddine L., Taktouk M., Dabbous M., Melki J.
Lara Nasreddine	NFSC	2019	Journal of Personalized Medicine	The Interaction between Genetic Polymorphisms in FTO and TCF7L2 Genes and Dietary Intake with Regard to Body Mass and Composition: An Exploratory Study.	Nasreddine L., Akika R., Mailhac A., Tamim H., Zgheib N.K.
Farah Naja	NFSC	2019	European Journal of Nutrition	A traditional dietary pattern is associated with lower odds of overweight and obesity among preschool children in Lebanon: a cross-sectional study.	Nasreddine L, Shatila H, Itani L, Hwalla N, Jomaa L, Naja F

Farah Naja	NFSC	2019	BMC Pregnancy and Childbirth	Gestational weight gain and gestational diabetes among Emirati and Arab women in the United Arab Emirates: results from the MISC cohort.	Hashim M, Radwan H, Hasan H, Obaid RS, Al Ghazal H, Al Hilali M, Rayess R, Chehayber N, Mohamed HJJ, Naja F
Farah Naja	NFSC	2019	BMC Public Health	Burden of non-communicable diseases among Syrian refugees: a scoping review.	Naja F, Shatila H, El Koussa M, Meho L, Ghandour L, Saleh S
Farah Naja	NFSC	2019	Nutrients	Human Milk Oligosaccharide, Phospholipid, and Ganglioside Concentrations in Breast Milk from United Arab Emirates Mothers: Results from the MISC Cohort.	McJarrow P, Radwan H, Ma L, MacGibbon AKH, Hashim M, Hasan H, Obaid RS, Naja F, Mohamed HJJ, Al Ghazal H, Fong BY
Farah Naja	NFSC	2019	Nutrition and Cancer	Healthy Eating Index-2010 and Mediterranean-Style Dietary Pattern Score and the risk of colorectal cancer and adenoma: a case-control study.	Jafari Nasab S, Bahrami A, Rafiee P, Hekmatdoust A, Ghanavati M, Rashidkhani B, Sadeghi A, Asadzadeh Aghdahi H, Naja F, Hejazi E
Farah Naja	NFSC	2019	Sustainability (Switzerland)	Mediterranean diet and its environmental footprints amid nutrition transition: The case of Lebanon	Naja F., Itani L., Hamade R., Chamieh M.C., Hwalla N.
Farah Naja	NFSC	2019	Metabolic Syndrome and Related Disorders	Anthropometric Cutoffs for Increased Cardiometabolic Risk Among Lebanese Adults: A Cross-Sectional Study.	Nasreddine L, Bachir N, Kharroubi S, Chamieh MC, Mehio Sibai A, Hwalla N, Naja F
Farah Naja	NFSC	2019	Nutrients	Differences in dietary intakes among Lebanese adults over a decade: results from two national surveys 1997–2008/2009	Nasreddine L., Ayoub J., Hachem F., Tabbara J., Sibai A., Hwalla N.,
Farah Naja	NFSC	2019	PLoS ONE	Identification of dietary patterns associated with elevated blood pressure among Lebanese men: A comparison of principal component analysis with reduced rank regression and partial least square	Naja F., Itani L., Hwalla N., Sibai A.M., Kharroubi S.A.

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Farah Naja	NFSC	2019	Frontiers in Public Health	Nutrition in the Prevention of Breast Cancer: A Middle Eastern Perspective	Naja F, Nasreddine L, Awada S, Hwalla N
Farah Naja	NFSC	2019	Public Health Nutrition	Prevalence and correlates of food insecurity among Lebanese households with children aged 4-18 years: findings from a national cross-sectional study.	Jomaa L, Naja F, Kharroubi S, Hwalla N
Farah Naja	NFSC	2019	BMJ open	Beliefs, practices and knowledge of community pharmacists regarding complementary and alternative medicine: national cross-sectional study in Lebanon.	Hijazi MA, Shatila H, El-Lakany A, Aboul Ela M, Kharroubi S, Alameddine M, Naja F
Farah Naja	NFSC	2019	International Journal of Adolescent Medicine and Health	Adherence to a Mediterranean dietary pattern and overweight and obesity among female adolescents in Iran	Sedaghat F., Naja F., Darand M., Beyzai B., Rashidkhani B.
Farah Naja	NFSC	2019	PLoS ONE	Pre-pregnancy BMI, gestational weight gain and birth outcomes in Lebanon and Qatar: Results of the MINA cohort.	Abdulmalik M.A., Ayoub J.J., Mahmoud A., Nasreddine L., Naja F.
Farah Naja	NFSC	2019	European Journal of Nutrition	A healthy lifestyle pattern is associated with a metabolically healthy phenotype in overweight and obese adults: a cross-sectional study.	Naja F, Itani L, Nasrallah MP, Chami H, Tamim H, Nasreddine L
Omar Obeid	NFSC	2019	Foods	Effect of processed chickpea flour incorporation on sensory properties of mankoushe zaatar	Dandachy S., Mawlawi H., Obeid O.
Omar Obeid	NFSC	2019	Nutrition Research	Fructose threshold for inducing organ damage in a rat model of non-alcoholic fatty liver disease	Fakhoury-Sayegh N, Trak-Smayra V, Sayegh R, Haidar F, Obeid O, Asmar S, Khazzaka A

Omar Obeid	NFSC	2019	Nature and Science of Sleep	Insufficient sleep duration and its association with breakfast intake, overweight/obesity, socio-demographics and selected lifestyle behaviors among Saudi school children	Al-Hazzaa H.M., Alhussain M.H., Alhowikan A.M., Obeid O.A.
Omar Obeid	NFSC	2019	JSM Nutritional Disorders	Regional policies on sugar intake reduction at population levels to address obesity in the Eastern Mediterranean	Jawadleh A.J., El Mallah C.M., Obeid O.
Omar Obeid	NFSC	2019	Nutrition	Phosphorus ingestion with a high-carbohydrate meal increased the postprandial energy expenditure of obese and lean individuals.	Assaad M., El Mallah C., Obeid O.
Omar Obeid	NFSC	2019	Obesity	Effect of Meal Acceptability on Postprandial Appetite Scores and Hormones of Male Subjects with Varied Adiposity	El Helou N., Obeid O., Olabi A.
Omar Obeid	NFSC	2019	Nutrition	Concomitant lysine and phosphorus addition to wheat gluten protein diet highly amplified growth measures of rats	Ragi M.E., El Mallah C., Toufeili I., Obeid O.
Omar Obeid	NFSC	2019	Eastern Mediterranean Health Journal	Macro-minerals enrichment of white bread reduces postprandial glycaemia without altering the sensory properties: A cross-over study	El Khoury R., El Solh N., Olabi A., Toufeili I., Hlais S., El Mallah C., Obeid O.
Ammar Olabi	NFSC	2019	Eastern Mediterranean Health Journal	Macro-minerals enrichment of white bread reduces postprandial glycaemia without altering the sensory properties: A cross-over study	El Khoury R., El Solh N., Olabi A., Toufeili I., Hlais S., El Mallah C., Obeid O.
Ammar Olabi	NFSC	2019	Obesity	Effect of Meal Acceptability on Postprandial Appetite Scores and Hormones of Male Subjects with Varied Adiposity	El Helou N., Obeid O., Olabi A.
Imad Toufeili	NFSC	2019	Eastern Mediterranean Health Journal	Macro-minerals enrichment of white bread reduces postprandial glycaemia without altering the sensory properties: A cross-over study	El Khoury R., El Solh N., Olabi A., Toufeili I., Hlais S., El Mallah C., Obeid O.

Imad Toufeili	NFSC	2019	Environmental Geochemistry and Health	Uptake of Cd, Pb, and Ni by Origanum syriacum produced in Lebanon	Dbaibo R., Bashour I., Hamadeh S., Toufeili I.
Imad Toufeili	NFSC	2019	American Journal of Analytical Chemistry	Impact of Plastic Packaging Materials and Storage Time on the Quality Parameters of Lebanese Extra Virgin Olive Oil under Real-Time Storage Conditions	Zarazir, Rajab, Obeid H, Toufaily, Toufeili I, Hamieh
Imad Toufeili	NFSC	2019	Clinical Nutrition	MON-PO635: Contribution of Lebanese Composite Dishes Toantioxidant Intakes in Lebanon	Itani M, Toufeili I, Nasreddine L
Imad Toufeili	NFSC	2019	Nutrition	Concomitant lysine and phosphorus addition to wheat gluten protein diet highly amplified growth measures of rats	Ragi M.E., El Mallah C., Toufeili I., Obeid O.
Samer Kharroubi	NFSC	2019	Metabolic Syndrome and Related Disorders	Anthropometric Cutoffs for Increased Cardiometabolic Risk Among Lebanese Adults: A Cross-Sectional Study.	Nasreddine L, Bachir N, Kharroubi S, Chamieh MC, Mehio Sibai A, Hwalla N, Naja F
Samer Kharroubi	NFSC	2019	Public Health Nutrition	Prevalence and correlates of food insecurity among Lebanese households with children aged 4-18 years: Findings from a national cross-sectional study	Jomaa L, Naja F., Kharroubi S., Hwalla N.
Samer Kharroubi	NFSC	2019	BMJ open	Beliefs, practices and knowledge of community pharmacists regarding complementary and alternative medicine: national cross-sectional study in Lebanon.	Hijazi MA, Shatila H, El-Lakany A, Ela M, Kharroubi S, Alameddine M, Naja F
Samer Kharroubi	NFSC	2019	Mediterranean Journal of Hematology and Infectious Diseases	Viral etiology of acute respiratory infections in pediatric patients in Lebanon	Masoud K., Hanna-Wakim R., Zaraket H., Kharroubi S., Araj G.F., Matar G.M., Dbaibo G.
Samer Kharroubi	NFSC	2019	Journal of Medical Economics	The importance of accounting for the uncertainty around the preference-based health-related quality-of-life measures value sets: a systematic review	Kharroubi S.A., Beyh Y.

Samer Kharroubi	NFSC	2019	European Journal of Health Economics	Valuation of preference-based measures: can existing preference data be used to select a smaller sample of health states?	Kharroubi S.A., Rowen D.
Samer Kharroubi	NFSC	2019	PLoS ONE	Identification of dietary patterns associated with elevated blood pressure among Lebanese men: A comparison of principal component analysis with reduced rank regression and partial least square methods	Naja F., Itani L., Hwalla N., Sibai A.M., Kharroubi S.A.
Elie Jacques Fares	NFSC	2019	Journal of Physical Activity and Health	First physical activity report card for children and youth in Lebanon	Nader P.A., Majed L., Sayegh S., Mattar L., Hadla R., Chamieh M.C., Mourad C.H., Fares E.-J., Hawa Z., Belanger M.
Issmat Kassem	NFSC	2019	Travel Medicine and Infectious Disease	First report on the detection of the plasmid-borne colistin resistance gene mcr-1 in multi-drug resistant E. coli isolated from domestic and sewer waters in Syrian refugee camps in Lebanon	Sulaiman A.A.A., Kassem I.I.
Issmat Kassem	NFSC	2019	International Journal of Antimicrobial Agents	Emergence of plasmid-borne colistin resistance gene mcr-1 in multidrug-resistant Escherichia coli isolated from irrigation water in Lebanon	Hmede Z., Sulaiman A.A.A., Jaafar H., Kassem I.I.
Issmat Kassem	NFSC	2019	Journal of Food Safety	Qualitative and quantitative cues in consumers' valuation of food safety: Evidence from Lebanon	Chalak A, Diab M, Kassem II, Abiad MG
Issmat Kassem	NFSC	2019	Journal of Global Antimicrobial Resistance	On a collision course: The availability and use of colistin-containing drugs in human therapeutics and food -animal farming in Lebanon	Kassem I.I., Hijazi M.A., Saab R.
Issmat Kassem	NFSC	2019	IDCases	First report of the plasmid-borne colistin resistance gene (mcr-1) in Proteus mirabilis isolated from a toddler clinical settings	Hmede Z., Kassem I.I.

7- Services

- Mohamad Abiad

AUB Committees:

- University Senate – Elected FAFS Representative
- Senate Committee for Faculty Affairs
- University Senate Steering Committee – Elected FAFS Representative
- University Disciplinary Committee – Elected FAFS Representative
- Social and Behavioral Sciences Institutional Review Board (SBS-IRB) – Alternate Member
- Social and Behavioral Sciences Institutional Review Board (SBS-IRB) – Full Member
- University Sports Committee – Member
- University Student Faculty Committee (USFC) – Elected FAFS Representative
- University Committee on Student Affairs – Elected FAFS Representative
- Writing Center Advisory Board – Member
- K.A.S. Central Research Science Laboratory Steering Committee – Member – FAFS Representative
- Interfaculty Financial Aid Committee – FAFS Representative (member)
- Middle States Commission on Higher Education (MSCHE) Reaccreditation – Self-Study working group addressing Standard VII: Governance, Leadership, and Administration
- Task Force for the Review of Grading System
- Task Force for Design and Implementation of Electronic Voting System for Faculty Affairs
- Faculty Student Affairs Committee – Chair and Elected Member
- Student Representative Committee – Elected Advisor

- Samer Kharroubi

AUB Committees:

- Member of Student Affairs Committee
- Member of Undergraduate Curriculum Committee
- Member of Undergraduate Admissions Committee
- FAFS Representative on the University Teaching Evaluation Committee
- FAFS Representative on the University Commencement Committee
- FAFS Representative on the University Appeals Committee
- FAFS Representative on the University General Education Quantitative Thought Task Force

Other non-AUB Committees:

- Honorary Reader in Medical Statistics, SchARR, University of Sheffield, UK
- Chartered Statistician (CStat) from the Royal Statistical Society (RSS)
- Member of the Lebanese Society for the Mathematical Sciences
- Member of International Statistical Institute

- Member of International Society for Pharmacoeconomics and Outcomes Research (ISPOR).
 - Abstract reviewer for ISPOR conference
 - ISPOR Value of Information Task Force Review Group
 - ISPOR Statistical Methods Task Force Review Group
 - Member in the International Editorial Reviewer Board of International Journal of Healthcare
 - Member in the International Editorial Reviewer Board of INQUIRY Journal
- Lara Nasreddine
AUB Committees:
 - University Self Study Discussion Meeting
 - Member of the Organizing Committee for AUB's 7th Graduate Open House
 - Member of the Faculty Workload Taskforce
 - Deputy Title IX Coordinator, Equity & Title IX Network
 - Serving on Title IX investigation panels
 - Member of the Biomedical Sciences PhD Committee
 - Member of the Vascular Medicine Program (VMP) Executive Council
 - Member of the Committee on Scholarly Concentration Clerkship at the Faculty of Medicine
 - Member of the Strategic Plan Committee
 - Member of the Graduate Studies Committee at FAFS
 - Member of the Nutrition and Dietetics Coordinated Program Committee
 - Member of the inter-faculty Public Health Nutrition program committee (FAFS/FHS)
 - Omar Obeid
AUB Committees:
 - Member of FAFS research committee
 - Chair of FAFS Social committee
- Other non-AUB Committees:
- Appointed as National Coordinator for ICCIDD Global Network for Lebanon (June 2013)
 - The Nutrition Society. UK (Full member)
 - The Lebanese Association for Nutrition and Food Science (Executive committee)
 - Advisory Committee for the Arab center of Nutrition
 - Member of the editorial board: Arab Journal of Food and Nutrition
 - Reviewer: Eastern Mediterranean Health Journal (EMHJ)
 - Member of the Nutrition in Emergencies Training Network (NIETN)
 - Member of evaluation committee (ministry of Education)
 - Editorial Advisory Board, Canadian Journal of Clinical Nutrition
 - Editorial Board, ISRN Nutrition

- Editor: Journal of Obesity and Overweight

8- Participation in Workshops and Conferences

- Mohamad Abiad
 - Organized and moderated 2-days workshop on climate smart food preservation and processing technologies in collaboration with FAO. The workshop was attended by more than 100 representatives from FAO Rome, FAO Regional office, FAO Lebanon in addition to representatives from the Ministries of Agriculture and Economy and Trade, local and regional NGOs and cooperatives from Jordan, Egypt, Sultanate Oman, Qatar, Sudan, Iraq, Tunisia and Morocco. Representatives from local industry and universities were also among the audience. Beirut, Lebanon. June 2018
 - Organized and moderated a 1-day capacity building workshop on the use of packaging in promoting traditional/local food products. The workshop involved 12 women from different cooperatives from Southern Lebanon. It was hosted by Tyre Municipality and sponsored by the Italian Embassy. Tyre, Lebanon. March 2018
- Elie-Jacques Fares
 - Attended the Regional Training Course on Assessing Anthropometry, Total Body Water and Total Energy Expenditure in Infants. (Kuala Lumpur, Malaysia, April 8-12, 2019)
- Laura Hjeij
 - Organized and participated in Diabetes Awareness Day that was held November 14, 2018.
- Nahla Hwalla
 - Took part in the initial accreditation of a BS in Nutrition and Dietetics at Al Ain University. (Dubai and Abu Dhabi, UAE, January 26-February 1, 2019)
 - Participated in a workshop entitled “Towards the Enhancement of the Mediterranean Diet in the Mediterranean Region. National Final Workshop: Lower Adherence to the Mediterranean Diet in Lebanon: A Call for Action”, FAO-UN and Ministry of Agriculture in Lebanon. (Beirut, Lebanon, Feb 27, 2019)
 - Attended the International Centre for Advanced Mediterranean Agronomic Studies (CIHEAM) Advisory Board Meeting. (Montpellier, France, March 18-20, 2019)
 - Participated in the training and kick-off meeting of the project “Feeding Infants and Toddler Study (FITS) and the kids Nutrition and Health Survey (KNHS). (Dubai, UAE, April 19-22, 2019)
- Lamis Jomaa
 - Went on a research visit to Pennsylvania State University for 6 days as an Affiliate Assistant Professor. (Pennsylvania, USA, January 3-10, 2019)

- Participated in a workshop entitled “Towards the Enhancement of the Mediterranean Diet in the Mediterranean Region. National Final Workshop: Lower Adherence to the Mediterranean Diet in Lebanon: A Call for Action”, FAO-UN and Ministry of Agriculture in Lebanon. (Beirut, Lebanon, Feb 27, 2019)
- Participated in the National Digital Research Center (NDRC) Workshop. (Dublin, Ireland, April 23-May 3, 2019)
- Participated as a panelist in the GradEx event organized by the AUB Graduate Council on Research for the Public Good. (AUB, Lebanon, April 2, 2019).
- Facilitated a joint Yale-AUB graduate student workshop at FAFS to discuss potential joint research opportunities on topics relevant refugee health, food security, and vulnerability of conflict-affected populations.
- Samer Kharroubi
 - Conference, Nov 7-8, 2018: The 2nd Kuwait Statistical Science Conference, Kuwait. Contributed paper: Modelling health state preference data, and a new utility measure for Asthma and Overactive Bladder.
 - Conference, Nov 10- 18, 2018: International Society for Pharmacoeconomics and Outcomes Research (ISPOR), Barcelona, Spain. Poster presentation: The importance of accounting for parameter uncertainty around the SF-6D value sets and its impact on studies that use the SF-6D to measure health utility.
- Farah Naja
 - Traveled to follow-up on the progress of her Qatar Grant research project to attend to emergent issues in the data collection in the field. (Doha, Qatar, January 14-18, 2019)
 - Participated in the Workshop on “A Research Strategy to Reduce Non-Communicable Diseases relate to Food and Nutrition at the Kuwait Institute for Scientific Research. (Kuwait, February 18-20, 2019)
 - Participated in a workshop entitled “Towards the Enhancement of the Mediterranean Diet in the Mediterranean Region. National Final Workshop: Lower Adherence to the Mediterranean Diet in Lebanon: A Call for Action”, FAO-UN and Ministry of Agriculture in Lebanon. (Beirut, Lebanon, Feb 27, 2019)
 - Traveled to follow-up on the progress of her Qatar Grant research project to attend to emergent issues in the data collection in the field. (Doha, Qatar, April 10-12, 2019)
 - Participated in the training and Kick-off meeting of the project “Feeding Infants and Toddler Study (FITS) and the kids Nutrition and Health Survey (KNHS) in the UAE.” (Dubai, UAE, April 19-22, 2019)
- Lara Nasreddine
 - Participated in the ILSI Middle East General Assembly and Board Meeting, 11 November 2018, Dubai, UAE.
 - Organized the Elrha’s Research for Health in Humanitarian Crises (R2HC) Consultation Meeting Workshop (The main purpose of the meeting was to bring

together all the local and international partners and research team members to develop the full and detailed proposal for the R2HC call), 5- 8 November, 2018, American University of Beirut, Beirut, Lebanon.

- Participated in the workshop entitled “The Challenge of Obesity in the Middle East Workshop: Moving Toward a Strategy for Effective Public Health Policy and Intervention”, Harvard Medical School Center for Global Health Delivery, 3-4 November 2018, Dubai, UAE.
 - Participated as a facilitator in the regional WHO meeting entitled “Technical Consultation on Developing Regional Road-Map to Implement Front-of-Pack (FOP) Food Labelling Systems in the Region”, 11-13 September 2018, Beirut, Lebanon.
 - Poster presentation entitled “Nutritional Status and Feeding Practices among 0-2-Year-Old Children in Lebanon” in the IAEA International Symposium on Understanding the Double Burden of Malnutrition for Effective Interventions, 10-13 December 2018, Vienna, Austria.
 - Presented an oral Presentation entitled “Secular trend in adherence to the Mediterranean Diet in Lebanon: evidence from food supply data 1961-2013.; Workshop on Evidence of Adherence to the Traditional Mediterranean Diet in Tunisia and Lebanon” regarding the project “Towards the Enhancement of the Mediterranean Diet in the Mediterranean Region”, Food and Agriculture Organization of the United Nations, 5-7 December 2018, Tunis, Tunisia.
 - Presented an oral presentation entitled “Overview of the nutrition situation in the Eastern Mediterranean Region (in relation to intakes of energy, fat, sugars and salt)” during the regional WHO meeting “Technical Consultation on Developing Regional Road-Map to Implement Front-of-Pack (FOP) Food Labelling Systems in the Region”, 11-13 September 2018, Beirut, Lebanon.
 - Presented an oral presentation entitled “Nutrition Labelling in Lebanon-Current Situation and Future Plans” during the regional WHO meeting “Technical Consultation on Developing Regional Road-Map to Implement Front-of-Pack (FOP) Food Labelling Systems in the Region”, 11-13 September 2018, Beirut, Lebanon.
 - Participated in the regional meeting on pre-project assistance and project design of ARASIA proposed concepts for 2020-2021. (Vienna, Austria, March 11-14, 2019)
 - Participated in the training and Kick-off meeting of the project “Feeding Infants and Toddler Study (FITS) and the kids Nutrition and Health Survey (KNHS) in the UAE.” (Dubai, UAE, April 19-22, 2019)
- Omar Obeid
 - Participated as a speaker at the roundtable event on Trans fatty acids (TFAs). He presented on necessary technical capacities to implement TFA policies and what low-and middle-income countries lacking this capacity can do to create an evidence base and monitor TFAs, drawing from experience in Lebanon and the wider WHO of the Eastern Mediterranean region. (Geneva, Switzerland, January 27-30, 2019)
 - Attended and supported the training for the Jordan National Micronutrient and Nutrition survey 2019 (JNMNS 2019). (Amman, Jordan, March 2-7, 2019)

- Review Manuscript for Molecular Biology Reports entitled Dietary Supplementation with L-Lysine Affects Body Weight and Blood Hematological and Biochemical Parameters in Rats
- Participated in the Train the Trainer course: Training the East Mediterranean Trainers in the Prevention and Management of Obesity (Istanbul) organized by EASO. September, 23-24, 2018

9- Consultancies

- Omar Obeid
 - Provided technical assistance to GroundWork in the execution of GroundWork's contract with UNICEF-Jordan to provide technical and scientific support in the planning, implementation, and analysis of a national nutrition survey in Jordan.
- Mohamad Abiad
 - INDEVCO Zouk Mosbeh, Lebanon, Packaging testing and quality monitoring
 - Touma Development s.a.r.l., Jal el Dib, Lebanon. Advising and assisting in the development and formulation of new food products; advising and evaluating packaging material for selected products; assisting in the design and evaluation of various food processes including but not limited to machinery design and selection; shelf-life evaluation of various food products; provide scientific and sound solutions where applicable to extend the shelf-life of new and existing products
 - Sanitary Paper Co. – (Mimosa), Zahleh-Qaa el Rim, Lebanon. Packaging testing and quality monitoring

10- Strategic Challenges

The following challenges were encountered during the past year:

- Difficulty in conducting national or regional nutrition surveys given the unstable political situation.
- Difficulty in implementing community projects and securing internship placements for dietetic interns as part of their community nutrition rotations due to the unstable security situation in Lebanon.
- Scarcity of laboratory equipment

11- New Initiatives

- Dr. Jomaa led the initiative to develop an online 15-weeks course on Global Health and Conflict in the Middle East and North Africa in collaboration with the Refugee Health Program at GHI/AUB, University of California Berkeley, and University of California San

Francisco. Course was offered Spring 2019 and will be offered second time in Fall 2019. Total number of students enrolled to date was 100.

- The Nutrition Student Society and Charles Hostler Diet Clinic held a “Sports Nutrition Event” on Wednesday March 27th 2019 from 10 am till 2pm. This event was part of celebrating the Nutrition Month.
- Dr. Jomaa coordinated the community nutrition rotation of dietetic interns and supervised the field work and interventions conducted with three international NGOs working closely with Syrian refugee communities, primarily women and children.

12- Future Plans

- Establish a Packaging and Consumer Unit for Research and Education (Pack CURE) at the Faculty of Agriculture and Food Sciences.
- Enhance collaborations with the food industry