



Maroun Semaan Faculty  
of Engineering and Architecture

# Entrepreneurship Initiative at the **Maroun Semaan Faculty of Engineering and Architecture** American University of Beirut

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November 27, 2019

Ayman Kayssi



Maroun Semaan Faculty  
of Engineering and Architecture



# Maroun Semaan Faculty of Engineering and Architecture

## Vision

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*A viable, livable, equitable world*

## MSFEA Students

- **Total** **2900**
  - Undergraduates **2400**
  - Master's **400**
  - PhD **100**
- **Female %** **almost 40%**
- **MSFEA fraction of AUB** **almost one out of three**

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## Entrepreneurship Initiative

### OBJECTIVES

- Transform the Faculty into a powerhouse of innovation and entrepreneurship
- Contribute to the knowledge economies of Lebanon and the region
- Foster links with the growing entrepreneurial ecosystem in Lebanon and the region
- Encourage companies, small to large in size, and networks such as LebNet to build stronger connections with faculty and students
- Graduate students with a solid preparation for entrepreneurial endeavors
- Create a ripple-effect and spread awareness about the importance of entrepreneurship



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## El comprehensive program Covers journey from prospective students to alumni

### PRECOLLEGE

#### Initiation

- Outreach
- Design thinking
- Latest trends in engineering
- Innovation and entrepreneurship projects

### UNDERGRAD

#### Capacity Building

- Hackathons
- Mentorship
- Courses
- Competitions
- FYP Accelerator Program
- Innovation Center
- Makerspace

### GRADUATE

#### Enabling Spin-offs

- Workshops
- Tailored programs
- Incubating highly innovative research projects
- Technology transfer of intellectual property



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# *Pre-college*

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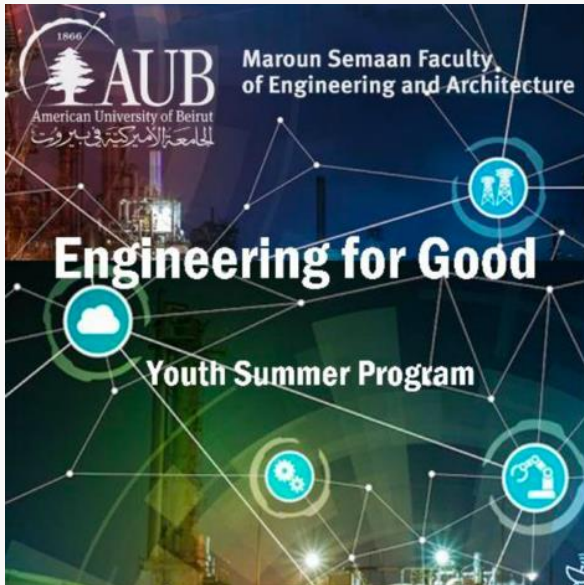






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## Youth Summer Program 2018



200+ applicants

30 participants

2-week intensive program

Hands-on IoT workshops

Team-based projects

Theme: Pollution in Lebanon

8 pitches

2 winning teams

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## Youth Summer Program 2019

200+ applicants

50 participants

3-week intensive program

Data analytics & AI workshops

Team-based projects

Theme: Social Good

12 pitches

2 winning teams



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## Goals

- Assuming a leadership role in raising awareness about engineering and the emerging trends for high-school students
- Recruitment of students and identification of exemplary talent (including females and public school students)
- Fostering the innovation and entrepreneurship mindset early on and playing a role in that paradigm shift
- Fulfilling a social role by orienting the youth to use technology and engineering for the social good





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# *Undergraduate*

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## Hackathons



**2016-18**

MSFEA-level hackathon in January, with 30-40 participants

**2019**

MSFEA-organized hackathon reaching out to all AUB students, with > 100 participants

**Future**

Cross-faculty organization effort of campus-wide hackathon of 200+ participants





# Entrepreneurship Events

**AUB** Maroun Semaan Faculty  
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The Entrepreneurship Initiative at MSFEA  
 Presents

*A Celebration of MSFEA Student Innovations*

Featuring Alumnus Anthony Tayoun



MBA Candidate at Harvard Business School  
 and Co-founder at Dexai Robotics

and MSFEA student startups








Date: December 20, 2018  
 Time: 3 pm - 5 pm  
 Location: IOEC 6th floor  
 RSVP: mi34@aub.edu.lb



**WHAT YOU NEED  
 TO BECOME AN  
 ENTREPRENEUR:  
 INVESTMENT AND MORE**

**MARCH 14 5:00-7:30 ELH**



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### Entrepreneurs' Talks

**Amer Chamseddine**  
 Co-founder and Director,  
 PocketCampus



**Nabil Hajj Chehade**  
 VP Product & Technology,  
 Apprentice.io



### Internship Program and Startups



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BEIRUT  
 DIGITAL  
 DISTRICT

### One-minute pitches

FYP Accelerator Teams 2018-19



### Investment Panel

<p><b>Moderator</b>  <b>Tarek Kettaneh</b>                  Senior Lecturer at OSB, AUB</p> 	<p><b>Amal Chahine</b>                  Certified Business                  Angel for Startups</p> 	<p><b>Jad Salame</b>                  Managing Partner at                  Phoenician Funds</p> 	<p><b>Fadi Bieri</b>                  Partner at B&amp;V                  Venture Partners</p> 
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3<sup>rd</sup> year

4<sup>th</sup> year

### Hackathon

*Induct students*

### Course

*Deep-dive and academic support*

### Internship

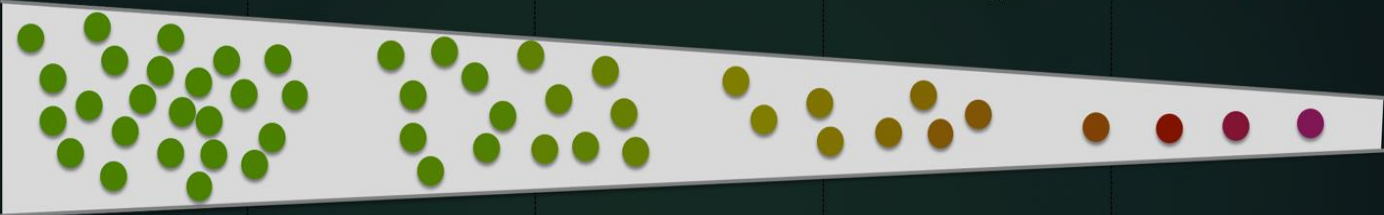
*Real-life experience*

### FYP

*R&D augmented with  
 business support*

### Translation Phase

*Translation into the  
 outside real world*



- Three day Hackathon
- Open to all students
- Goal is to introduce students into the world of entrepreneurship and innovation
- During Winterm

- For credit course to equip students with the right skills
- Deep dive into entrepreneurship
- Spring of third year

- Internship placement in startups, mainly run by FEA/AUB alumni
- Ability to apply to startup accelerators

- Research and development
- Augment with business mentorship

- Support the right teams either within AUB (CRInn / Innovation Park) or by funding from external supporters
- Offer 6+ months stipend / salary support to minimize risk on students post AUB

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## FYP Accelerator

### Foundation

Design thinking  
Entrepreneurship vs.  
innovation  
The lean canvas model

### Essentials

Value proposition and  
validation  
The software  
development cycle  
The hardware  
development cycle  
Revenue streams and  
cost structure  
Legal and IP-related  
issues  
Accounting basics

### Advanced

Team management  
and equity split  
Channel and user  
growth  
Financial projections  
and company valuation  
Financing schemes  
Social impact  
Pitching

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# FYP Accelerator Program

**2017-18 edition**

<https://www.youtube.com/watch?v=-WHGVFbX6tY>

**Zero-credit**

**18 applicant teams**

**7 pitching teams**

**20,000 USD in awards**

**2 teams pursuing startup idea**



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# FYP Accelerator Program

**2018-19 edition**

**FEAA 501 in Fall: 0 credits**

**FEAA 502 in Spring: 3 credits**

**Proper documentation**

**28 applicant teams**

**8 pitching teams**

**50,000 USD in Awards for 3 teams**

**DEMO-DAY on April 18, 2019 as part of IDEAS 2019**



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# FYP Accelerator Program

**2019-20 edition**

**FEAA 501 in Fall: 0 credits**

**FEAA 502 in Spring: 3 credits**

**36 applicant teams**

**19 selected teams**

**10 pitching teams**

**50,000 USD in Awards for 3 teams**

**DEMO-DAY in April 2020 as part of IDEAS 2020**





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ENTREPRENEURSHIP INITIATIVE

# STUDENT STARTUP COMPETITION

WHO?

OPEN FOR BOTH UNDERGRADUATE & GRADUATE STUDENTS  
FROM ALL MSFEA MAJORS. APPLY NOW TO COMPETE TO  
WIN FINANCIAL AWARDS TOTALING 15,000 USD

DEADLINE

05 11 19

ANY MSFEA STUDENT OR TEAM WITH AT LEAST ONE MSFEA STUDENT WORKING  
ON A STARTUP IDEA FOR THE PAST THREE MONTHS ARE ELIGIBLE TO APPLY



APPLY HERE



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## Internships at Startups

Program handled by MSFEA Career  
Development Center

Increasing number of students and opportunities each year

From local (Beirut Digital District) to international (Silicon Valley), in  
collaboration with alumni network (LebNet)



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## Innovation Center and Makerspace

- 3D Printing Studio
- Prototyping tools
- Co-working space
- Access to mentorship
- Flexible space
- Fostering creativity and design



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## Mentorship Services to all MSFEA Students Pursuing Entrepreneurial Endeavors

HULT Prize, competitions, personal projects

Future plan to host Entrepreneurs in Residence



Open-door policy



On-demand requests



Formalized process  
for appointment booking



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# *Graduate & Faculty*

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## On-Going Plan

- Roundtable with graduates held in March, 2019
- Leverage the deep-tech and innovative research projects of graduate students
- Offer entrepreneurship workshops and modules to graduate students (ME and PhD) and faculty members
- Incubate highly innovative research projects with business potential





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# *Growing the Network*

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## Internal Collaboration

Grow the pre-college,  
undergraduate, and graduate  
entrepreneurship activities

Provide resources to:

- Encourage creation of inter-disciplinary teams
- Create a communications platform
- Plan and coordinate entrepreneurship activities and events related to engineering, design, and technology



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## Community Engagement

- Engagement with MSFEA and AUB alumni in entrepreneurship programs
- Create new programs and initiatives that target a broader base internally and externally
- Assist other entities and organizations in their innovation and entrepreneurship endeavors in the form of pro-bono or consultancy services



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## Regional and International Collaboration

Exchange Program for FYP Accelerator top teams in collaboration with LebNet

Host guest entrepreneurs

Develop partnerships and

collaboration with local, regional, and international universities on various entrepreneurship initiatives:

- Texas A&M – Invent for the Planet
- Virginia Tech – International Entrepreneurship Competition
- American University of Armenia – EPIC Center Exchange Program



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# Challenges