Bilal Hamad Elected Mayor for Beirut City
Dean Hajj Resigns after 10 Years of Service
Yusef M. Salam Civil Engineering Excellence Award Established
The Neighborhood Initiative Project

Class Facts
- Students Receiving Bachelor’s Degree: 70
- (incl. Fall 2010 graduates)
- Transfer Students*: 16%
- Students Graduating with Distinction: 16%
- Students Graduating with High-Distinction: 4
- Age of Youngest Graduates: 21
- Age of Oldest Graduate: 26
- Males: 73%
- Females: 27%

Post-Graduation Plans*
- Pursue Graduate Studies in Engineering: 25%
- (including ENMG)
- Pursue Graduate Studies in Non-Engineering Fields: 10%
- Work in Contracting: 43%
- Work in Engineering Consultancy: 16%
- Work in Non-Engineering Fields: 6%
- Will Stay in Lebanon the Coming Year*: 53%

*Statistic based on survey of 49 students

Congratulations Class of 2010!

What’s Your Reaction to Graduating from University? What Will You Remember Most About Your Time Here at AUB?

Walid Jal Kh
I was happy to finally graduate from one of the most prestigious universities in the region and I can finally dedicate myself to the career I have always wished for: finance. My time at AUB was precious, and I will always remember the daily life on and even off campus. I will surely stay in touch with most of the people I met here with whom I share loads of memories.

Suha Saleh
It is an honor for me to graduate from such a prestigious university, especially with a degree in Civil Engineering. This is just the first of many great accomplishments I hope to achieve throughout my life. There has been a lot of change and growth in all of us over the past four years; AUB was more than just a degree for us, every person I met here had some impact on me, especially the professors and the staff who helped shape our life.

Lina Rassi
Four years have passed by so quickly and it’s too bad we can’t turn back time. AUB days were the best and worst days of my life. Who could deny that there were days we really wished we weren’t studying engineering with all the quizzes, projects, and due dates? However those are the times that I will remember the most: the overnights at Jafet, Bechtel library, and dorms! I’ll never forget the teachers who helped us through it all nor the amazing friendships that I have built, especially in my fourth and final year. It’s sad that we’re all going on our separate ways, but we’ll always have these AUB memories to remember forever!

Sherine Matta
It is probably a mix of happiness as well as emotive feelings. We are all happy and proud to be engineers now but there is a small pain in our hearts since the people with whom we have been for the past 4 years will now go on separate ways. I guess the times that will remain in our memories are those that we have spent together, all of us as civil engineering students, as well as those we have spent with our teachers, both formally in-class and informally outside the classroom trying to get the best out of their experiences.
Bilal Hamad Elected Mayor for Beirut City

Bilal Hamad, professor and ex-chairman of the Department of Civil and Environmental Engineering at the American University of Beirut, has been elected mayor for Beirut City in the May 9, 2010 municipal elections. Dr. Hamad joined AUB in 1972 as an undergraduate student in Civil and Environmental Engineering and graduated four years later in 1976. He then left to pursue graduate studies in the US earning a Master’s followed several years later by a Ph.D. in Structural Engineering, both from the University of Texas at Austin. Dr. Hamad joined the CEE department at AUB as an assistant professor back in 1990. During his years at AUB, Prof. Hamad expanded his research interests to include work on design and behavior of reinforced concrete structures, bond and development of reinforcement, assessment, repair, and strengthening of earthquake-damaged, blast-damaged, and fire-damaged reinforced concrete structures, plain concrete and concrete technology, sustainable construction, steel structures, and earthquake engineering. On the non-academic side, Dr. Hamad is a consultant to many engineering firms in Lebanon, Saudi Arabia, Jordan, France, and many other Arab Gulf countries. He also engages in many external and outreach activities; in fact, as president of the Hariri Foundation Alumni Association, he has organized conferences in different parts of Lebanon dealing with all aspects of development: agriculture, water, environment, and even issues related to municipal administrative problems. Prof. Hamad found his career interests early on in his youth: “I always thought of myself as a builder, someone who can erect a building or erect a bridge, and it turned out that this is what I love to do”. As for teaching, it is no different: “when I was even in high school, I used to teach neighbors just for the fun of it; I used to like acting as a teacher and since then I had that art of conveying information”. Dr. Hamad also emphasized that a key for one’s excellence is his passion for what he does. His hobbies include sports, hanging out with friends, and politics. He especially likes watching football, and he is a big fan of different teams in different countries (Brazil and Spain for the world cup).

Prof. Hamad has been involved in politics since long ago. He has worked with former Prime Minister Rafik Hariri with whom he had developed a valuable friendship. This friendship has extended to Prime Minister Saad Hariri who thought that Dr. Hamad, also being a professor at AUB, would set a new example in Beirut’s municipality works. According to Hamad, his experience will help in the new job: “by associating myself with AUB for over 38 years, I have picked up the most important values AUB upholds: AUB’s freedom of expression, professionalism, value of teamwork, its integrity, and its dedication to service, all have provided me with the tools I need to succeed; my administrative and multidisciplinary engineering experiences are ideal for this position”. Prof. Hamad added that “there are a lot of things to be done; I am not a magician, but I will work on it with honesty, integrity, and I will make a difference in the way things are being run; I will be on the streets with the Beiruties, talking to them, and feeling with them”. The three main goals of Hamad’s program involve modernizing the administration, preserving the environment, and boosting the infrastructure of Beirut. He plans to fill all the vacant administrative positions with experts and to introduce technology to reduce paperwork and encourage citizen feedback: “Beirut is turning into a concrete city – I plan to work on creating more green areas, reducing pollution, regulating the water supply, and reducing traffic jams; we need to plan and put down visions for Beirut in 20, 30 years time”. Hamad also highlighted the voluntary nature of the job and the importance of collaborative effort between the people and the administration. “We will establish a state of the art website and a hotline for Beiruties to send their ideas and problems”.

When asked about recommendations to students to prepare for a career, Dr. Hamad stated: “I would like them to take courses in different disciplines in civil engineering and to work on developing their software skills; as a student, you are more efficient in acquiring these skills”; ‘students should respect the value of their time and learn how to manage it because everyone wants his work done by yesterday” he adds. Prof. Hamad also underlined the importance of pursuing graduate studies beyond the Bachelor’s degree and the benefits it will provide later on in one’s life. We all wish Prof. Hamad a fruitful 6-year mayoralty and success in achieving his objectives.

IT Note

This year, students enrolled at the Faculty of Engineering and Architecture, along with the students of Computer Science, had the chance to benefit from a great offer Microsoft has given to the American University of Beirut. Said offer consisted of free genuine Windows 7 operating systems to the students. The IT unit, the many engineering societies (IEEE, ASME, CES), and the student SRCs at FEA all helped in the process of providing the students with free Windows 7 keys. Microsoft had two main aims behind this offer. The first is to establish a Microsoft club at AUB through which students are made aware of the latest technological innovations and are encouraged to discuss and share their opinions about different IT matters. Each class has one representative at the Club, called a Microsoft Student Partner (MSP); all MSPs hold weekly meetings with the Microsoft employees who discuss and inform them about the latest developments in the field. The second aim is to attempt to decrease the use of pirated software in the region by showing the students the benefits of genuine software. All students eagerly awaited the distribution of the keys and quickly replaced their Vista systems with the more acclaimed Windows 7.
DEAN HAJJ RESIGNS AFTER TEN YEARS OF SERVICE

Professor Ibrahim Hajj, Dean of the Faculty of Engineering and Architecture (FEA) at the American University of Beirut (AUB), has resigned from the deanship after ten years of invaluable service to the faculty. Dean Hajj received his BE (with distinction) from AUB, his MS from the University of New Mexico, Albuquerque, and his PhD from the University of California at Berkeley, all in electrical engineering. From 1978 to 2000, Hajj was a professor of electrical and computer engineering and a research professor at the Coordinated Science Laboratory and the Beckman Institute at the University of Illinois. He then joined AUB as Dean of FEA in 2000. His research interests include computer aided design of VLSI circuits, design for reliability and low power synthesis, physical design, and testing. He has published two books and over 200 book chapters, journal, and conference papers on these subjects, and has served as an associate editor of a number of scientific journals. He has also received a number of paper awards due to their impacts in the field. Dr. Hajj is a Fellow of IEEE, Fellow of AAAS, member of ACM, Sigma Xi, and a member of the Computer-Aided Network Design and the VLSI Design Technical Committees of the Circuits and Systems Society of IEEE. His hobbies include gardening, exercising, cooking (especially Lebanese food), reading, and traveling. When asked about favorite countries, he replied: "every country has its own character/style/identity; the experience of interacting with the local people, the scenery, and the local habits are rewarding". "I like all of them; and the more you see, the more you realize that there are more things to see and experience" he added.

As Dean of FEA, Hajj has led in building strong research programs in key areas in engineering and technology, established new PhD programs in four fields in engineering, initiated two BS engineering programs in chemical and construction engineering and several new master's degree programs. He has facilitated and supported the research culture at FEA by initiating and nurturing the tradition of the yearly FEA Student Conference and by granting faculty members external competitive research funding, which has grown remarkably over the past few years. Hajj also supported the growth of FEA with more than 50 new faculty members recruited and the number of students almost doubling since the year 2000. He has also helped in restructuring the study programs at the faculty, establishing the career center, and introducing IT and automation. After years of preparation, all undergraduate engineering programs are expected to receive ABET accreditation this summer.

When asked about recommendations to students to prepare for a career, he answered: "take advantage of your presence here and learn as much as you can from lectures, projects, and external activities; the knowledge you learn is more important than the grades, which come naturally". And when asked about prerequisites of success, the reply included knowledge, self-confidence, willingness to learn new things, enjoyment of one’s work, and integrity. Dr. Hajj would like to see many changes on the way ahead: "I would like to see an additional sense of ownership from the students’ part; this is the students’ department and faculty and I would like to see them have pride in our institution. I would also like to have students more involved in policing themselves and to move away from the attitude that ‘If I cheat and get away with it, I am smart’. He adds that "it is something in the culture: you see something wrong and you don’t say anything; not only at AUB, but outside also’. Hajj also noted his desire to see increased student-faculty interaction as well as interaction between the different departments for accomplishing interdisciplinary works. He highlighted the importance for AUB plans (buildings, landscapes, etc.) to proceed to provide students, who are society’s examples, with state of the art facilities supporting increased research grants as well as with enough space for them to gather, talk, eat, and interact on many levels.

Dean Hajj plans on taking a year at the University of Illinois in the US starting September 2010 to complete an academic book he previously started on computer aided design, and get engaged in research activities. Afterwards, he’ll return to AUB as a professor in the Department of Electrical and Computer Engineering. We wish Dean Hajj continued success in his future endeavors.

YUSEF M. SALAM Civil Engineering Excellence Award Established

The American University of Beirut (AUB) and its Faculty of Engineering and Architecture (FEA) have announced the establishment of the Yusef M. Salam Civil Engineering Excellence Award. Donated by Hadi Y. Salam, the award consists of a $1000 check and a certificate given annually in June to the student ranked first in the graduating civil engineering class. The award is supported by the Yusef M. Salam Endowed Civil Engineering Excellence Award Fund, which means that it will be available every year in perpetuity.

Hadi Salam earned his B.E. in Mechanical Engineering from AUB in 2006. He then left to pursue graduate studies at the Massachusetts Institute of Technology (MIT), also in mechanical engineering. He dedicated the award to his father, Yusef, who earned a B.E. in civil engineering from AUB (with Penrose Award) followed by a Master’s and a PhD from the University of California at Berkeley. After graduation, Yusef Salam moved back to Lebanon where he co-founded TEAM International, an Engineering and Management Consultancy firm covering Lebanon and the rest of the Arab World. He is a member of the Makassed Association Board of Trustees and a Fellow of the American Society of Civil Engineers.
Neighborhood Initiative Congestion Studies

Something that many of us may not know is that our Civil Engineering Department is often involved not only in research on a departmental level, but also on a university wide level. The ‘Neighborhood Initiative Congestion Studies’ is a project that was initiated in 2007 with the aim of improving the quality of life in the vicinity of AUB by addressing the two main objectives of greening the area and improving traffic conditions, while accounting for the residents’ perspectives and feedback on the studies.

Having Dr. Peter F. Dorman as ‘Principal Investigator’ allows many faculties/departments to be involved: Civil Engineering for transportation, Architecture for Urban Design and Planning, and the ‘Center for Population and Health’ under FAS to help study the standard of living of the Ras Beirut residents. The Ford Foundation, which is based in Cairo, is pleasantly funding the project and a great accomplishment is the capability of AUB to be involved in multi-disciplinary research. The main academic objective at hand is: how can AUB faculty and students draw on their academic disciplines for the benefit of society?

Under the leadership of the Department of Civil and Environmental Engineering and the AUB Transport Research Unit, with the appreciated help of Dr. Issam Kaysi as ‘Principal Investigator’, Dr. Maya Abou Zeid as ‘Co-Principal Investigator’ and Ms. Cynthia Myntti as ‘Project Manager/Leader’, the $300,000 project will go through three phases that will each occur over one year to help reach the desired goals:

**Phase 1: The Clash between Cars and Pedestrians**
This study aims at studying how the car-pedestrian clash can be mitigated and made friendlier through potentially widening the sidewalks, adding crosswalks and even banning side-parking.

**Phase 2: Parking Problems**
This phase entails evaluating both on and off street parking problems including shortage of spaces available, enforcement of ‘parking by the rules’ (fining double-parking among others), and amelioration of drop-offs.

**Phase 3: Public Transportation**
Public transportation comprises the most sustainable solution for improving traffic conditions and hence is evaluated on its own in this section.

So far, Phase 1 has been completed through interviews conducted with pedestrians on Bliss Street visiting specific businesses. The main problem faced is the ability to collect a large amount of data. Being rather time consuming, an innovative part of this research, to be performed in the following phases, is to use a GPS device to track the activity of pedestrians around AUB and identify which businesses are most visited and hence contribute most to the congestion problem.

Another difficulty expected in the next few years is to get the approval from the multiple stakeholders to implement changes and improvements.

Being personally involved in this project, I think it is important for us to contribute in any way possible because such studies affect our everyday lives quite significantly. Exposure to this type of work can also help prepare us for our careers. Furthermore, it is worthy of noting that such a project can be considered as a ‘pilot’ project and be used (to some extent of course) as a model for other parts of Lebanon.

Anyone interested in participating in this on-going project, kindly contact Dr. Maya Abou Zeid at ma202@aub.edu.lb. Additional information is available at [http://www.aub.edu.lb/ni/Pages/index.aspx](http://www.aub.edu.lb/ni/Pages/index.aspx). I am certain that there is a way in which each and everyone one of us can contribute to the initiative, and for current 3rd-year students who are thinking about potential FYP topics, there is surely some part of the initiative that can be interesting to work on.

Faculty Profiles

**kristina stephan**

Have you ever wondered what our professors do outside the classroom? Here’s a little insight on the professional work they carry out besides teaching our civil engineering students as well as a glimpse into what they like to do to keep themselves busy.

**Dr. Shadi Najjar**

*Interests:* Chilling out at the beach, bird hunting in the North of Lebanon, soccer, volleyball, and tennis. He also enjoys travel as well as trying out new dining places and coffee shops.

*Professional Activities:* Occasional consulting work on external projects. Research in many fields including reliability-based design and risk assessment of foundation systems and experimental research studies related to soil and site improvement.

**Dr. Maya Abou Zeid**

*Interests:* Traveling to new countries and discovering new cultures, watching romantic-comedy movies, listening to music, and Latin and ballroom dancing.

*Professional Activities:* Two of Dr. Abou Zeid’s AUB projects include the Neighborhood Initiative Congestion Studies and research using the newly installed driving simulator. Outside AUB, Dr. Abou Zeid acts as a research affiliate at the MIT Intelligent Transportation Systems program; as part of the MIT-Portugal program, she is currently collaborating with other scholars on modeling attitudes and value of time as well as energy consumption based on human activities.

**Dr. Pascal Saikaly**

*Interests:* Walking his dog.

*Professional Activities:* Much of the research Dr. Saikaly is involved in is about finding renewable energy sources using environmental biotechnology. Other projects he contributes to include extracting methane gas from wastewater and solid waste material for energy production.

**Dr. George Ayoub**

*Interests:* Tennis, basketball, swimming, and walking.

*Professional Activities:* Local and international consulting work on water and wastewater management, development of low cost methods and materials for water and wastewater treatment, and research on industrial waste treatment.

**Dr. Mohamad Harajli**

*Interests:* Jogging and gardening his large piece of land in the south of Lebanon.

*Professional Activities:* Consulting work on earthquake design of high-rise buildings both locally and in the Gulf region.
The party did not end before 2 in the morning, even though classes were being held the following day! The event was sponsored by the Consolidated Contractors Company (CCC) and covered by Mondanité magazine. First year Civil Engineering student Saji Khoury said that he felt the event “was a success” and that “it was cool that it was covered by Mondanité magazine which gave it a greater feel of importance”. These comments, inter alia, confirm the success of these annual CES occasions.

E-Learning

E-learning, including Moodle, PowerPoint presentations, and online discussions, is part of the new advancements in technology that allow the provision of a richer learning experience based on diversified methods of teaching. Have you ever wondered, however, if this has truly enhanced said learning experience? Does posting class notes online encourage students to skip classes more often or does it make it easier for them to follow the material in class and study it at home? E-learning quite often seems to be an issue taken for granted by most students, but only professors genuinely understand its effects. To help clarify this dilemma, we spoke to a few professors in the department to get a feel of whether or not we’re headed in the right direction.

Dr. Shadi Najjar
I do not see any negative impact for Moodle/PowerPoint based courses. I support the use of PowerPoint presentations because it allows professors to interact more with students during the lecture (since they are facing them all the time) and gives them more time to discuss examples from real life projects and research; time is saved when all the examples and figures are clearly illustrated in PowerPoint lectures.

Dr. Maya Abou Zeid
If used effectively, e-learning can certainly have a positive impact on students. For example, Moodle facilitates communication and makes all material easily accessible. The use of PowerPoint lectures on the other hand has advantages and disadvantages; it allows for covering more material, but students become more passive and don’t put effort into taking notes. Overall, it is good as long as material that is difficult to comprehend quickly (e.g. mathematical derivations) is explained slowly by, for example, writing them on the board. I also think the use of images and videos captures students’ attention and makes the material more interesting to them.

Prof. Mohamad Harajli
I believe we should combine both e-learning with the classical method; with the classical method alone, the lecture becomes sleepy and monotonic. Slides alone, on the other hand, create distance from students. Mixing a little bit of both is perhaps the right technique to pass over the valuable material to the students, while still keeping the lecture interesting and interactive.

Prof. George Ayoub
If e-learning is used alone, this would have a negative impact on the students from a learning perspective and on the professor from a teaching perspective. Students may stop coming to class, stop taking notes, and thus not get the full sense of the material. A process involving downloading and memorizing notes resembles the work of machines and is therefore not productive. What is said in class (CIVE450) is double the content of what is on the slides. Slides should be used for record in place of the textbook since the latter may provide extra material and topics not needed; the information provided in the Moodle lectures is the basic material. Dr. Ayoub feels that “the students aren’t living up to [his] expectations. He believes that they used to learn more and be more involved; now it sometimes seems as if “they are not even present in class.”

Dr. Pascal Saikaly
The most important way to approach e-learning is to post the material on Moodle beforehand. This allows students to print them and bring them to class to take extra notes on when needed. They can hence be more focused on understanding the material in class.
The idea of writing in the alumni section of Civil News after serving as its first editor for a year in 2008 makes me feel like someone going back home after some time away. Indeed, I can find no better word to describe the helpful and loving family environment of the CEE department, which established the building blocks of my academic life. However, my four-year CEE experience was much more than just an academic endeavor. It was also social activism, volunteering, and networking mainly through the Civil Engineering Society. All that paved the way towards my acceptance at the University of California Berkeley, where I completed my MS in Structural Engineering Mechanics and Materials in December 2009 and headed directly into the job market to work in one of the structural engineering firms in the San Francisco Bay Area.

Looking back at the transition from undergrad to grad school and then to the job market, I would like to share a few noteworthy experiences or views, which could prove to be helpful to my fellow AUBites who are thinking of going through the same path of graduate studies.

First, the valuable engineering knowledge that we gain in AUB does not necessarily rule out difficulties and challenges in our journey after AUB, but it certainly provides us with the “raw material” to surpass all hurdles and thus it is our responsibility to make the best out of what we learn in AUB. Second, in grad school and later at work, personal discipline becomes essential more than ever. Here I would like to ring a bell by pointing out to the tremendous difference I noticed in the work load between AUB and UC Berkeley, where daily preparation was a must to keep up with the fast track learning process and I am sure that the situation is not any different in other top notch grad schools and this is something that CEE students applying for grad studies abroad should have in mind.

Third, regardless of the hardships that one might face during the post-AUB academic life, grad school is still an experience worth going through. After all, it is said that the best lessons learned in life are the ones learned by passing through and conquering difficult situations, but the good news is that the grad school “package” also includes lots of fun and exposure to top students from all over the world who can become good friends at some point. Finally, when it comes to the life after school, what one gets to do at work is not the same as in courses and it certainly requires something beyond academic knowledge, something that one gains through active participation in extracurricular activities and exposure to the real world and for that the CES and Civil News can prove to be the perfect “school”.

On a final note, I would like to thank the CEE department in AUB and mainly the staff, professors, and the CEE class of 2008 for giving me beautiful memories that will stay with me forever. AUB was my first experience after high school and it certainly has been the best so far. My best wishes of success to the CEE class of 2010. May you enjoy your abundant life in AUB while you are there!

--Narine Bolghourjian
After the stressing and tiring fall finals, students had the chance to enjoy a ski-trip to Faraya organized, for the first time, by the CES. All students were welcome whether they were studying at AUB or not. The trip’s ticket-sale started in January and the trip took place on the 9th and 10th of February. Over 80 tickets were sold costing 60$ for the CES members and 70$ for the others. On the 9th of February, the participating students met in front of AUB’s Hostler gate, at 2:00 pm, where two big buses were awaiting to go to Faraya. A second stop before the final destination was made in front of ABC Dabayeh because it was a more convenient spot for some of the students who wanted to join. At around 4:00 pm, the two buses had finally reached Mount Smash Hotel where the students settled and placed their bags in each of their assigned rooms. The latter were of various sizes as they could hold four to twenty-four persons. Dinner was planned to start at 8, so everyone had plenty of activities to do in order to fill their time until then. In fact, the hotel contains many diverse rooms: a lounge, a gym, a games-room, a heated pool, saunas etc. Some played ping-pong, billiard or baby-foot, some preferred to watch a movie on the hotel’s big screen, others played cards and others just sat with their friends. After dinner ended, the party started! Students danced under the beats of the DJ and drinks were available at the hotel’s bar. Despite the fact that there was an early awakening the next day, sleeping early wasn’t an option for the party wasn’t about to end before a late hour. Fortunately, the next day, most of the students managed to wake up on time to have breakfast and get dressed by 9. Afterwards, everybody took the bus to go to the place where the ski and snowboarding equipment was being rented. Once all were equipped, the bus headed to the slopes where the students spent their time skiing, snowboarding and having fun. At 3:00 pm, everyone climbed up the bus which transported them back to the hotel to pack their bags. Lunch was served at 4:00 pm; once everybody had finished eating, it was time to head back to AUB. The first bus was filled with senior and graduate students while the second with sophomore and junior ones. Fortunately, the trip was incident-free and a big success which pushed the CES to promise students for another trip next year!
1. Which of the figures should replace the question mark?

2. Which of the ten domino pieces does not fit in with the others and why?

3. What number should replace the question mark?

4. What number should replace the question mark?

---

**Key**

1. The sum of the number in the middle of each column and the numbers in the two outermost numbers is the sum of the two outermost numbers in the row. The middle number is the difference of the two outermost numbers in the row.

2. The middle number is the difference of the two outermost numbers in the row. The sum of the two outermost numbers in the row is the middle number.

3. The sum of the number in the middle of each column and the numbers in the two outermost numbers is the sum of the two outermost numbers in the column. The middle number is the difference of the two outermost numbers in the column.

4. The middle number is the sum of the two outermost numbers in the column. The sum of the two outermost numbers in the column is the middle number.